
# Catalogue of EU funded projects in Environmental research

## 2007-2012

## FP7 - Theme 6 – Environment (including climate change)


**European Commission**

**Directorate General for Research And Innovation**
**Environment Directorate**



EDITOR:
European Commission
DG Research and Innovation, Environment Directorate
Rue de la Loi 200, B-1049 Brussels, Belgium
E-mail: RTD-ENV-2011-CALLS@ec.europa.eu

**Practical information**

This catalogue is also available electronically in the Publications Menu of the Environment Theme Website http://ec.europa.eu/research/environment

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**How to find an EU research project in the catalogue?**

- **Thematic search:** Projects are sorted by thematic area and the call year
- **Free text search:** Use the 'Find' command (Ctrl+F) and introduce free text keywords (e.g., impact assessment, salmon, MEECE,…)

# Table of contents

## Natural hazards

## Technology assessment, verification and testing

## Forecasting methods and assessment tools for sustainable development

**Activity Code:** ENV.2007.1.1.3.1. **Funding Scheme:** CP **Duration (Months):** 48

**Title:** European Project on Ocean Acidification

**Proposed EC Grant:** 6.548.995 €

**Abstract:**

The overall goal of the European Project on Ocean Acidification (EPOCA) is to fill the numerous gaps in our understanding of the effects and implications of ocean acidification. EPOCA aims to document the changes in ocean chemistry and biogeography across space and time. Paleo-reconstruction methods will be used on several archives, including foraminifera and deep-sea corals, to determine past variability in ocean chemistry and to tie these to present-day chemical and biological observations. EPOCA will determine the sensitivity of marine organisms, communities and ecosystems to ocean acidification. Molecular to biochemical, physiological and ecological approaches will be combined with laboratory and field-based perturbation experiments to quantify biological responses to ocean acidification, assess the potential for adaptation, and determine the consequences for biogeochemical cycling. Laboratory experiments will focus on key organisms selected on the basis of their ecological, biogeochemical or socio-economic importance. Field studies will be carried out in systems deemed most sensitive to ocean acidification. Results on the chemical, biological and biogeochemical impacts of ocean acidification will be integrated in biogeochemical, sediment and coupled ocean-climate models to better understand and predict the responses of the Earth system to ocean acidification. Special special attention will be paid to the potential feedbacks of the physiological changes in the carbon, nitrogen, sulfur and iron cycles. EPOCA will assess uncertainties, risks and thresholds ("tipping points") related to ocean acidification at scales ranging from sub-cellular, to ecosystem and from local to global. It will also assess pathways of CO2 emissions required to avoid these thresholds and describe the state change and the subsequent risk to the marine environment and Earth system should these emissions be exceeded.

**Partners:**

| | | |
|---|---|---|
| 1 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 2 | UNIVERSITETET I BERGEN | NO |
| 3 | HELMHOLTZ ZENTRUM FUR OZEANFORSCHUNG KIEL | DE |
| 4 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 5 | ALFRED-WEGENER-INSTITUT FUER POLAR- UND MEERESFORSCHUNG | DE |
| 6 | THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE | UK |
| 7 | COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES | FR |
| 8 | PLYMOUTH MARINE LABORATORY | UK |
| 9 | THE SCOTTISH ASSOCIATION FOR MARINE SCIENCE | UK |
| 10 | MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. | DE |
| 11 | MARINE BIOLOGICAL ASSOCIATION OF THE UNITED KINGDOM | UK |
| 12 | GOETEBORGS UNIVERSITET | SE |
| 13 | STICHTING KONINKLIJK NEDERLANDS INSTITUUT VOOR ZEEONDERZOEK (NIOZ) | NL |
| 14 | UNIVERSITEIT UTRECHT | NL |
| 15 | KONINKLIJKE NEDERLANDSE AKADEMIE VAN WETENSCHAPPEN - KNAW | NL |
| 16 | SIR ALISTER HARDY FOUNDATION FOR OCEAN SCIENCE | UK |
| 17 | HELMHOLTZ-ZENTRUM GEESTHACHT ZENTRUM FUR MATERIAL- UND KUSTENFORSCHUNG GMBH | DE |
| 18 | UNIVERSITAET BERN | CH |
| 19 | UNIVERSITE LIBRE DE BRUXELLES | BE |
| 20 | PHILIPPE SAUGIER INTERNATIONAL EDUCATIONAL PROJECTS | FR |
| 21 | VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG | NL |
| 22 | EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZURICH | CH |
| 23 | HAFRANNSOKNASTOFNUNIN | IS |
| 24 | UNIVERSITY OF SOUTHAMPTON | UK |
| 25 | UNIVERSITY OF PLYMOUTH | UK |
| 26 | UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION -UNESCO | FR |
| 27 | UNIVERSITY OF BRISTOL | UK |
| 28 | LEIBNIZ-INSTITUT FUER MEERESWISSENSCHAFTEN AN DER UNIVERSITAET KIEL | DE |

**Activity Code:** ENV.2007.1.1.5.1. **Funding Scheme:** CSA **Duration (Months):** 36

**Title:** Bridging the gap between adaptation strategies of climate change impacts and European water policies

**Proposed EC Grant:** 956.932 €

**Abstract:**

The Project ClimateWater is aimed as the first step on the analysis and synthesis of data and information on the likely (known, assumed, expected, modelled, forecasted, predicted, estimated etc.) water related impacts of the changes of the climate with special regard to their risk and to the urgency of getting prepared to combat these changes and their impacts. The Project will identify all adaptation strategies that were developed in Europe and also globally for handling (preventing, eliminating, combating, mitigating) the impacts of global climate changes on water resources and aquatic ecosystems, including all other water related issues of the society and nature. Research needs in the field of 'climate impact on the water cycle and water users' will be identified with special regard to enable the ranking of adaptation action in the light of the magnitude of impact on water resources and the urgency of the action needed. The most important output of the project will be the identification of gaps that would hinder the implementation of the EU water policy in combating climate impacts on water.

**Partners:**

| | | |
|---|---|---|
| 1 | VITUKI KORNYEZETVEDELMI ES VIZGAZDALKODASI KUTATO INTEZET NONPROFIT KOZHASZNU KORLATOLT FELELOSSEGU TARSASAG | HU |
| 2 | DEBRECENI EGYETEM | HU |
| 3 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 4 | UNIVERSITAET OSNABRUECK | DE |
| 5 | INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE PENTRU GEOLOGIE SI GEOECOLOGIE MARINA-GEOECOMAR | RO |
| 6 | GEONARDO ENVIRONMENTAL TECHNOLOGIES LTD | HU |
| 7 | UNIVERSITAET WIEN | AT |
| 8 | UNIVERSITY OF LEICESTER | UK |
| 9 | SLOVENSKY HYDROMETEOROLOGICKY USTAV | SK |
| 10 | SOGREAH CONSULTANTS SAS | FR |
| 11 | MALTA RESOURCES AUTHORITY | MT |

**Activity Code:** ENV.2007.1.1.2.1. **Funding Scheme:** CP **Duration (Months):** 36

**Title:** megaCITY - Zoom for the ENvironment

**Proposed EC Grant:** 2.915.000 €

**Abstract:**

We will determine the air pollution distribution and change in and around hotspots over the last decade from extensive satellite and in-situ observations and we will employ a series of different scale models in order to analyze the impacts of air pollution hot spots on regional and global air quality including potential future changes for various climate scenarios. Focus is on ozone and particulate matter with chemical and physical characterization, and their precursors. The Eastern Mediterranean (Istanbul, Athens, Cairo), the Po Valley, the BeNeLux region, the Pearl River Delta in China (with megacities Guangzhou and Hong Kong) and the hot and polluted European summer 2003 are chosen for intensive case studies. The consortium includes groups from China, Turkey, Greece and Italy, in addition to France, Germany, UK and Norway, with experts on the observations, emission data and models. A set of chemical transport models which connect all the most important spatial and temporal scales will be developed and used to quantify how the observed air pollution arises. The models and emission inventories will be evaluated, errors identified and improved on the urban, regional and global spatial scales. Climate change may cause changes in air pollution in and around hotspots, and hotspot pollution can change precipitation and temperature/albedo. These feedbacks will be studied in scale-bridging model systems based on global climate model scenarios, and in a coupled high resolution chemistry-climate model. The model systems evaluated in the project will be applied to analyse mitigation options in and around hotpots, also taking into account climate change. Best available technologies and sectoral changes will be studied. Several partners have key roles in the technical underpinning of policy. They will ensure that the improved emission inventories, scale-bridging model systems and the systematic observational evidence will have a significant, broad and lasting impact.

**Partners:**

| | | |
|---|---|---|
| 1 | METEOROLOGISK INSTITUTT | NO |
| 2 | PEKING UNIVERSITY | CN |
| 3 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 4 | INSTITUT NATIONAL DE L ENVIRONNEMENT ET DES RISQUES INERIS | FR |
| 5 | UNIVERSITAET BREMEN | DE |
| 6 | RHEINISCHES INSTITUT FUER UMWELT-FORSCHUNG AN DER UNIVERSITAET ZU KOELN E.V. | DE |
| 7 | FORSCHUNGSZENTRUM JUELICH GMBH | DE |
| 8 | PANEPISTIMIO KRITIS (UNIVERSITY OF CRETE) | EL |
| 9 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 10 | NORSK INSTITUTT FOR LUFTFORSKNING | NO |
| 11 | UNIVERSITETET I OSLO | NO |
| 12 | MIDDLE EAST TECHNICAL UNIVERSITY | TR |
| 13 | UNIVERSITY OF LEICESTER | UK |
| 14 | INTERNATIONALES INSTITUT FUER ANGEWANDTE SYSTEMANALYSE | AT |
| 15 | NATIONAL OBSERVATORY OF ATHENS | EL |
| 16 | CAIRO UNIVERSITY | EG |

**Activity Code:** ENV.2007.1.1.5.2. **Funding Scheme:** CP **Duration (Months):** 60

**Title:** Assessment of Climatic change and impacts on the Quantity and quality of Water

**Proposed EC Grant:** 6.493.573 €

**Abstract:**

As the evidence for human induced climate change becomes clearer, so too does the realization that its effects will have impacts on natural environment and socio-economic systems. Some regions are more vulnerable than others, both to physical changes and to the consequences for ways of life. The proposal will assess the impacts of a changing climate on the quantity and quality of water in mountain regions. Modeling techniques will be used to project the influence of climatic change on the major determinants of river discharge at various time and space scales. Regional climate models will provide the essential information on shifting precipitation and temperature patterns, and snow, ice, and biosphere models will feed into hydrological models in order to assess the changes in seasonality, amount, and incidence of extreme events in various catchment areas. Environmental and socio-economic responses to changes in hydrological regimes will be analyzed in terms of hazards, aquatic ecosystems, hydropower, tourism, agriculture, and the health implications of changing water quality. Attention will also be devoted to the interactions between land use/land cover changes, and changing or conflicting water resource demands. Adaptation and policy options will be elaborated on the basis of the model results. Specific environmental conditions of mountain regions will be particularly affected by rapidly rising temperatures, prolonged droughts and extreme precipitation. The methodological developments gained from a European mountain focus will be used to address water issues in regions whose economic conditions and political structures may compromise capacities to respond and adapt, such as the Andes and Central Asia where complex problems resulting from asymmetric power relations and less robust institutions arise. Methodologies developed to study European mountains and their institutional frameworks will identify vulnerabilities and be used to evaluate a range of policy options.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITE DE GENEVE | CH |
| 2 | EIDGENOESSISCHES VOLKSWIRTSCHAFTSDEPARTEMENT | CH |
| 3 | AGENZIA REGIONALE PER LA PROTEZIONE AMBIENTALE DEL PIEMONTE | IT |
| 4 | AGENZIA REGIONALE PER LA PROTEZIONEDELL AMBIENTE | IT |
| 5 | UNIVERSITAET FUER BODENKULTUR WIEN | AT |
| 6 | UNIVERSIDAD DE LA SERENA | CL |
| 7 | CENTRO DE ESTUDIOS CIENTIFICOS | CL |
| 8 | METEO-FRANCE | FR |
| 9 | INSTITUTO TORCUATO DI TELLA | AR |
| 10 | RICERCA SUL SISTEMA ENERGETICO - RSE SPA | IT |
| 11 | UNIVERSITA DEGLI STUDI DELL'AQUILA | IT |
| 13 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 14 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 15 | COMPAGNIA VALDOSTANA ACQUE SPA | IT |
| 16 | ENEL PRODUZIONE. S.P.A. | IT |
| 17 | EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZURICH | CH |
| 18 | FONDAZIONE MONTAGNA SICURA | IT |
| 19 | UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION -UNESCO | FR |
| 20 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 22 | INSTITUTE OF WATER PROBLEMS AND HYDROPOWER OF THE KYRGYZ NATIONAL ACADEMY OF SCIENCES | KG |
| 24 | COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES | FR |
| 25 | MONTEROSASTAR SRL | IT |
| 26 | MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. | DE |
| 27 | ENTE PARCO NAZIONALE GRAN PARADISO | IT |
| 28 | POLITECNICO DI MILANO | IT |
| 29 | UNIVERSITAET BERN | CH |
| 30 | THE UNIVERSITY OF BIRMINGHAM | UK |
| 36 | UNIVERSITAET GRAZ | AT |
| 37 | UNIVERSITY OF DUNDEE | UK |
| 38 | FONDATION POUR L'ETUDE DES RELATIONS INTERNATIONALES ET DU DEVELOPPEMENT | CH |

**Activity Code:** ENV.2007.1.1.5.3. **Funding Scheme:** CP **Duration (Months):** 48

**Title:** A Europe-South America Network for Climate Change Assessment and Impact Studies in La Plata Basin

**Proposed EC Grant:** 3.358.996 €

**Abstract:**

The CLARIS LPB Project aims at predicting the regional climate change impacts on La Plata Basin (LPB) in South America, and at designing adaptation strategies for land-use, agriculture, rural development, hydropower production, river transportation, water resources and ecological systems in wetlands. In order to reach such a goal, the project has been built on the following four major thrusts. First, improving the description and understanding of decadal climate variability is of prime importance for short-term regional climate change projections (2010-2040). Second, a sound approach requires an ensemble of coordinated regional climate scenarios in order to quantify the amplitude and sources of uncertainties in LPB future climate at two time horizons: 2010-2040 for adaptation strategies and 2070-2100 for assessment of long-range impacts. Such coordination will allow to critically improve the prediction capacity of climate change and its impacts in the region. Third, adaptation strategies to regional scenarios of climate change impacts require a multi-disciplinary approach where all the regional components (climate, hydrology, land use, land cover, agriculture and deforestation) are addressed in a collaborative way. Feedbacks between the regional climate groups and the land use and hydrology groups will ensure to draw a first-order feedback of future land use and hydrology scenarios onto the future regional climate change. Fourth, stakeholders must be integrated in the design of adaptation strategies, ensuring their dissemination to public, private and governmental policy-makers. Finally, in continuity with the FP6 CLARIS Project, our project will put a special emphasis in forming young scientists in European institutes and in strengthening the collaborations between European and South American partners. The project is coordinated with the objectives of LPB, an international project on La Plata Basin that has been endorsed by the CLIVAR and GEWEX Panels.

**Partners:**

| | | |
|---|---|---|
| 1 | INSTITUT DE RECHERCHE POUR LE DEVELOPPEMENT | FR |
| 2 | UNIVERSITY OF EAST ANGLIA | UK |
| 3 | LEIBNIZ-ZENTRUM FUER AGRARLANDSCHAFTSFORSCHUNG (ZALF) e.V. | DE |
| 4 | MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. | DE |
| 5 | CENTRO EURO-MEDITERRANEO PER I CAMBIAMENTI CLIMATICI SCARL | IT |
| 6 | ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA | IT |
| 7 | UNIVERSIDAD DE CASTILLA - LA MANCHA | ES |
| 8 | SVERIGES METEOROLOGISKA OCH HYDROLOGISKA INSTITUT | SE |
| 9 | INSTITUTO NACIONAL DE PESQUISAS ESPACIAIS | BR |
| 10 | UNIVERSIDADE DE SAO PAULO | BR |
| 11 | UNIVERSIDADE FEDERAL DE SANTA CATARINA. | BR |
| 12 | UNIVERSIDADE FEDERAL DO PARANA | BR |
| 13 | CONSEJO NACIONAL DE INVESTIGACIONES CIENTIFICAS Y TECNICAS | AR |
| 14 | UNIVERSIDAD DE BUENOS AIRES | AR |
| 15 | INSTITUTO NACIONAL DE TECNOLOGIA AGROPECUARIA | AR |
| 16 | Instituzo national del agua | AR |
| 17 | UNIVERSIDAD DE LA REPUBLICA | UY |
| 18 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 19 | RICERCA SUL SISTEMA ENERGETICO - RSE SPA | IT |
| 20 | UNIVERSITE DE GENEVE | CH |

**Activity Code:** ENV.2007.1.1.2.1. **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Megacities: Emissions, urban, regional and Global Atmospheric POLlution and climate effects, and Integrated tools for assessment and mitigation

**Proposed EC Grant:** 3.398.989 €

**Abstract:**

The MEGAPOLI project brings together leading European research groups, state-of-the-art scientific tools and key players from third countries to investigate the interactions among megacities, air quality and climate. MEGAPOLI will bridge the spatial and temporal scales that connect local emissions, air quality and weather with global atmospheric chemistry and climate. The main objectives are: (i) to assess impacts of megacities and large air-pollution hot-spots on local, regional and global air quality, (ii) to quantify feedbacks among megacity air quality, local and regional climate, and global climate change, (iii) to develop improved integrated tools for prediction of air pollution in megacities. In order to achieve these objectives we will: - Develop and evaluate integrated methods to improve megacity emission data; - Investigate physical and chemical processes starting from the megacity street level, continuing to the city, regional and global scales; - Assess regional and global air quality impacts of megacity plumes; - Determine the main mechanisms of regional meteorology/climate forcing due to megacity plumes; - Assess global megacity pollutant forcing on climate; - Examine feedback mechanisms including effects of climate change on megacity air quality; - Develop integrated tools for prediction of megacity air quality; - Evaluate these integrated tools and use them in case studies; - Develop a methodology to estimate the impacts of different scenarios of megacity development on human health and climate change; - Propose and assess mitigation options to reduce the impacts of megacity emissions. We will follow a pyramid strategy of undertaking detailed measurements in one European major city, Paris, performing detailed analysis for 12 megacities with existing air quality datasets and investigate the effects of all megacities on climate. The results will be disseminated to authorities, policy community, researchers and the other megacity stakeholders.

**Partners:**

| | | |
|---|---|---|
| 1 | DANMARKS METEOROLOGISKE INSTITUT | DK |
| 2 | FOUNDATION FOR RESEARCH AND TECHNOLOGY HELLAS | EL |
| 3 | MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. | DE |
| 4 | ARIANET SRL | IT |
| 5 | ARISTOTELIO PANEPISTIMIO THESSALONIKIS | EL |
| 6 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 7 | ILMATIETEEN LAITOS | FI |
| 8 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 9 | UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION -UNESCO | FR |
| 10 | KING'S COLLEGE LONDON | UK |
| 11 | STIFTELSEN NANSEN SENTER FOR FJERNMAALING | NO |
| 12 | NORSK INSTITUTT FOR LUFTFORSKNING | NO |
| 13 | PAUL SCHERRER INSTITUT | CH |
| 14 | NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO | NL |
| 15 | MET OFFICE | UK |
| 16 | UNIVERSITAET HAMBURG | DE |
| 17 | HELSINGIN YLIOPISTO | FI |
| 18 | THE UNIVERSITY OF HERTFORDSHIRE HIGHER EDUCATION CORPORATION | UK |
| 19 | UNIVERSITAET STUTTGART | DE |
| 20 | ORGANISATION METEOROLOGIQUE MONDIALE | CH |
| 21 | UNIVERZITA KARLOVA V PRAZE | CZ |
| 22 | LEIBNIZ INSTITUT FUER TROPOSPHAERENFORSCHUNG e.V. | DE |
| 23 | THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE | UK |

**Activity Code:** ENV.2007.1.1.6.3. **Funding Scheme:** CP **Duration (Months):** 39

**Title:** Climate Change - Terrestrial Adaption and Mitigation in Europe

**Proposed EC Grant:** 3.499.516 €

**Abstract:**

The project will assess the impacts of agricultural, climate, energy, forestry and other associated land-use policies, considering the resulting feed-backs on the climate system. Geographically explicit biophysical models together with an integrated cluster of economic land-use models will be coupled with regional climate models to assess and identify mitigation and adaptation strategies in European agriculture and forestry. The role of distribution and pressures from socio-economic drivers will be assessed in a geographically nested fashion. Crop/trees growth models operating on the plot level as well as on continental scales will quantify a rich set of mitigation and adaptation strategies focusing on climatic extreme events. The robustness of response strategies to extreme events will further be assessed with risk and uncertainty augmented farm/forest enterprise models. Bioenergy sources and pathways will be assessed with grid level models in combination with economic energy-land-use models. The results from the integrated CC-TAME model cluster will be used to provide: quantitative assessments in terms of cost-efficiency and environmental effectiveness of individual land-use practices; competitive LULUCF mitigation potentials taking into account ancillary benefits, trade-offs and welfare impacts, and policy implications in terms of instrument design and international negotiations. The proposed structure of the integrated CC-TAME model cluster allows us, to provide an evaluation of policy options at a great level of detail for EU25(27) in a post-Kyoto regime, as well as to offer perspectives on global longer-term policy strategies in accordance with the principles and objectives of the UNFCCCC. Close interactions with policymakers and stakeholders will ensure the policy relevance of CC-TAME results.

**Partners:**

| | | |
|---|---|---|
| 1 | INTERNATIONALES INSTITUT FUER ANGEWANDTE SYSTEMANALYSE | AT |
| 2 | UNIVERSITAET FUER BODENKULTUR WIEN | AT |
| 3 | UNIVERSITAET HAMBURG | DE |
| 4 | INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE | FR |
| 5 | JOANNEUM RESEARCH FORSCHUNGSGESELLSCHAFT MBH | AT |
| 6 | CENTRO DE INVESTIGACION ECOLOGICA YAPLICACIONES FORESTALES | ES |
| 7 | UNIVERZITA KOMENSKEHO V BRATISLAVE | SK |
| 8 | VYSKUMNY USTAV PODOZNALECTVA A OCHRANY PODY | SK |
| 9 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 10 | EUROPEAN CENTER FOR AGRICULTURAL, REGIONAL AND ENVIRONMENTAL POLICY RESEARCH, EUROCARE | DE |
| 11 | DANMARKS TEKNISKE UNIVERSITET | DK |
| 12 | THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN | UK |
| 13 | METSANTUTKIMUSLAITOS | FI |
| 14 | MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. | DE |
| 15 | IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE | UK |

**Activity Code:** ENV.2007.1.1.1.1. **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Thermohaline Overturning - at Risk?

**Proposed EC Grant:** 9.274.427 €

**Abstract:**

THOR will establish an operational system that will monitor and forecast the development of the North Atlantic THC on decadal time scales and access its stability and the risk of a breakdown in a changing climate. Together with pre-existing data sets, ongoing observations within the project will allow precise quantitative monitoring of the Atlantic THC and its sources. This will, for the first time, allow an assessment of the strength of the Atlantic THC and its sources in a consistent manner and will provide early identification of any systematic changes in the THC that might occur. Analysis of palaeo observations covering the last millennium and millennium time scale experiments with coupled climate models will be carried out to identify the relevant key processes and feedback mechanisms between ocean, atmosphere, and cryosphere. In THOR, the combined effect of various global warming scenarios and melting of the Greenland ice sheet will also be thoroughly assessed in a coupled climate model. Through these studies and through the assimilation of systematic oceanic observations at key locations into ocean circulation models, THOR will forecast the development of the Atlantic THC and its variability until 2025, using global coupled ocean-atmosphere models. THOR will also assess induced climate implications of changes in the THC and the probability of extreme climate events with special emphasis on the European/North Atlantic region. THOR builds upon techniques, methods and models developed during several projects funded within FP5 and FP6 as well as many nationally funded projects. The project will contribute to Global Monitoring for Environment and Security (GMES), to Global Observing Systems such as to the Global Ocean Observing system (GOOS), and to the International Polar Year (IPY).

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITAET HAMBURG | DE |
| 2 | MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. | DE |
| 3 | MET OFFICE | UK |
| 4 | UNIVERSITE PIERRE ET MARIE CURIE - PARIS 6 | FR |
| 5 | UNIVERSITETET I BERGEN | NO |
| 6 | THE UNIVERSITY OF READING | UK |
| 7 | EUROPEAN CENTRE FOR MEDIUM-RANGE WEATHER FORECASTS | UK |
| 8 | LEIBNIZ-INSTITUT FUER MEERESWISSENSCHAFTEN AN DER UNIVERSITAET KIEL | DE |
| 9 | KONINKLIJK NEDERLANDS METEOROLOGISCH INSTITUUT (KNMI) | NL |
| 10 | DANMARKS METEOROLOGISKE INSTITUT | DK |
| 11 | HAVSTOVAN | FO |
| 12 | ILMATIETEEN LAITOS | FI |
| 13 | HAFRANNSOKNASTOFNUNIN | IS |
| 14 | STICHTING KONINKLIJK NEDERLANDS INSTITUUT VOOR ZEEONDERZOEK (NIOZ) | NL |
| 15 | THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS | UK |
| 16 | THE SCOTTISH ASSOCIATION FOR MARINE SCIENCE | UK |
| 17 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 19 | STIFTELSEN NANSEN SENTER FOR FJERNMAALING | NO |
| 20 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 21 | COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES | FR |

**Activity Code:** ENV.2007.1.1.6.1. **Funding Scheme:** CP **Duration (Months):** 32

**Title:** Full Costs of Climate Change

**Proposed EC Grant:** 3.499.994 €

**Abstract:**

There is increasing interest in the economics of climate change to inform policy on a) long-term targets, b) the costs of inaction (the economic effects of climate change), and c) the costs and benefits of adaptation. The objectives of this study are to advance knowledge across all three areas, i.e. the full economic costs of climate change, through the following tasks: 1. To identify and develop consistent climate change and socio-economic scenarios, including mitigation scenarios; 2. To quantify in physical terms, and economic costs, the 'costs of inaction' for these scenarios, with bottom-up disaggregated (spatial) modelling for market and non-market sectors (coasts, health, ecosystems, energy, water, infrastructure) in the EU and other major negotiator countries (US, China, India). To extend analysis to quantify and value the costs and benefits of adaptation, and the residual costs of climate change' after adaptation. 3. To asses the physical effects and economic damages of a number of the most important major catastrophic events and major socially contingent effects. 4. To update the mitigation costs of GHG emission reductions for medium and long-term reduction targets/ stabilisation goals. To include (induced) technological change, non CO2 GHG and sinks, and recent abatement technologies. 5. To quantify the ancillary air quality benefits of mitigation, using a spatially detailed dis-aggregated approach to quantify in physical terms and monetary benefits, in Europe and major negotiator countries. 6. To apply a number of complementary CGM and IAM models to incorporate the information from the tasks above. 7. To bring all the information above together to provide policy relevant output, including information on physical effects and economic values, and undertake analysis of policy scenarios. The project involves a multi-disciplinary team with leading impact and economic experts. It is innovative in developing bottom-up and top-down analysis within consistent scenarios and a single integrated framework, providing highly dis-aggregated outputs on impacts and economic costs.

**Partners:**

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|---|---|---|
| 1 | SEI OXFORD OFFICE LIMITED*STOCKHOLMENVIRONMENT INSTITUTE OXFORD OFFICE SEI LTD | UK |
| 2 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
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| 19 | UNIVERZITA KARLOVA V PRAZE | CZ |
| 20 | THE ENERGY AND RESOURCES INSTITUTE | IN |
| 21 | NATIONAL DEVELOPMENT AND REFORM COMMISSION ENERGY RESEARCH INSTITUTE | CN |
| 22 | UNIVERSITE PIERRE MENDES FRANCE | FR |

**Activity Code:** ENV **Funding Scheme:** CSA **Duration (Months):** 11

**Title:** World Climate Conference 3 - «Better Climate Information for a Better Future»

**Proposed EC Grant:** 200.000 €

**Abstract:**

The World Climate Conference-3 (WCC-3) is aimed at initiating a global action to address the management of climate related risks and opportunities in the interest of supporting sustainable socio-economic development, especially in developing and least developed countries, in the face of current climate variability and predicted climate change. The theme of WCC-3 is “Climate prediction and information for decision-making”, focusing on the application of climate information and predictions to societal problems enabling adaptation to the current climate conditions and predicted future changes in areas such as agriculture, forestry, water, health, infrastructure, urban cities and sustainable development. The involvement and participation of scientists from developing and least developed countries, which are often affected by climate related disasters and endowed with unique opportunities for development, shall help in developing appropriate climate services that would support the various sectors of the economy to spur growth. The WCC 3 is intended to establish an international framework that will enhance the provision, exchange, and application of climate prediction and information services for a wide range of socio-economic sectors and in doing so make a significant contribution to the UNFCCC COP15. This includes improving the ability of societies to reduce and manage climate related risks, through the provision of skilful climate prediction and information services as well as the integration of these services into decision-making as a means of enhancing the resilience of governments, society, and institutions to adapt to current and changing climate conditions. WCC-3 will also further the scientific basis to explain and predict changes in the global climate in the context of both natural and anthropogenic forcing with an emphasis on contributing, from the science perspective, to the development of policy options for appropriate responses to global chang

**Partners:**

1 ORGANISATION METEOROLOGIQUE MONDIALE CH

**Activity Code:** ENV.2008.1.1.2.1. **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Stratospheric ozone: Halogen Impacts in a Varying Atmosphere

**Proposed EC Grant:** 3.499.995 €

**Abstract:**

SHIVA aims to reduce uncertainties in present and future stratospheric halogen loading and ozone depletion resulting from climate feedbacks between emissions and transport of ozone depleting substances (ODS). Of particular relevance will be studies of short and very short-lived substances (VSLS) with climate-sensitive natural emissions. We will perform field studies of ODS production, emission and transport in understudied, but critical, regions of the tropics using ship, aircraft and ground-based instrumentation. We will parameterise potential climate sensitivities of emissions based on inter-dependencies derived from our own field studies, and surveys of ongoing work in this area. We will study the chemical transformation of ODS during transport from the surface to the tropical tropopause layer (TTL), and in the stratosphere, using a combination of aircraft and balloon observations together with process-oriented meso-scale modelling. These investigations will be corroborated by space-based remote sensing of marine phytoplankton biomass as a possible proxy for the ocean-atmosphere flux of ODS. From this a systematic emission inventory of VSLS ODS will be established to allow construction of future-climate scenarios. The impact of climate-sensitive feedbacks between transport and the delivery of ODS to the stratosphere, and their lifetime within it, will be studied using tracer observations and modelling. Further global modelling will assess the contribution of all ODS, including VSLS (which have hitherto normally been excluded from such models) to past, present and future ozone loss. Here, the sensitivity of natural ODS emissions to climate change parameters will be used in combination with standard IPCC climate model scenarios in order to drive measurement-calibrated chemical transport model (CTM) simulations for present and future stratospheric ozone; to better predict the rate, timing and climate-sensitivity of ozone-layer recovery.

**Partners:**

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| 3 | JOHANN WOLFGANG GOETHE UNIVERSITAET FRANKFURT AM MAIN | DE |
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| 9 | UNIVERSITY OF LEEDS | UK |
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| 11 | UNIVERSITAET BREMEN | DE |
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| 13 | UNIVERSITY OF MALAYA | MY |
| 14 | LEIBNIZ-INSTITUT FUER MEERESWISSENSCHAFTEN AN DER UNIVERSITAET KIEL | DE |

**Activity Code:** ENV.2008.1.1.5.2. **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Arctic Tipping Points

**Proposed EC Grant:** 4.998.098 €

**Abstract:**

The broad interdisciplinary consortia assembled in the Arctic Tipping Points (ATP) project will be managed (WP1) to identify the elements of the Arctic marine ecosystem likely to show abrupt changes in response to climate change, and establish the levels of the corresponding climate drivers inducing the regime shift for these tipping elements. ATP will evaluate the consequences of crossing those tipping points, and the associated risks and opportunities for economic activities dependent on the Arctic marine ecosystem. Historical records of Arctic climate change and projections of future changes in Arctic sea climate and ice systems are compiled (WP2), and time series of Arctic ecosystem components analysed using novel statistical tools to detect regime shifts and ecological thresholds and tipping points, and evaluate their sensitivity to climatic forcing (WP3). Experimental manipulations and comparative analyses across broad climatic ranges will be used to detect climatic thresholds and tipping points of Arctic organisms and ecosystems, using genome-wide analyses to develop genomic markers of climate-driven stress useful as early-warning indicators of the proximity of tipping points (WP4). A biological-physical coupled 3 D model will be used to generate future trajectories of Arctic ecosystems under projected climate change scenarios and to identify their consequences for the Arctic ecosystem (WP5). The impacts of abrupt changes in the Arctic ecosystems for activities of strategic importance for the European Arctic and the associated impacts on employment and income will be elucidated, and policies and legislative frameworks to adapt and mitigate these impacts will be analysed (WP 6). The effectiveness of possible alternative, post-Kyoto policies and stabilization targets in avoiding climate-driven thresholds in the Arctic ecosystem will be examined, and the results and projections will be conveyed to policy makers, economic sectors and the public in general (WP7).

**Partners:**

| | | |
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| 1 | UNIVERSITETET I TROMSOE | NO |
| 2 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 3 | AKVAPLAN-NIVA AS | NO |
| 4 | SINTEF FISKERI OG HAVBRUK AS | NO |
| 5 | AARHUS UNIVERSITET | DK |
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| 6 | INSTYTUT OCEANOLOGII - POLSKIEJ AKADEMII NAUK | PL |
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| 12 | KUNGLIGA VETENSKAPSAKADEMIEN | SE |
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**Activity Code:** ENV.2008.1.1.6.3. **Funding Scheme:** CSA **Duration (Months):** 36

**Title:** Policy Options to engage Emerging Asian economies in a post-Kyoto regime

**Proposed EC Grant:** 971.518 €

**Abstract:**

Developing countries are reluctant to make any binding commitment as their per capita emissions are low and climate abatement measures conflict with their main priorities on socio-economic development. The question is if there is a way to simultaneously provide sufficient energy (which is also the main source of GHG emissions), to support poverty alleviation and economic growth and achieve sufficient emission reductions. Finding an answer is the main aim of this project. It may be possible with a combination of policies and measures encompassing from international level to national level supported by committed international cooperation to achieve both the goals together. The main focus of the study is on India and China. The primary objective is to develop a portfolio of policy options including both international and national policies as well as institutional frameworks for international cooperation for these two emerging economies to engage them in climate protection measures under a post-2012 regime. By applying an integrated modeling framework, the study will explore possible multiple pathways which may exist for these countries to contribute into international climate initiatives without compromising their national development priorities. Specific objectives are, 1) developing country-specific integrated modeling framework to analyse policies and identify multiple pathways to achieve socio-economic and climate targets; 2) identifying/designing international climate polices in post-Kyoto regime for future commitments and participations of emerging economies (India and China); 3) designing national polices (in socio-economic sectors, energy and environment) compatible with the global climate targets; 4) designing and quantifying as much as possible the international co-operations needed to make the participation in a post-2012 regime acceptable at least in economic terms; 5) disseminating the results to potential users for use in future negotiations.

**Partners:**

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| 4 | TSINGHUA UNIVERSITY | CN |
| 5 | INSTITUT FUR WELTWIRTSCHAFT | DE |
| 7 | Institute of Economic Growth, Delhi | IN |
| 8 | Beijing Institute of Technology | CN |

**Activity Code:** ENV.2008.1.1.5.1. **Funding Scheme:** CP **Duration (Months):** 42

**Title:** Reducing Emissions from Deforestation and Degradation through Alternative Landuses in Rainforests of the Tropics

**Proposed EC Grant:** 3.488.760 €

**Abstract:**

The proposal addresses Topic ENV.2008.1.1.5.1 “Addressing deforestation in tropical areas: greenhouse gas emissions, socio-economic drivers and impacts, and policy options for emissions reduction”. The overall goal of the project is to contribute to the development and evaluation of mechanisms and the institutions needed at multiple levels for changing stakeholder behaviour to slow tropical deforestation rates and hence reduce GHG emissions. This will be achieved through enhancing our understanding of the social, cultural, economic and ecological drivers of forest transition in selected case study areas in Southeast Asia, Africa and South America. This understanding will facilitate the identification and assessment of viable policy options addressing the drivers of deforestation and their consistency with policy approaches on avoided deforestation, such as Reduced Emissions from Deforestation and degradation (REDD), currently being discussed in UNFCCC and other relevant international fora. At the same time, ways of improving the spatial quantification of land use change and the associated changes in GHG fluxes will be developed, thereby improving the accounting of GHG emissions resulting from land use change in tropical forest margins and peatlands. This will allow the analysis of scenarios of the local impacts of potential international climate change policies on GHG emission reductions, land use, and livelihoods in selected case study areas, the results of which will be used to develop new negotiation support tools for use with stakeholders at international, national and local scales to explore a basket of options for incorporating REDD into post-2012 climate agreements. The project will provide a unique link between international policy-makers and stakeholders on the ground who will be required to change their behaviour regarding deforestation, thereby contributing to well-informed policy-making at the international level.

**Partners:**

| | | |
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| 8 | INTERNATIONAL INSTITUTE OF TROPICAL AGRICULTURE | NG |
| 9 | CENTRO INTERNACIONAL DE AGRICULTURA TROPICAL | CO |
| 10 | Balai Penelitian Tanah | ID |
| 11 | Research Centre for Forest Ecology and Environment | VN |
| 12 | INSTITUT DE RECHERCHE AGRICOLE POUR LE DEVELOPPEMENT | CM |
| 13 | Instituto Nacional de Innovacion Agraria | PE |

**Activity Code:** ENV.2008.1.1.2.1. **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Reconciliation of essential process parameters for an enhanced predictability of arctic stratospheric ozone loss and its climate interactions.

**Proposed EC Grant:** 3.499.782 €

**Abstract:**

The extent of polar stratospheric ozone loss – often referred to as the “Ozone Hole” – is significantly influenced by climate change, and in turn, stratospheric ozone has been recognized as an important component in the climate system. To accurately quantify the effects of climate change on stratospheric ozone and the related feedback mechanisms, as well as to make reliable predictions of future ozone loss and the so-called recovery date, a correct representation of all relevant processes is indispensable. However, a number of gaps in the understanding of these processes still exist. The issues where the lack of understanding is most palpable are (a) the catalytic ClOx/BrOx chemistry, (b) chlorine activation on cold stratospheric aerosol, (c) NAT nucleation mechanisms, and (d) mixing and transport of processed air to lower latitudes. The RECONCILE project sets out to address all these issues using a comprehensive approach that includes laboratory and field experiments together with microphysical and chemical transport modelling. RECONCILE will produce and test reliable parameterisations of the key processes in Arctic stratospheric ozone depletion and bridge these to large scale chemistry climate models (CCMs), thereby greatly enhancing their ability to realistically predict the future evolution of Arctic stratospheric ozone loss and the interaction with climate change.

**Partners:**

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| 3 | DEUTSCHES ZENTRUM FUER LUFT - UND RAUMFAHRT EV | DE |
| 4 | ALFRED-WEGENER-INSTITUT FUER POLAR- UND MEERESFORSCHUNG | DE |
| 5 | EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZURICH | CH |
| 6 | NORSK INSTITUTT FOR LUFTFORSKNING | NO |
| 7 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 8 | BERGISCHE UNIVERSITAET WUPPERTAL | DE |
| 9 | MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. | DE |
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| 13 | RUPRECHT-KARLS-UNIVERSITAET HEIDELBERG | DE |
| 14 | Karlsruher Institut fuer Technologie | DE |
| 15 | EÖTVÖS LORÁND TUDOMÁNYEGYETEM | HU |
| 18 | MET OFFICE | UK |

**Activity Code:** ENV.2008.1.1.1.1. **Funding Scheme:** CP **Duration (Months):** 57

**Title:** Ice2sea - estimating the future contribution of continental ice to sea-level rise

**Proposed EC Grant:** 9.994.842 €

**Abstract:**

The melting of continental ice (glaciers, ice caps and ice sheets) is a substantial source of current sea-level rise, and one that is accelerating more rapidly than was predicted even a few years ago. Indeed, the most recent report from Intergovernmental Panel on Climate Change highlighted that the uncertainty in projections of future sea-level rise is dominated by uncertainty concerning continental ice, and that understanding of the key processes that will lead to loss of continental ice must be improved before reliable projections of sea-level rise can be produced. The ice2sea programme will draw together European and international partners, to reduce these uncertainties. We will undertake targeted studies of key processes in mountain glacier systems and ice caps (e.g. Svalbard), and in ice sheets in both polar regions (Greenland and Antarctica) to improve understanding of how these systems will respond to future climate change. We will improve satellite determinations of continental ice mass, and provide much-needed datasets for testing glacier-response models. Using newly developed ice-sheet/glacier models, we will generate detailed projections of the contribution of continental ice to sea-level rise over the next 200 years, and identify thresholds that commit the planet to long-term sea-level rise. We will deliver these results in forms accessible to scientists, policy-makers and the general public, which will include clear presentations of the sources of uncertainty. The ice2sea programme will directly inform the ongoing international debate on climate-change mitigation, and European debates surrounding coastal adaptation and sea-defence planning. It will leave a legacy of improved understanding of key cryospheric processes affecting development of the Earth System and the predictive tools for glacier-response modelling, and it will train a new generation of young European researchers who can use those tools for the future benefit of society.

**Partners:**

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|---|---|---|
| 1 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 2 | ALFRED-WEGENER-INSTITUT FUER POLAR- UND MEERESFORSCHUNG | DE |
| 3 | CSC-TIETEEN TIETOTEKNIIKAN KESKUS OY | FI |
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| 21 | CENTRO DE ESTUDIOS CIENTIFICOS | CL |
| 22 | AGENZIA NAZIONALE PER LE NUOVE TECNOLOGIE,L'ENERGIA E LO SVILUPPO ECONOMICO SOSTENIBILE | IT |
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| 24 | Instytut Geofizyki Polskiej Akademii Nauk | PL |
| 25 | UNIVERSITY OF LEEDS | UK |

**Activity Code:** ENV.2008.1.1.4.1. **Funding Scheme:** CP **Duration (Months):** 54

**Title:** Comprehensive Modelling of the Earth system for better climate prediction and projection

**Proposed EC Grant:** 7.922.680 €

**Abstract:**

The European integrating project COMBINE brings together research groups to advance Earth system models (ESMs) for more accurate climate projections and for reduced uncertainty in the prediction of climate and climate change in the next decades. COMBINE will contribute to better assessments of changes in the physical climate system and of their impacts in the societal and economic system. The proposed work will strengthen the scientific base for environmental policies of the EU for the climate negotiations, and will provide input to the IPCC/AR5 process. COMBINE proposes to improve ESMs by including key physical and biogeochemical processes to model more accurately the forcing mechanisms and the feedbacks determining the magnitude of climate change in the 21st century. For this purpose the project will incorporate carbon and nitrogen cycle, aerosols coupled to cloud microphysics and chemistry, proper stratospheric dynamics and increased resolution, ice sheets and permafrost in current Earth system models. COMBINE also proposes to improve initialization techniques to make the best possible use of observation based analyses of ocean and ice to benefit from the predictability of the climate system in predictions of the climate of the next few decades. Combining more realistic models and skilful initialization is expected to reduce the uncertainty in climate projections. Resulting effects will be investigated in the physical climate system and in impacts on water availability and agriculture, globally and in 3 regions under the influence of different climate feedback mechanisms. Results from the comprehensive ESMs will be used in an integrated assessment model to test the underlying assumptions in the scenarios, and hence to contribute to improved scenarios. COMBINE will make use of the experimental design and of the scenarios proposed for IPCC AR5. Therefore the project will be able to contribute to the AR5, by its relevant research and by the contribution of experiments to the IPCC data archives.

**Partners:**

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| 7 | UNIVERSITETET I BERGEN | NO |
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| 18 | UNIVERSITY OF BRISTOL | UK |
| 19 | UNIVERSITAET KASSEL | DE |
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| 23 | THE UNIVERSITY OF EXETER | UK |
| 24 | MINISTERIE VAN INFRASTRUCTUUR EN MILIEU | NL |

**Activity Code:** ENV.2008.1.1.6.2. **Funding Scheme:** CP **Duration (Months):** 39

**Title:** Implications and risks of engineering solar radiation to limit climate change

**Proposed EC Grant:** 999.152 €

**Abstract:**

The overall goal of this project is to significantly increase the level of knowledge about the feasibility and implications of novel options (or "geoengineering concepts"), proposed recently to limit climate change. Among these possibilities, a deliberate manipulation of the radiative budget of the Earth may allow a counterbalancing of the effects of continued greenhouse gas emissions on global temperature, but may also result in undesirable side effects for crucial parts of the Earth system and humankind. Three complex climate models will be used to quantify the effectiveness and side effects of such geoengineering concepts aiming at a reduction of the incoming solar radiation. Simulations of a climate modified through geoengineering will be performed based on IPCC type future emission scenarios. Economic modelling will be used to link benefits and side effects of the studied geoengineering concepts. The results of the study will be discussed with the scientific community, policy- and law-related communities and interested non-governmental organizations (NGOs).

**Partners:**

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| 3 | UNIVERSITETET I OSLO | NO |
| 4 | CICERO SENTER KLIMAFORSKNING STIFTELSE | NO |

**Activity Code:** ENV.2008.1.1.3.1. **Funding Scheme:** CP **Duration (Months):** 48

**Title:** The terrestrial Carbon cycle under Climate Variability and Extremes – a Pan-European synthesis

**Proposed EC Grant:** 3.312.754 €

**Abstract:**

The aim of this project is to achieve an improved knowledge of the terrestrial carbon cycle in response to climate variability and extremes, to represent and apply this knowledge over Europe with predictive terrestrial carbon cycle modelling, to interpret the model predictions in terms of vulnerability of the terrestrial – in particular soil – carbon pools and give according advice to EU climate and soil protection policies. This objective will be achieved by integrating three major types of recent and new solid scientific carbon cycle data, from: (i) soil process studies, (ii) a network of established ecosystem manipulation experiments, and (iii) long-term observations spanning several times-scales (e.g. eddy covariance data, tree rings and growth, crop yields, long-term remote sensing data on soil moisture and vegetation activity and soil carbon inventories). The integration will be reached by establishing a consistent and harmonized data base and by confronting the terrestrial carbon cycle models with the multiple data sets within a Bayesian model identification and improvement procedure. Specific model development concerning processes affected by extreme events (e.g. soil carbon destabilization, tree growth response incl. lag effects and mortality) will be included and followed by model testing and improvement against the data made available in the project. The improved models will simulate terrestrial processes relevant to carbon balance and soil erosion at pan- European scale using regionalized climate scenarios with explicit inclusion of extreme climatic events. Since we are using several climate scenarios and an ensemble of models we will be able to characterize the uncertainties in prediction coming from models and climate scenarios. We will interpret the empirical evidence from the observational work and the model simulations in a framework of vulnerability assessment and disseminate and discuss results with stakeholders at EU level.

**Partners:**

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|---|---|---|
| 1 | MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. | DE |
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| 11 | CRANFIELD UNIVERSITY | UK |
| 12 | DANMARKS TEKNISKE UNIVERSITET | DK |
| 13 | INSTITUTUL DE CERCETARI SI AMENAJARI SILVICE | RO |
| 14 | INTERNATIONALES INSTITUT FUER ANGEWANDTE SYSTEMANALYSE | AT |
| 15 | INSTITUTO NACIONAL DE INVESTIGACION Y TECNOLOGIA AGRARIA Y ALIMENTARIA | ES |
| 16 | MET OFFICE | UK |
| 18 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 19 | SVERIGES LANTBRUKSUNIVERSITET | SE |
| 20 | UNIVERSITAET INNSBRUCK | AT |
| 21 | VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG | NL |
| 22 | EIDGENOESSISCHE FORSCHUNGSANSTALT WSL | CH |
| 23 | GOTTFRIED WILHELM LEIBNIZ UNIVERSITAET HANNOVER | DE |
| 24 | LUNDS UNIVERSITET | SE |
| 25 | FUNDACION CENTRO DE ESTUDIOS AMBIENTALES DEL MEDITERRANEO | ES |
| 26 | UNIVERSITE PARIS-SUD XI | FR |
| 27 | UNIVERSIDAD DE ALCALA | ES |

**Activity Code:** ENV.2008.1.1.6.1. **Funding Scheme:** CP **Duration (Months):** 36

**Title:** HighNoon: adaptation to changing water resources availability in northern India with Himalayan glacier retreat and changing monsoon pattern

**Proposed EC Grant:** 3.311.751 €

**Abstract:**

The hydrological system of Northern India is based on two main phenomena, the monsoon precipitation in summer and the growth and melt of the snow and ice cover in the Himalaya, also called the “Water Tower of Asia”. However, climate change is expected to change these phenomena and it will have a profound impact on snow cover, glaciers and its related hydrology, water resources and the agricultural economy on the Indian peninsula (Singh and Kumar, 1996, Divya and Mehrotra, 1995). It is a great challenge to integrate the spatial and temporal glacier retreat and snowmelt and changed monsoon pattern in weather prediction models under different climate scenarios. Furthermore, the output of these models will have an effect on the input of the hydrological models. The retreat of glaciers and a possible change in monsoon precipitation and pattern will have a great impact on the temporal and spatial availability of water resources in Northern India. Besides climate change, socio-economic development will also have an influence on the use of water resources, the agricultural economy and the adaptive capacity. Socio-economic development determines the level of adaptive capacity. It is a challenge to find appropriate adaptation strategies with stakeholders for each of the sectors agriculture, energy, health and water supply by assessing the impact outputs of the hydrological and socio-economical models. The principal aim of the project is to assess the impact of Himalayan glaciers retreat and possible changes of the Indian summer monsoon on the spatial and temporal distribution of water resources in Northern India and to provide recommendations for appropriate and efficient response strategies that strengthen the cause for adaptation to hydrological extreme events.

**Partners:**

| | | |
|---|---|---|
| 1 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 2 | THE ENERGY AND RESOURCES INSTITUTE | IN |
| 3 | MET OFFICE | UK |
| 4 | THE UNIVERSITY OF SALFORD | UK |
| 5 | FOUNDATION FOR INNOVATION AND TECHNOLOGY TRANSFER | IN |
| 7 | MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. | DE |
| 8 | INDIAN INSTITUTE OF TECHNOLOGY, KHARAGPUR | IN |
| 9 | NAGOYA UNIVERSITY | JP |
| 10 | UNIVERSITE DE GENEVE | CH |

**Activity Code:** ENV.2009.1.1.1.1 **Funding Scheme:** CP **Duration (Months):** 60

**Title:** Climate change - Learning from the past climate

**Proposed EC Grant:** 6.647.909 €

**Abstract:**

Past4Future will combine multidisciplinary paleoclimate records from ice cores, marine cores, speleothems, pollen and other records, concentrating on a global distribution of the records, to reconstruct climate change and variability during the present interglacial (the Holocene) and the last interglacial (known as the Eemian in northwestern Europe and as marine isotope stage 5e in the marine sediment records). The records will be combined in integrated analyses aided by proxy modeling and assimilation, to gain understanding of the climate processes involved in the dynamics of interglacial climates. Earth system models (ESM) including physical and biogeochemical processes will be applied to simulate the past and present interglacial climate, and to confront and intercompare the simulations with climate changes as observed from the palaeodata; this will both advance the models and our understanding of the dynamics and predictability of the climate system. Focus will be on the most recent two interglacial periods, as these provide the highest-resolved most comprehensive data records. Moreover the last interglacial represents a situation where the mean state was warmer than at present in large regions due to orbital forcing, thereby allowing tests of climate system sensitivity to constrain projections of potential future ice sheet, sea-level, circulation and biogeochemical changes. The data and Earth system model results will be used improve our capabilities to project future global and regional warming from a better understanding of relevant paleoclimates, especially in relation to sea level changes, sea ice changes and thermohaline circulation changes.The Past4Future program will draw together a world leading team of European and international partners in a concerted effort to advance our knowledge on the causes, processes and risks of abrupt changes in warm periods, such as those projected for the current and the next century. The program will inform the international debate on climate system stability and the dissemination of results will be targeted to both citizens and governmental and non-governmental stakeholders. It will leave a legacy of improved understanding of past drivers of sea level changes, changes of sea ice, and of greenhouse gas concentrations, and it will train a new generation of young climate researchers to further advance research and improved future predictions for the benefit of society and our capacity to mitigate and adapt to climate changes.

**Partners:**

| | | |
|---|---|---|
| 1 | KOBENHAVNS UNIVERSITET | DK |
| 2 | UNI RESEARCH AS | NO |
| 3 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 4 | AARHUS UNIVERSITET | DK |
| 4 | AARHUS UNIVERSITET | DK |
| 5 | UNIVERSITAET BERN | CH |
| 6 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 7 | UNIVERSITAT AUTONOMA DE BARCELONA | ES |
| 8 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 9 | UNIVERSITY OF BRISTOL | UK |
| 10 | UNIVERSITE CATHOLIQUE DE LOUVAIN | BE |
| 11 | UNIVERSITAET BREMEN | DE |
| 12 | MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. | DE |
| 13 | VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG | NL |
| 14 | COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES | FR |
| 15 | UNIVERSITY COLLEGE LONDON | UK |
| 16 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 17 | ALFRED-WEGENER-INSTITUT FUER POLAR- UND MEERESFORSCHUNG | DE |
| 18 | THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE | UK |
| 19 | PAGES ASSOCIATION | CH |
| 21 | EAST CHINA NORMAL UNIVERSITY ECNU | CN |
| 22 | UNIVERSITY OF OTTAWA | CA |
| 23 | UNIVERSITE DU QUEBEC A MONTREAL*UQAM | CA |

**Activity Code:** ENV.2009.1.1.6.1 **Funding Scheme:** CP **Duration (Months):** 42

**Title:** Methodology for Effective Decision-making on Impacts and AdaptaTION (MEDIATION)

**Proposed EC Grant:** 3.142.744 €

**Abstract:**

Assessment of climate change impacts, vulnerability and adaptation requires a combination of generic and context-specific knowledge. Currently, the availability of such knowledge in Europe is fragmented and incomplete. MEDIATION addresses this challenge through six activities: (i) analysis of the decision-making context; (ii) inventory, review and improvement of methods and metrics for impacts and vulnerability analysis; (iii) likewise for costing of impacts and adaptation options; (iv) development of an overarching integrated methodology; (v) development of a flexible, interactive common platform for knowledge sharing; and (vi) dissemination of this knowledge and training. The components of the project will be connected in an iterative fashion, using case studies which combine selected regional, sectoral and cross-sectoral characteristics and policy questions. The consortium combines eleven top European scientific institutions with a high reputation and long experience in impacts, vulnerability and adaptation research and assessment. They represent different regions in Europe with contrasting vulnerabilities, cover the wide array of disciplinary and interdisciplinary knowledge required to assess sectoral and cross-sectoral vulnerabilities, already participate in numerous related European and national research programmes, and have extensive expertise in science-policy interactions. The project will establish an Advisory Group of key international scientific experts and climate change policy makers to strengthen the scientific basis of the project as well as the policy relevance. In addition to scientific innovation, MEDIATION aims at supporting national and international policy development through targeted interactions, including the UNFCCC process (notably the Nairobi Work Programme), and the EU White Paper process, the latter by systematically addressing the components of the 3rd pillar of the EU Green Paper related to knowledge development and sharing.

**Partners:**

| | | |
|---|---|---|
| 1 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 2 | INTERNATIONALES INSTITUT FUER ANGEWANDTE SYSTEMANALYSE | AT |
| 3 | GCF - GLOBAL CLIMATE FORUM EV | DE |
| 4 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 5 | POTSDAM INSTITUT FUER KLIMAFOLGENFORSCHUNG | DE |
| 6 | REGIONAL ENVIRONMENTAL CENTER FOR CENTRAL AND EASTERN EUROPE -REC | HU |
| 7 | SEI OXFORD OFFICE LIMITED*STOCKHOLMENVIRONMENT INSTITUTE OXFORD OFFICE SEI LTD | UK |
| 8 | SUOMEN YMPARISTOKESKUS | FI |
| 9 | UNIVERSITA DEGLI STUDI DI FIRENZE | IT |
| 10 | UNIVERSIDAD POLITECNICA DE MADRID | ES |
| 11 | WAGENINGEN UNIVERSITEIT | NL |

**Activity Code:** ENV.2009.1.1.6.1 **Funding Scheme:** CP **Duration (Months):** 42

**Title:** Climate change integrated assessment methodology for cross-sectoral adaptation and vulnerability in Europe

**Proposed EC Grant:** 3.149.644 €

**Abstract:**

CLIMSAVE will develop and apply an integrated methodology for stakeholder-led, climate change impact and vulnerability assessment that explicitly evaluates regional and continental scale adaptation options, and cross-sectoral interactions between the key sectors driving landscape change in Europe (agriculture, forests, biodiversity, coasts/floodplains, water resources, urban development and transport). A range of sectoral meta-models will be linked within a common assessment platform that is user-friendly, interactive and web-based to allow the rapid reproduction of climate change impacts by stakeholders themselves. The meta-models will be derived from detailed state-of-the-art models which represent the latest results on impacts of, and vulnerability to, climate change and which are appropriate for multi-scale spatially explicit impact studies. Indicator metrics, which translate the outputs from the integrated models into ecosystem services outcomes, will create a standardised approach across sectors ensuring comparability in quantifying impacts and vulnerability. The integrated assessment platform will use these metrics to identify hotspots of climate change vulnerability and provide the ability to assess adaptation strategies for reducing these vulnerabilities, in terms of their cost-effectiveness and cross-sectoral benefits and conflicts. Methods for reducing uncertainties and increasing the transparency of model and scenario assumptions will be implemented to inform the development of robust policy responses. A series of professionally facilitated workshops will identify stakeholder needs and test an innovative methodology for participatory scenario development specifically geared towards interactive climate change impact and adaptation assessment. Two sets of three workshops at two levels (European and regional) will ensure that the CLIMSAVE methodologies work at different scales and provide for continuity of engagement and mutual learning.

**Partners:**

| | | |
|---|---|---|
| 1 | THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF OXFORD | UK |
| 2 | FUNDATIA PENTRU TEHNOLOGIA INFORMATIEI APLICATE IN MEDIU,AGRICULTURA SI SCHIMBARI GLOBALE | RO |
| 3 | PROSPEX BVBA | BE |
| 4 | ESSRG Kft. | HU |
| 5 | CRANFIELD UNIVERSITY | UK |
| 6 | CENTRO DE INVESTIGACION ECOLOGICA YAPLICACIONES FORESTALES | ES |
| 7 | UNIVERSITAET KASSEL | DE |
| 8 | MENDELOVA UNIVERZITA V BRNE | CZ |
| 9 | University of the Aegean-Research Unit | EL |
| 10 | TINCH ROBERT ROSS TEMPLETON | BE |
| 11 | SERI - NACHHALTIGKEITSFORSCHUNGS UND -KOMMUNIKATIONS GmbH | AT |
| 12 | THE UNIVERSITY OF EDINBURGH | UK |
| 13 | LUNDS UNIVERSITET | SE |
| 15 | WAGENINGEN UNIVERSITEIT | NL |
| 16 | UNIVERSITY OF SOUTHAMPTON | UK |
| 17 | Institute of Environment and Sustainable Development in Agriculture,Chinese Academy of Agricultural Sciences | CN |
| 18 | University of the Sunshine Coast | AU |
| 19 | Victoria University | AU |

**Activity Code:** ENV.2009.1.1.4.1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** EU Cloud Intercomparison, Process Study and Evaluation Project

**Proposed EC Grant:** 3.500.000 €

**Abstract:**

Cloud feedbacks remain the largest source of uncertainty in projections of future climate. They are also a major contributor to uncertainty in other feedbacks (e.g., surface albedo, carbon cycle) in the Earth System. Through interactions with the large-scale circulation, cloud processes also contribute to synoptic circulations and regional climate. They are therefore critical to the prediction of future changes in precipitation patterns, climate variability and extreme events. The central objective of EUCLIPSE is to reduce the uncertainty in the representation of cloud processes and feedbacks in the new generation of Earth System Models (ESMs), in support of the IPCC's fifth assessment report. Novel, process-oriented evaluations of clouds in present-day and future climate simulations made by the leading European ESMs will identify the cloud types and processes responsible for the spread in climate sensitivity and future precipitation changes across the models, and for deficiencies in the simulation of the present-day climate. The new diagnostics and metrics developed in EUCLIPSE will inform targeted sensitivity experiments to isolate the processes responsible for cloud feedback uncertainty. In EUCLIPSE, four distinct communities will work together across a set of integrated work packages over a four-year period: the observational community will provide state-of-the-art measurements from ground- and space-based active and passive remote sensing; the numerical weather prediction community will provide analyses of short timescale model biases induced by cloud processes; the cloud modeling community will provide fine-scale models as an additional tool for understanding cloud behavior in a changing climate; finally, the climate modeling community will synthesize the physical understanding and observational constraints identified by the other communities to improve the representation and assessment of cloud processes in ESMs and so improve the predictive skill of ESMs.

**Partners:**

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|---|---|---|
| 1 | KONINKLIJK NEDERLANDS METEOROLOGISCH INSTITUUT (KNMI) | NL |
| 2 | MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. | DE |
| 3 | MET OFFICE | UK |
| 4 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 5 | ACADEMY OF ATHENS | EL |
| 6 | EUROPEAN CENTRE FOR MEDIUM-RANGE WEATHER FORECASTS | UK |
| 7 | TECHNISCHE UNIVERSITEIT DELFT | NL |
| 8 | METEO-FRANCE | FR |
| 9 | STOCKHOLMS UNIVERSITET | SE |
| 10 | EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZURICH | CH |
| 11 | UNIWERSYTET WARSZAWSKI | PL |
| 13 | Deutsches Klimarechenzentrum GmbH | DE |

**Activity Code:** ENV.2009.1.1.6.2 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** European responses to climate change: deep emissions reductions and mainstreaming of mitigation and adaptation

**Proposed EC Grant:** 3.149.659 €

**Abstract:**

EU action on climate change is now focused on accelerating mitigation efforts, while seeking to reduce risks associated with climate change impacts. To achieve the multiple goals of cutting greenhouse gas emissions, reducing vulnerability to climate impacts, and building mitigative and adaptive capacities, climate action needs to be mainstreamed across all EU policy sectors. As the scale of European policy grows, mitigation and adaptation need increasingly to be integrated. These policies have strong international dimensions. The RESPONSES project addresses EU policy challenges by: developing new global low emissions scenarios, placing EU efforts in a global context; building an approach for assessing EU policies against mitigation and adaptation objectives and for developing alternative policy options; applying this framework in five EU policy sectors (water and agriculture, biodiversity, regional development/infrastructure, health and energy), linked by a set of cross-sectoral integrative activities; and synthesizing the results to new policy strategies. The main outputs of the project will be: a set of global low emission scenarios, differentiated by key countries; options and strategies for integrating mitigation and resilience to climate impacts into EU policies; a validated strategic climate assessment approach. The RESPONSES consortium brings together seven leading European research institutes working on climate change scenarios, modelling, analysis and policy, combining the necessary disciplinary and sectoral expertise. Chinese, Indian and US partners and associates will also participate in the project. The consortium builds on partners' experience in other EU and national projects, including the ADAM project, and will foster close relationships with policymakers. Research outputs will be of direct relevance to the IPCC and to post-2012 international negotiations, as well as supporting implementation of the EU White Paper on Adaptation.

**Partners:**

| | | |
|---|---|---|
| 1 | VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG | NL |
| 2 | INTERNATIONALES INSTITUT FUER ANGEWANDTE SYSTEMANALYSE | AT |
| 3 | FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V | DE |
| 5 | UNIVERSITY OF EAST ANGLIA | UK |
| 6 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 7 | Ministerie van Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer | NL |
| 8 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 9 | INSTITUTE OF POLICY AND MANAGEMENT, CHINESE ACADEMY OF SCIENCES | CN |
| 10 | THE ENERGY AND RESOURCES INSTITUTE | IN |
| 11 | HELSINGIN YLIOPISTO | FI |
| 12 | MINISTERIE VAN INFRASTRUCTUUR EN MILIEU | NL |

**Activity Code:** ENV.2009.1.1.3.1 **Funding Scheme:** CP **Duration (Months):** 42

**Title:** Greenhouse gas management in European land use systems

**Proposed EC Grant:** 6.648.704 €

**Abstract:**

The GHG-Europe project aims to improve our understanding and capacity for predicting the European terrestrial carbon and greenhouse gas (GHG) budget by applying a systematic, comprehensive and integrative approach. GHG-Europe quantifies the annual to decadal variability of the carbon and GHG budgets of terrestrial ecosystems in EU27 plus Switzerland and in six data-rich European regions via data-model integration, diagnostic and predictive modelling. Models are calibrated by multi-site observations. Research includes CO2, CH4 and N2O in forests, croplands, grasslands, shrublands, peatlands and soils. Via an integrated approach, GHG Europe scales up consistently from local to regional and continental scale via scale dependent error propagation and systematic quantification of uncertainties, model validation at different scales and top-down verification by atmospheric inversion models. At regional and European scale lateral C transport by land use, trade and rivers are included. Variability in C and GHG budgets is attributed to natural (climate) and anthropogenic drivers (N deposition, land use, past and present management) by synthesis of past and emerging experiments, targeted observations in hot spots and hot moments and model sensitivity analyses. For this purpose, observations are extended to under-sampled regions and ecosystems with likely high importance for the European C budget: forests and land use change in Eastern Europe and Mediterranen shrublands. The future vulnerability of carbon pools and risks of positive feedbacks in the climate-carbon system are assessed by scenario analyses with biophysical models and by integrating feedbacks with socio-economic changes and EU climate and land use policies. GHG-Europe uses a bidirectional interaction with stakeholders to provide regular and timely scientific advice targeted to the emerging needs of the UNFCCC process and for implementing post-2012 climate commitments in Europe.

**Partners:**

| | | |
|---|---|---|
| 1 | JOHANN HEINRICH VON THUENEN-INSTITUT, BUNDESFORSCHUNGSINSTITUT FUER LANDLICHE RAUME, WALD UND FISCHEREI | DE |
| 2 | COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES | FR |
| 3 | INTERNATIONALES INSTITUT FUER ANGEWANDTE SYSTEMANALYSE | AT |
| 4 | MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. | DE |
| 5 | THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN | UK |
| 6 | UNIVERSITA DEGLI STUDI DELLA TUSCIA | IT |
| 7 | VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG | NL |
| 9 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 10 | EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZURICH | CH |
| 11 | INSTITUTUL DE CERCETARI SI AMENAJARI SILVICE | RO |
| 12 | INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE | FR |
| 13 | UNIWERSYTET PRZYRODNICZY W POZNANIU* | PL |
| 14 | TECHNISCHE UNIVERSITAET MUENCHEN | DE |
| 15 | UNIVERSITEIT ANTWERPEN | BE |
| 16 | FUNDACION CENTRO DE ESTUDIOS AMBIENTALES DEL MEDITERRANEO | ES |
| 17 | HELSINGIN YLIOPISTO | FI |
| 18 | Bundesforschungs-und Ausbildungszentrum für Wald, Naturgefahren und Landschaft | AT |
| 19 | FONDAZIONE EDMUND MACH | IT |
| 20 | DANMARKS TEKNISKE UNIVERSITET | DK |
| 21 | STICHTING ENERGIEONDERZOEK CENTRUM NEDERLAND | NL |
| 22 | EUROPEAN FOREST INSTITUTE | FI |
| 23 | ILMATIETEEN LAITOS | FI |
| 24 | JOANNEUM RESEARCH FORSCHUNGSGESELLSCHAFT MBH | AT |
| 25 | Autonomous Province of Bolzano/Bozen | IT |
| 26 | RIJKSUNIVERSITEIT GRONINGEN | NL |
| 27 | SVERIGES LANTBRUKSUNIVERSITET | SE |
| 28 | SUOMEN YMPARISTOKESKUS | FI |
| 29 | UNIVERSITY COLLEGE DUBLIN, NATIONAL UNIVERSITY OF IRELAND, DUBLIN | IE |
| 30 | KOBENHAVNS UNIVERSITET | DK |
| 31 | UNIVERSITAET INNSBRUCK | AT |
| 32 | ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA | IT |
| 33 | UNIVERSIDAD DE GRANADA | ES |
| 34 | WAGENINGEN UNIVERSITEIT | NL |
| 35 | Università degli Studi di Udine | IT |
| 36 | RUPRECHT-KARLS-UNIVERSITAET HEIDELBERG | DE |

| | | |
|---|---|---|
| 37 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 38 | CENTRE TECNOLOGIC FORESTAL DE CATALUNYA | ES |
| 39 | UNIVERSIDAD DE CASTILLA - LA MANCHA | ES |
| 40 | METEO-FRANCE | FR |
| 41 | POTSDAM INSTITUT FUER KLIMAFOLGENFORSCHUNG | DE |
| 42 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |

**Activity Code:** ENV.2009.1.1.6.3 **Funding Scheme:** CSA **Duration (Months):** 18

**Title:** Climate Change and Marine Ecosystem Research Results

**Proposed EC Grant:** 991.357 €

**Abstract:**

Although there is no certainty regarding the precise nature and rate of future climate change, even the most moderate scenarios predict a continuing change of the marine environment, with associated major environmental and social impacts. To prepare society for the necessary mitigation and adaptation measures, the awareness of citizens to research results, both certainties and uncertainties, in this specific area should be raised. During the last years, much new information has been gathered in large EU-funded research, but to date this information has not been synthesized nor has it become an important part of public knowledge. The aim of this proposal is to make a synthesis of EU research results on the impacts of climate change on the marine environment and to make this knowledge and its socio-economic consequences better known to European citizens and society at large. Together with expert representatives of major Networks of Excellence, large EU projects and research networks, we will produce a state-of-the-art overview of European research results on the effects of climate change on marine environment. An up-to-date overview of public knowledge and perception on the effects of climate change on marine environments and their socio-economic consequences will be produced by means of polls and questionnaires. The results will be used to identify the main issues to be addressed and the best practices to be used during the outreach activities. Enhancement of public knowledge on climate change impacts on the marine environment, including the socio-economic consequences, will be achieved by means of challenging and innovative tools such as an interactive Pan-European conference at the end of 2010 and a high-quality internet-based portal within an e-learning platform. These outreach activities will build upon recent experience as has been gathered within EU-funded research to communicate with European citizens on impacts of climate change on marine ecosystems.

**Partners:**

| | | |
|---|---|---|
| 1 | STICHTING KONINKLIJK NEDERLANDS INSTITUUT VOOR ZEEONDERZOEK (NIOZ) | NL |
| 2 | FONDATION EUROPEENNE DE LA SCIENCE | FR |
| 3 | THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS | UK |
| 4 | VLAAMS INSTITUUT VOOR DE ZEE VZW | BE |
| 5 | DANMARKS METEOROLOGISKE INSTITUT | DK |
| 6 | PLYMOUTH MARINE LABORATORY | UK |
| 7 | UNIVERSITE DE BRETAGNE OCCIDENTALE | FR |
| 8 | UNIVERSITA POLITECNICA DELLE MARCHE | IT |
| 9 | HELLENIC CENTRE FOR MARINE RESEARCH | EL |
| 10 | NATIONAL UNIVERSITY OF IRELAND, GALWAY | IE |
| 11 | KONINKLIJKE NEDERLANDSE AKADEMIE VAN WETENSCHAPPEN - KNAW | NL |
| 12 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 13 | UNIVERSITY OF EAST ANGLIA | UK |
| 14 | SOPAB BREST SA | FR |
| 15 | SIR ALISTER HARDY FOUNDATION FOR OCEAN SCIENCE | UK |
| 16 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 17 | UNIVERSITETET I TROMSOE | NO |

**Activity Code:** ENV.2009.1.1.5.2 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Climate Induced Changes on the Hydrology of Mediterranean Basins: Reducing Uncertainty and Quantifying Risk through an Integrated Monitoring and Modeling System

**Proposed EC Grant:** 3.148.945 €

**Abstract:**

With regard to the objectives specified in ENV-2009.1.1.5.2, modeling capabilities must be improved and appropriate tools developed to advance the capability to assess climate effects on water resources and uses. The project consortium will employ a combination of novel field monitoring concepts, remote sensing techniques, integrated hydrologic (and biophysical) modeling and socioeconomic factor analyses to reduce existing uncertainties in climate change impact analysis and to create an integrated quantitative risk and vulnerability assessment tool. Together, these will provide the necessary information to design appropriate adaptive water resources management instruments and select suitable agricultural practices under climate change conditions. The integrated risk and vulnerability analysis tool will also enable assessment of risks for conflict-inducing actions, e.g. migration. The improved models, new assessment tools, and their results will be evaluated against current methodologies. Improvements will be communicated to stakeholders and decision makers in a transparent, easy-to-understand form, enabling them to utilize the new findings in regional water resource and agricultural management initiatives as well as in the design of mechanisms to reduce potential for conflict (linkage to SSH-2009.4.2.1).

**Partners:**

| | | |
|---|---|---|
| 1 | LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN | DE |
| 2 | Agris Sardegna - Agenzia per la Ricerca in Agricoltura | IT |
| 3 | CHRISTIAN-ALBRECHTS-UNIVERSITAET ZU KIEL | DE |
| 4 | INSTITUT NATIONAL DE RECHERCHE EN SCIENCES ET TECHNOLOGIES POUR L'ENVIRONNEMENT ET L'AGRICULTURE | FR |
| 5 | CENTRE DE RECHERCHES ET DES TECHNOLOGIES DES EAUX | TN |
| 6 | Consorzio Interuniversitario Nazionale per la Fisica delle Atmosfere e delle Idrosfere | IT |
| 7 | CENTRO DI RICERCA, SVILUPPO E STUDI SUPERIORI IN SARDEGNA | IT |
| 8 | DEUTSCHES ZENTRUM FUER LUFT - UND RAUMFAHRT EV | DE |
| 9 | FORSCHUNGSZENTRUM JUELICH GMBH | DE |
| 10 | GEBZE YUKSEK TEKNOLOJI ENSTITUSU | TR |
| 11 | Institut national de la recherche scientifique | CA |
| 12 | JOANNEUM RESEARCH FORSCHUNGSGESELLSCHAFT MBH | AT |
| 13 | UNIVERSITE D'ANGERS | FR |
| 14 | Islamic University of Gaza | PS |
| 15 | UNIVERSITA DEGLI STUDI DI PADOVA | IT |
| 16 | UNIVERSITA DEGLI STUDI DI TRENTO | IT |
| 17 | ZAGAZIG UNIVERSITY | EG |
| 18 | VISTA Geowissenschaftliche Fernerkundung GmbH | DE |
| 19 | BAYERISCHE FORSCHUNGSALLIANZ GEMEINNUTZIGE GMBH | DE |
| 20 | UNIVERSITE FRANCOIS RABELAIS DE TOURS | FR |

**Activity Code:** ENV.2009.1.1.5.1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Climate change predictions in Sub-Saharan Africa: impacts and adaptations

**Proposed EC Grant:** 3.496.232 €

**Abstract:**

Africa is probably the most vulnerable continent to climate change and climate variability and shows diverse range of agro-ecological and geographical features. Thus the impacts of climate change can be very high and will greatly differ across the continent, and even within countries. There is a urgent need for the most appropriate and up-to-date tools to better understand and predict climate change, assess its impact on African ecosystems and population, and develop the correct adaptation strategies. In particular the current proposal will focus on the following specific objectives: 1- Develop improved climate predictions on seasonal to decadal climatic scales, especially relevant to SSA; 2- Assess climate impacts in key sectors of SSA livelihood and economy, especially water resources and agriculture; 3- Evaluate the vulnerability of ecosystems and civil population to inter-annual variations and longer trends (10 years) in climate; 4- Suggest and analyse new suited adaptation strategies, focused on local needs; 5- Develop a new concept of 10 years monitoring and forecasting warning system, useful for food security, risk management and civil protection in SSA; 6- Analyse the economic impacts of climate change on agriculture and water resources in SSA and the cost-effectiveness of potential adaptation measures. This objectives will be achieved by an integrated working approach that involves 9 European, 8 African and 1 International Organization.

**Partners:**

| | | |
|---|---|---|
| 1 | CENTRO EURO-MEDITERRANEO PER I CAMBIAMENTI CLIMATICI SCARL | IT |
| 2 | LUNDS UNIVERSITET | SE |
| 3 | COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES | FR |
| 4 | MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. | DE |
| 5 | VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG | NL |
| 6 | CENTRE TECNOLOGIC FORESTAL DE CATALUNYA | ES |
| 7 | POTSDAM INSTITUT FUER KLIMAFOLGENFORSCHUNG | DE |
| 8 | CENTRE DE COOPERATION INTERNATIONAL EN RECHERCHE AGRONOMIQUE POUR LE DEVELOPPEMENT | FR |
| 9 | FOOD AND AGRICULTURE ORGANISATION OF THE UNITED NATIONS FAO | IT |
| 10 | Stichting Onderzoek Wereldvoedselvoorziening van de Vrije Universiteit | NL |
| 11 | UNITE DE RECHERCHE SUR LA PRODUCTIVITE DES PLANTATIONS INDUSTRIELLES | CG |
| 12 | UNIVERSITY OF CAPE TOWN | ZA |
| 13 | UNIVERSITY OF MALAWI | MW |
| 14 | UNIVERSITE DE LOME | TG |
| 15 | Agricultural Research Corporation | SD |
| 16 | IGAD CENTRE FOR CLIMATE PREDICTION AND APPLICATION | KE |
| 17 | COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH | GH |
| 18 | CERPINEDD CENTRED ETUDE DE RECHERCHE ET DE PRODUCTION EN INFORMATION POUR L ENVIRONNEMENT ET LE DEVELOPPEMENT DURABLE | BF |

**Activity Code:** ENV.2009.1.1.5.2 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Water Availability and Security in Southern EuRope and the Mediterranean

**Proposed EC Grant:** 2.933.973 €

**Abstract:**

The WASSERMed project will analyse, in a multi-disciplinary way, ongoing and future climate induced changes in hydrological budgets and extremes in southern Europe, North Africa and the Middle East under the frame of threats to national and human security. A climatic and hydrological component directly addresses the reduction of uncertainty and quantification of risk. This component will provide an interface to other climatologic projects and models, producing climate change scenarios for the Mediterranean and Southern Europe, with special emphasis on precipitation. Five case studies will be considered: 1) Syros Island (Greece), 2) Sardinia Island (Italy), 3) Merguellil watershed (Tunisia), 4) Jordan river basin, and 5) the Nile River system (Egypt). The case studies are illustrative and represent situations which deserve special attention, due to their relevance to national and human security. Furthermore, impacts on key strategic sectors, such as agriculture and tourism, will be considered, as well as macroeconomic implications of water availability in terms of regional income, consumption, investment, trade flows, industrial structure and competitiveness. WASSERMed is an interdisciplinary project, which overall aims at all three targets of the call, through the integration of climate change scenarios, holistic water system modelling and interdisciplinary impact assessment, with three main contributions: a) Integration of climate change scenarios, holistic water system modelling. This provides results for reduction of uncertainties of climate change impacts on hydrology in the identified regions; b) Interdisciplinary approach, coupling macroeconomic implications and technical indicators. This provides a better assessment of climate effects to water resources, water uses and expected security risks; c) Proposal of specific adaptation measures for key sectors of the Mediterranean economy. This provides better basis for achieving water security.

**Partners:**

| | | |
|---|---|---|
| 1 | CENTRO EURO-MEDITERRANEO PER I CAMBIAMENTI CLIMATICI SCARL | IT |
| 2 | THE UNIVERSITY OF EXETER | UK |
| 3 | CENTRO INTERNAZIONALE DI ALTI STUDI AGRONOMICI MEDITERRANEI - ISTITUTO AGRONOMICO MEDITERRANEO DI BARI | IT |
| 4 | CLU srl | IT |
| 5 | NATIONAL TECHNICAL UNIVERSITY OF ATHENS | EL |
| 6 | UNIVERSIDAD POLITECNICA DE MADRID | ES |
| 7 | National Center For agricultural research and Extension | JO |
| 8 | POTSDAM INSTITUT FUER KLIMAFOLGENFORSCHUNG | DE |
| 9 | INSTITUT DE RECHERCHE POUR LE DEVELOPPEMENT | FR |
| 10 | MINISTRY OF WATER RESOURCES AND IRRIGATION | EG |
| 11 | Institut National Agronomique de Tunisie | TN |
| 12 | UNIVERSITY OF JORDAN | JO |

**Activity Code:** ENV.2009.1.1.6.4 **Funding Scheme:** CSA **Duration (Months):** 48

**Title:** Climate Impact Research & Response Coordination for a Larger Europe - 2nd Generation ERA-Net -Science meets Policy

**Proposed EC Grant:** 1.999.331 €

**Abstract:**

Climate Change is one of the most important issues facing the world in the 21st century and challenges all four (ecological, economical, social and cultural) dimensions of sustainable development. Europe takes a leading role in the necessary response to these challenges. Severe impacts are unavoidable and European adaptation strategies must be supported by a coherent base of knowledge on its key vulnerabilities and response options. Such a base can only be generated by European, national and regional policy-relevant research. It is CIRCLE-2 ERA-Net prime objective to contribute to those efforts by aligning and networking national and regional research funding and managing organisations as well as their respective programmes. CIRCLE-2 will support a common research agenda and share good practices on adaptation with national and European decision makers, thus contributing to the envisaged EU Clearing House on Climate Change Impacts Vulnerability and Adaptation (CCIVA). CIRCLE-2 (CSA-CA) builds on the experience of previous coordinating and support actions (i.e. CIRCLE CA and SSA) and will develop its activities through a now enlarged network of 23 countries and 3 regions. A flexible work plan will LEAD the consortium to identify common policy-relevant CCIVA research needs. Those needs will serve to DESIGN a joint research agenda and deepen the networking and cooperation activities of the consortium. CIRCLE-2 will FUND transnational joint research initiatives including joint calls for projects on CCIVA. The outcomes of these initiatives and projects will provide the consortium with an updated knowledge base on European, National and Regional CCIVA research and CIRCLE-2 will SHARE this knowledge base with decision-makers at all relevant scales. CIRCLE-2 will thus contribute to the development of both European and national Climate Change response frameworks (e.g. Adaptation Strategies) by facilitating research outputs tailor-made to common needs. International cooperation with non-European countries (e.g. developing countries) as well as the involvement of new EU Member States and candidate countries will be particularly encouraged throughout CIRCLE-2 lifetime.

**Partners:**

| | | |
|---|---|---|
| 1 | FUNDACAO DA FACULDADE DE CIENCIAS DA UNIVERSIDADE DE LISBOA | PT |
| 2 | UMWELTBUNDESAMT GMBH | AT |
| 3 | FUNDACAO PARA A CIENCIA E A TECNOLOGIA | PT |
| 4 | CENTRO EURO-MEDITERRANEO PER I CAMBIAMENTI CLIMATICI SCARL | IT |
| 5 | MINISTERE DE L'ECOLOGIE, DU DEVELOPPEMENT DURABLE DES TRANSPORTS ET DU LOGEMENT | FR |
| 6 | MINISTERIO DE CIENCIA E INNOVACION | ES |
| 7 | SVERIGES METEOROLOGISKA OCH HYDROLOGISKA INSTITUT | SE |
| 8 | Stichting Kennis voor Klimaat | NL |
| 9 | SUOMEN AKATEMIA | FI |
| 10 | NATURVARDSVERKET | SE |
| 11 | ENVIRONMENTAL PROTECTION AGENCY OF IRELAND | IE |
| 12 | DEUTSCHES ZENTRUM FUER LUFT - UND RAUMFAHRT EV | DE |
| 13 | MARIOLOPOULOS-KANAGINIS FOUNDATION FOR ENVIRONMENT SCIENCES | EL |
| 14 | FORSKNINGSRÅDET FÖR MILJÖ, AREELLA NÄRINGAR OCH SAMHÄLLSBYGGANDE | SE |
| 16 | TURKIYE BILIMSEL VE TEKNOLOJIK ARASTIRMA KURUMU | TR |
| 17 | SIHTASUTUS EESTI TEADUSAGENTUUR | EE |
| 18 | Ministry of Environmental Protection | IL |
| 19 | EIGEN VERMOGEN FLANDERS HYDRAULICS | BE |
| 20 | THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS | UK |
| 21 | VIDEKFEJLESZTESI MINISZTERIUM | HU |

**Activity Code:** ENV.2010.1.1.3-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Changes in carbon uptake and emissions by oceans in a changing climate

**Proposed EC Grant:** 6.989.906 €

**Abstract:**

CARBOCHANGE will provide the best possible process-based quantification of net ocean carbon uptake under changing climate conditions using past and present ocean carbon cycle changes for a better prediction of future ocean carbon uptake. We will improve the quantitative understanding of key biogeochemical and physical processes through a combination of observations and models. We will upscale new process understanding to large-scale integrative feedbacks of the ocean carbon cycle to climate change and rising carbon dioxide concentrations. We will quantify the vulnerability of the ocean carbon sources and sinks in a probabilistic sense using cutting edge coupled Earth system models under a spectrum of emission scenarios including climate stabilisation scenarios as required for the 5th IPCC assessment report. The drivers for the vulnerabilities will be identified. The most actual observations of the changing ocean carbon sink will be systematically integrated with the newest ocean carbon models, a coupled land-ocean model, an Earth system model of intermediate complexity, and fully fledged Earth system models through a spectrum of data assimilation methods as well as advanced performance assessment tools. Results will be optimal process descriptions and most realistic error margins for future ocean carbon uptake quantifications with models under the presently available observational evidence. The project will deliver calibrated future evolutions of ocean pH and carbonate saturation as required by the research community on ocean acidification in the EU project EPOCA and further projects in this field. The time history of atmosphere-ocean carbon fluxes past, present, and future will be synthesised globally as well as regionally for the transcontinental RECCAP project. Observations and model results will merge into GEOSS/GEO through links with the European coordination action COCOS and will prepare the marine branch of the European Research Infrastructure ICOS.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITETET I BERGEN | NO |
| 2 | VITUSLAB V/JORGEN BENDTSEN | DK |
| 3 | INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER | FR |
| 4 | COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES | FR |
| 5 | UNIVERSITE PIERRE ET MARIE CURIE - PARIS 6 | FR |
| 6 | ALFRED-WEGENER-INSTITUT FUER POLAR- UND MEERESFORSCHUNG | DE |
| 8 | MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. | DE |
| 9 | UNIVERSITAET BREMEN | DE |
| 10 | HAFRANNSOKNASTOFNUNIN | IS |
| 11 | NATIONAL UNIVERSITY OF IRELAND, GALWAY | IE |
| 12 | INSTITUT NATIONAL DE RECHERCHE HALIEUTIQUE | MA |
| 13 | STICHTING KONINKLIJK NEDERLANDS INSTITUUT VOOR ZEEONDERZOEK (NIOZ) | NL |
| 14 | STIFTELSEN NANSEN SENTER FOR FJERNMAALING | NO |
| 15 | UNI RESEARCH AS | NO |
| 16 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 17 | UNIVERSIDAD DE LAS PALMAS DE GRAN CANARIA | ES |
| 18 | GOETEBORGS UNIVERSITET | SE |
| 19 | EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZURICH | CH |
| 20 | UNIVERSITAET BERN | CH |
| 21 | MET OFFICE | UK |
| 22 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 23 | PLYMOUTH MARINE LABORATORY | UK |
| 24 | UNIVERSITY OF BRISTOL | UK |
| 25 | UNIVERSITY OF EAST ANGLIA | UK |
| 26 | COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH | ZA |
| 27 | TRUSTEES OF PRINCETON UNIVERSITY | US |
| 28 | DALHOUSIE UNIVERSITY | CA |
| 29 | HELMHOLTZ ZENTRUM FUR OZEANFORSCHUNG KIEL | DE |

**Activity Code:** ENV.2010.1.1.5-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** MEDiterranean Sea Acidification in a changing climate

**Proposed EC Grant:** 3.490.169 €

**Abstract:**

Increases of atmospheric CO2 and associated decreases in seawater pH and carbonate ion concentration this century and beyond are likely to have wide impacts on marine ecosystems including those of the Mediterranean Sea. Consequences of this process, ocean acidification, threaten the health of the Mediterranean, adding to other anthropogenic pressures, including those from climate change. Yet in comparison to other areas of the world ocean, there has been no concerted effort to study Mediterranean acidification, which is fundamental to the social and economic conditions of more than 130 million people living along its coastlines and another 175 million who visit the region each year.The MedSeA project addresses ecologic and economic impacts from the combined influences of anthropogenic acidification and warming, while accounting for the unique characteristics of this key region. MedSeA will forecast chemical, climatic, ecological-biological, and socio-economical changes of the Mediterranean driven by increases in CO2 and other greenhouse gases, while focusing on the combined impacts of acidification and warming on marine shell and skeletal building, productivity, and food webs. We will use an interdisciplinary approach involving biologists, earth scientists, and economists, through observations, experiments, and modelling. These experts will provide science-based projections of Mediterranean acidification under the influence of climate change as well as associated economic impacts. Projections will be based on new observations of chemical conditions as well as new observational and experimental data on the responses of key organisms and ecosystems to acidification and warming, which will be fed into existing ocean models that have been improved to account for the Mediterranean´s fine-scale features. These scientific advances will allow us to provide the best advice to policymakers who must develop regional strategies for adaptation and mitigation.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITAT AUTONOMA DE BARCELONA | ES |
| 2 | UNIVERSITE DE PERPIGNAN | FR |
| 3 | BAR ILAN UNIVERSITY | IL |
| 4 | HELLENIC CENTRE FOR MARINE RESEARCH | EL |
| 5 | CENTRO EURO-MEDITERRANEO PER I CAMBIAMENTI CLIMATICI SCARL | IT |
| 6 | UNIVERSITE PIERRE ET MARIE CURIE - PARIS 6 | FR |
| 7 | PLYMOUTH MARINE LABORATORY | UK |
| 8 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 9 | UNIVERSITY OF PLYMOUTH | UK |
| 10 | ALFRED-WEGENER-INSTITUT FUER POLAR- UND MEERESFORSCHUNG | DE |
| 11 | CONSORZIO NAZIONALE INTERUNIVERSITARIO PER LE SCIENZE DEL MARE | IT |
| 12 | INSTITUT NATIONAL DE RECHERCHE HALIEUTIQUE | MA |
| 13 | National Institute of Oceanography and Fisheries | EG |
| 14 | SFAX UNIVERSITY | TN |
| 15 | ISTITUTO NAZIONALE DI OCEANOGRAFIA E DI GEOFISICA SPERIMENTALE - OGS | IT |
| 16 | COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES | FR |

**Activity Code:** ENV.2010.1.1.2-2 **Funding Scheme:** CSA **Duration (Months):** 48

**Title:** Atmospheric Composition Change: the European Network-Policy Support and Science

**Proposed EC Grant:** 998.352 €

**Abstract:**

Fragmentation of research efforts, lack of a shared scientific vision and insufficient availability of research tools, shared databases, etc., is a major limitation for the understanding of atmospheric composition change over Europe under a changing climate, and the consequent inadequate transfer of prospects to the decision makers for future policies. The ACCENT-Plus project builds on the successful efforts of the Network of Excellence ACCENT which, over the past six years, has brought together the atmospheric science community engaged in global change and air pollution studies. The integration efforts within the ACCENT Network have produced a stronger cohesion of the community, including research groups from the new EU Member States and have facilitated the engagement of a new generation of scientists who have started their career in the collaborative environment promoted by ACCENT. ACCENT-Plus aims at extending the breath of the previous ACCENT phase to reach out to the policy community, facilitating the transfer of research results into policy/decision making. A prerequisite to reach this goal is to continue fostering the coordination and integration of the European science community, associating with this new effort all partners and associates of the previous ACCENT phase. Joint research programming, contribution to the international research agenda, access to information, training/mobility activities and facilitation in the use of research infrastructures will be key elements of ACCENT-Plus to preserve and enhance the excellence of European research in an ERA context, to produce integrated assessment and synthesis of scientific results and to connect science and policy making by transferring to the decision makers the important links between air quality and climate change and the prospects and benefits of co-control policies.

**Partners:**

| | | |
|---|---|---|
| 1 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 2 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 3 | HELMHOLTZ-ZENTRUM GEESTHACHT ZENTRUM FUR MATERIAL- UND KUSTENFORSCHUNG GMBH | DE |
| 4 | UNIVERSITAET BREMEN | DE |
| 5 | WEIZMANN INSTITUTE OF SCIENCE | IL |
| 6 | Universita' degli Studi di Urbino Carlo Bo | IT |
| 7 | PAUL SCHERRER INSTITUT | CH |
| 8 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 9 | UNIVERSITY OF LEICESTER | UK |

**Activity Code:** ENV.2010.1.1.6-3 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Assessment of Climate Change Mitigation Pathways and Evaluation of the Robustness of Mitigation Cost Estimates

**Proposed EC Grant:** 3.149.490 €

**Abstract:**

Climate policy needs to aim at ambitious long-term climate stabilization. This will require managing the transition from carbon intensive to low carbon economies within this century. Research on mitigation pathways to a low carbon society and the associated mitigation costs is indispensable for informing policy makers. The project AMPERE is aiming for a broad exploration of mitigation pathways and associated mitigation costs under various real world limitations, while at the same time generating a better understanding about the differences across models, and the relation to historical trends. Uncertainties about the costs of mitigation originate from the entire causal chain ranging from economic activity, to emissions and related technologies, and the response of the carbon cycle and climate system to greenhouse gas emissions. AMPERE will use a sizable ensemble of state-of-the-art energy-economy and integrated assessment models to analyse mitigation pathways and associated mitigation costs in a series of multi-model intercomparisons. It will focus on four central areas: (i) The role of uncertainty about the climate response to anthropogenic forcing on the remaining carbon budget for supplying societies around the globe with energy, (ii) the role of technology availability, innovation and myopia in the energy sector, (iii) the role of policy imperfections like limited regional or sectoral participation in climate policy regimes, and (iv) the implications for decarbonisation scenarios and policies for Europe.

**Partners:**

| | | |
|---|---|---|
| 1 | POTSDAM INSTITUT FUER KLIMAFOLGENFORSCHUNG | DE |
| 2 | INTERNATIONALES INSTITUT FUER ANGEWANDTE SYSTEMANALYSE | AT |
| 3 | UNIVERSITEIT UTRECHT | NL |
| 4 | FONDAZIONE ENI ENRICO MATTEI | IT |
| 5 | INSTITUTE OF COMMUNICATION AND COMPUTER SYSTEMS | EL |
| 6 | CENTRE FOR EUROPEAN POLICY STUDIES | BE |
| 7 | SOCIETE DE MATHEMATIQUES APPLIQUEES ET DE SCIENCES HUMAINES | FR |
| 8 | PAUL SCHERRER INSTITUT | CH |
| 9 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 10 | ENERDATA SA | FR |
| 11 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 12 | UNIVERSITAET STUTTGART | DE |
| 13 | TECHNISCHE UNIVERSITAET WIEN | AT |
| 14 | MINISTERIE VAN ECONOMISCHE ZAKEN, LANDBOUW EN INNOVATIE | NL |
| 15 | UNIVERSITE PARIS I PANTHEON-SORBONNE | FR |
| 16 | MET OFFICE | UK |
| 17 | CLIMATE ANALYTICS GMBH | DE |
| 18 | NATIONAL INSTITUTE FOR ENVIRONMENTAL STUDIES INCORPORATED ADMINISTRATIVE AGENCY | JP |
| 19 | RESEARCH INSTITUTE OF INNOVATIVE TECHNOLOGY FOR THE EARTH | JP |
| 20 | NATIONAL DEVELOPMENT AND REFORM COMMISSION ENERGY RESEARCH INSTITUTE | CN |
| 21 | INDIAN INSTITUTE OF MANAGEMENT | IN |

**Activity Code:** ENV.2010.1.1.2-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Pan-European Gas-AeroSol-climate interaction Study

**Proposed EC Grant:** 6.999.992 €

**Abstract:**

The Pan-European Gas-AeroSOls-climate interaction Study (PEGASOS) European large scale integrating project brings together most of the leading European research groups, with state-of the-art observational and modeling facilities to:(1) Quantify the magnitude of regional to global feedbacks between atmospheric chemistry and a changing climate and to reduce the corresponding uncertainty of the major ones.(2) Identify mitigation strategies and policies to improve air quality while limiting their impact on climate change.The project is organized into four scientific Themes designed to optimize the integration of methodologies, scales, and ultimately our understanding of air quality and climate interactions:(I) Anthropogenic and biogenic emissions and their response to climate and socio-economy(II) Atmospheric interactions among chemical and physical processes(III) Regional and global links between atmospheric chemistry and climate change(IV) Air quality in a changing climate: Integration with policyPEGASOS will bridge the spatial and temporal scales that connect local surface-air pollutant exchanges, air quality and weather with global atmospheric chemistry and climate. Our major focus for air quality will be Europe including effects of changes in pollutant emissions elsewhere and the time horizon for the study will be the next 50 years. During the project we will provide improved process understanding in areas of major uncertainty for better quantification of feedbacks between air quality and a changing climate. We will present, for the first time, a fully integrated analysis of dynamically changing emissions and deposition, their link to tropospheric chemical reactions and interactions with climate, and emerging feedbacks between chemistry-climate and surface processes. We will target both local and regional scales, taking into account chemistry and climate feedbacks on the global scale.

**Partners:**

| | | |
|---|---|---|
| 1 | FOUNDATION FOR RESEARCH AND TECHNOLOGY HELLAS | EL |
| 2 | FORSCHUNGSZENTRUM JUELICH GMBH | DE |
| 3 | HELSINGIN YLIOPISTO | FI |
| 4 | UNIVERSITY OF LEICESTER | UK |
| 5 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 6 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 7 | EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZURICH | CH |
| 8 | LUNDS UNIVERSITET | SE |
| 9 | WAGENINGEN UNIVERSITEIT | NL |
| 10 | NATIONAL UNIVERSITY OF IRELAND, GALWAY | IE |
| 11 | KOBENHAVNS UNIVERSITET | DK |
| 12 | WEIZMANN INSTITUTE OF SCIENCE | IL |
| 13 | METEOROLOGISK INSTITUTT | NO |
| 14 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 15 | MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. | DE |
| 16 | ILMATIETEEN LAITOS | FI |
| 17 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 18 | PAUL SCHERRER INSTITUT | CH |
| 19 | STOCKHOLMS UNIVERSITET | SE |
| 20 | UNIVERSITY OF LEEDS | UK |
| 21 | LEIBNIZ INSTITUT FUER TROPOSPHAERENFORSCHUNG e.V. | DE |
| 22 | HELMHOLTZ-ZENTRUM GEESTHACHT ZENTRUM FUR MATERIAL- UND KUSTENFORSCHUNG GMBH | DE |
| 23 | AS AIREL | EE |
| 24 | INTERNATIONALES INSTITUT FUER ANGEWANDTE SYSTEMANALYSE | AT |
| 25 | Ministerie van Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer | NL |
| 26 | UNIVERSITE JOSEPH FOURIER GRENOBLE 1 | FR |

**Activity Code:** ENV.2010.1.1.6-2 **Funding Scheme:** CSA **Duration (Months):** 36

**Title:** Knowledge transfer and research needs for preparing mitigation/adaptation policy portfolios

**Proposed EC Grant:** 961.455 €

**Abstract:**

The project's aims are the development and evaluation of mitigation/adaptation (M/A) policy portfolios and the prioritization of research needs and gaps for twelve (12) countries (Albania, Armenia, Azerbaijan, Bulgaria, Estonia, Kazakhstan, Moldova, Romania, Russian Federation, Serbia, Turkey and Ukraine) characterized as emerging economies.The achievement of these aims is ensured through seven (7) work packages (WP) corresponding to the following project's main objectives, Evaluation of available data and information (WP1), Choice and implementation of models (WP2), Scenarios and policy portfolios (WP3), Evaluation of policy portfolios (WP4), Prioritization of research gaps and needs (WP5), Training – Dissemination (WP6), Management (WP7).The overall strategy is based on Development (WP1, WP2, and WP3), Implementation (WP3), Evaluation (WP4) and Knowledge Transfer (WP6) towards scientists and decision makers of both public and private sectors from the aforementioned emerging economies; scientific research needs and gaps (WP5) will be identified and listed in an inventory as well.The knowledge transfer (training – dissemination) includes a combination of training and of a continuous flow of information to decision makers of the public and private sectors of the participating emerging economies.Training includes tele-teaching and one case study seminar (in-situ) plus the provision of the necessary means (data base, software licenses plus the instruction material that will be developed during the relevant tasks of the project). Scientists and decision makers of both the public and private sector will be encouraged to participate in the training procedures and benefit from the project's dissemination activities.The dissemination activities include official presentations and deliberations with the governmental bodies of the Black Sea Economic Cooperation Organization (BSEC) (Ministerial Meetings, Working Groups on Environment, Energy, Science and Technology, etc), the national competent authorities and relevant stakeholders, twelve (12) national workshops, a final international conference, a world wide disseminated newsletter, a main website with fifteen (15) linked websites, papers in scientific journals and conferences, editions.A close cooperation, at regional and national level with the BSEC Permanent Secretariat (PERMIS), the Business Council (BC-BSEC), the relevant ministries and local market forces (Industry, SMEs, banking sector, NGOs, etc) will enhance the socio-economic impact of the project.Additional efforts will be carried out for coordinated action with the United Nations Development Programme (UNDP) and other international programmes in the region.The project's duration is 36 months and the budget 961,455.00 €

**Partners:**

| | | |
|---|---|---|
| 1 | NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS | EL |
| 2 | NATIONAL OBSERVATORY OF ATHENS | EL |
| 3 | INSTITUT FUER HOEHERE STUDIEN UND WISSENSCHAFTLICHE FORSCHUNG | AT |
| 4 | TURKIYE BILIMSEL VE TEKNOLOJIK ARASTIRMA KURUMU | TR |
| 5 | SCIENTIFIC RESEARCH INSTITUTE OF ENERGY | AM |
| 6 | UNIVERSITY OF BELGRADE - FACULTY OF MINING AND GEOLOGY | RS |
| 7 | INSTITUTUL DE ENERGETICA AL ACADEMIEI DE STIINTE A MOLDOVEI | MD |
| 8 | ARISTOTELIO PANEPISTIMIO THESSALONIKIS | EL |
| 9 | FINANSOVIY UNIVERSITET PRI PRAVITELSTVE ROSSIYSKOY FEDERACII | RU |
| 10 | INSTITUTUL DE STUDII SI PROIECTARI ENERGETICE SA | RO |
| 11 | UNIVERSITETI POLITEKNIK I TIRANES | AL |
| 12 | Ministry of Education of the Azerbaijan Republic | AZ |
| 13 | BLACK SEA REGIONAL ENERGY CENTRE | BG |
| 14 | NACIONALNIY TEHNICHNIY UNIVERSITET UKRAINI KIIVSKIY POLITEHNICHNIY INSTITUT | UA |
| 15 | RESEARCH AND PRODUCTION FIRM KAZCHIMINVEST LLC*KAZHIMINVEST | KZ |
| 16 | TALLINNA TEHNIKAULIKOOL | EE |

**Activity Code:** ENV.2010.1.1.4-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Climate Local Information in the Mediterranean region: Responding to User Needs

**Proposed EC Grant:** 3.489.334 €

**Abstract:**

CLIM-RUN aims at developing a protocol for applying new methodologies and improved modeling and downscaling tools for the provision of adequate climate information at regional to local scale that is relevant to and usable by different sectors of society (policymakers, industry, cities, etc.). Differently from current approaches, CLIM-RUN will develop a bottom-up protocol directly involving stakeholders early in the process with the aim of identifying well defined needs at the regional to local scale. The improved modeling and downscaling tools will then be used to optimally respond to these specific needs. The protocol is assessed by application to relevant case studies involving interdependent sectors, primarily tourism and energy, and natural hazards (wild fires) for representative target areas (mountainous regions, coastal areas, islands). The region of interest for the project is the Greater Mediterranean area, which is particularly important for two reasons. First, the Mediterranean is a recognized climate change hot-spot, i.e. a region particularly sensitive and vulnerable to global warming. Second, while a number of countries in Central and Northern Europe have already in place well developed climate service networks (e.g. the United Kingdom and Germany), no such network is available in the Mediterranean. CLIM-RUN is thus also intended to provide the seed for the formation of a Mediterranean basin-side climate service network which would eventually converge into a pan-European network. The general time horizon of interest for the project is the future period 2010-2050, a time horizon that encompasses the contributions of both inter-decadal variability and greenhouse-forced climate change. In particular, this time horizon places CLIM-RUN within the context of a new emerging area of research, that of decadal prediction, which will provide a strong potential for novel research.

**Partners:**

| | | |
|---|---|---|
| 1 | AGENZIA NAZIONALE PER LE NUOVE TECNOLOGIE,L'ENERGIA E LO SVILUPPO ECONOMICO SOSTENIBILE | IT |
| 2 | THE CYPRUS RESEARCH AND EDUCATIONAL FOUNDATION | CY |
| 3 | METEO-FRANCE | FR |
| 4 | UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION -UNESCO | FR |
| 5 | FUNDACIO INSTITUT CATALA DE CIENCIES DEL CLIMA | ES |
| 6 | NATIONAL OBSERVATORY OF ATHENS | EL |
| 7 | CENTRO EURO-MEDITERRANEO PER I CAMBIAMENTI CLIMATICI SCARL | IT |
| 8 | TOURISME TERRITOIRES TRANSPORTS ENVIRONNEMENT CONSEIL | FR |
| 9 | PLAN BLEU POUR L'ENVIRONNEMENT ET LE DEVELOPPEMENT EN MEDITERRANNEE | FR |
| 10 | POTSDAM INSTITUT FUER KLIMAFOLGENFORSCHUNG | DE |
| 11 | UNIVERSITY OF EAST ANGLIA | UK |
| 12 | Université de Tunis | TN |
| 13 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 14 | DRZAVNI HIDROMETEOROLOSKI ZAVOD | HR |
| 15 | THE UNIVERSITY SYSTEM OF MARYLAND FOUNDATION, INC. | US |
| 16 | UNIVERSIDAD DE CANTABRIA | ES |

**Activity Code:** ENV.2010.1.1.4-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Enabling CLimate Information Services for Europe - ECLISE

**Proposed EC Grant:** 3.408.671 €

**Abstract:**

Climate and climate change has high impact on society. Better understanding and improved prediction skills of future weather and climate is vital to protect lives, goods and infrastructures. Different sectors of society and infrastructure are more or less designed to accommodate the current level of climate variability. The prospect of a changing climate necessitates adapting these designs. To prevent high costs, it is of paramount importance that the most reliable and accurate climate information is used to underpin the development of new adaptation strategies.In response to this need, climate scientists, in close cooperation with climate impact specialists, have started to generate and provide information on future climate projections, aimed at supporting adaptation policies. These efforts are often organized at a national level and, at present, differ considerably in the methods used and the level of user involvement. It has been recognized (WMO-WCC3, EU White paper on Adaptation) that coordination of climate services at an international level would greatly advance the benefits of climate science for adaptation policies. This effort must find a way to deal with the strong local nature of climate impacts and adaptation needs.The central objective of ECLISE is to take the first step towards the realisation of a European Climate Service. ECLISE is a European effort in which researchers, in close cooperation with users, develop and demonstrate local climate services to support climate adaption policies. It does so by providing climate services for several climate-vulnerable regions in Europe, organized at a sectorial level: coastal defence, cities, water resources and energy production. Furthermore, ECLISE will define, in conceptual terms, how a pan-European Climate Service could be developed in the future, based on experiences from the aforementioned local services and the involvement of a broader set of European decision makers and stakeholders.

**Partners:**

| | | |
|---|---|---|
| 1 | KONINKLIJK NEDERLANDS METEOROLOGISCH INSTITUUT (KNMI) | NL |
| 2 | SVERIGES METEOROLOGISKA OCH HYDROLOGISKA INSTITUT | SE |
| 3 | HELMHOLTZ-ZENTRUM GEESTHACHT ZENTRUM FUR MATERIAL- UND KUSTENFORSCHUNG GMBH | DE |
| 4 | WAGENINGEN UNIVERSITEIT | NL |
| 5 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 7 | UNI RESEARCH AS | NO |
| 8 | METEOROLOGISK INSTITUTT | NO |
| 10 | INSTITUTUL DE GEOGRAFIE | RO |
| 11 | TECHNICAL UNIVERSITY OF CRETE | EL |
| 12 | UNIVERSITY OF NEWCASTLE UPON TYNE | UK |
| 13 | INSTITUTUL NATIONAL DE HIDROLOGIE SI GOSPODARIRE A APELOR | RO |

**Activity Code:** ENV.2010.1.1.6-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Impacts of Reducing Emissions from Deforestation and Forest Degradation and Enhancing Carbon Stocks

**Proposed EC Grant:** 3.149.969 €

**Abstract:**

At COP15 in Copenhagen one outcome was a commitment to develop a mechanism for reducing greenhouse gas emissions from deforestation and forest degradation and enhancing carbon stocks (REDD+). There is, however, only a limited research basis for such a mechanism particularly with regard to the need for understanding and monitoring the impact of REDD+ activities on climate effectiveness, cost efficiency, equity and co-benefits. I-REDD+ will approach these challenges from a truly interdisciplinary perspective. The overall objective will be to obtain an improved understanding of how the implementation of REDD+ mechanisms may 1) reduce emissions of GHG and maintain or enhance existing stocks of carbon in vegetation and soil of various land cover types; 2) impact livelihoods and welfare of local farming communities and differences between communities; 3) impact biodiversity conservation, and 4) provide a realistic framework for monitoring, reporting and verification of REDD+, including the importance of governance and accountability at multiple levels. To complement other research initiatives we propose to work in the uplands of Southeast Asia in the 'Heart of Borneo', Kalimantan, Indonesia, and in the northern parts of Lao PDR and Vietnam, and Yunnan in Southwest China. Rapid land use transitions from forest and shifting cultivation to other, more intensive land use systems and widespread forest degradation are occurring in these areas, making the potential for REDD+ particularly pronounced. Moreover, REDD+ may considerably impact on local economies, because of the high population densities in the region. The partners in I-REDD+ are leading research institutions in Europe and Southeast Asia, international research organizations, an NGO and an SME. The consortium has a strong emphasis on local dissemination and capacity development in order to ensure that project results influence REDD+ policy development at local, national and global level.

**Partners:**

| | | |
|---|---|---|
| 1 | KOBENHAVNS UNIVERSITET | DK |
| 2 | LEIBNIZ INSTITUT FUER AGRARENTWICKUNG IN MITTEL- UND OSTEUROPA | DE |
| 3 | HUMBOLDT-UNIVERSITAT ZU BERLIN | DE |
| 4 | UNIVERSITY OF EAST ANGLIA | UK |
| 5 | THE UNIVERSITY OF EDINBURGH | UK |
| 6 | INSTITUT DE RECHERCHE POUR LE DEVELOPPEMENT | FR |
| 7 | UNIVERSITAET BERN | CH |
| 8 | KUNMING INSTITUTE OF BOTANY CHINESEACADEMY OF SCIENCES*KIB | CN |
| 9 | TRUNG TAM SINH THAI NONG NGHIEP | VN |
| 10 | National University of Laos | LA |
| 11 | WWF INDONESIA | ID |
| 12 | Center for International Forestry Research | ID |
| 13 | INTERNATIONAL CENTRE FOR RESEARCH IN AGROFORESTRY | KE |
| 14 | NORDISK FOND FOR MILJØ OG UDVIKLING | DK |

**Activity Code:** ENV.2011.1.1.5-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Raising the alert about critical feedbacks between climate and long-term land use change in the Amazon

**Proposed EC Grant:** 3.494.420 €

**Abstract:**

AMAZALERT will enable raising the alert about critical feedbacks between climate, society, land-use change, vegetation change, water availability and policies in Amazonia. We will:1) analyze and improve coupled models of global climate and Amazon, land use, vegetation and socio-economic drivers to quantify anthropogenic and climate induced land-use and land cover change and non-linear, irreversible feedbacks among these components2) assess the role of regional and global policies and societal responses in the Amazon region for altering the trajectory of land-use change in the face of climate change and other anthropogenic factors and finally3) propose i) an Early Warning System for detecting any imminent irreversible loss of Amazon ecosystem services, ii) policy response strategies to prevent such loss.We first prioritise the functions of Amazonia and threats to these. We then will analyse uncertainties in biogeochemistry, land cover (vegetation), land-use change and regional hydrology , as well as nonlinear responses and feedbacks using existing and new simulations from state of the art models in which land surface is coupled to global climate. The way in which policies and possible future response strategies of policy makers, trade and economy will affect land-use change will be modelled. This will lead to (A) understanding the impact on and effectiveness of a range of international and regional policy options, including REDD+; and (B) identification of both biophysical and socio-economic indicators of irreversible change.AMAZALERT integrates the multidisciplinary knowledge and research of world-renowned, highly influential climate, land cover, land use change scientists and also policy analysts from 14 European and South-American institutions that have been collaborating for 10 to 30 years. Thus, this project can achieve maximum impact on EU (2020 climate goals), international and South-American strategies, including REDD

**Partners:**

| | | |
|---|---|---|
| 1 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 2 | INSTITUTO NACIONAL DE PESQUISAS ESPACIAIS | BR |
| 3 | MET OFFICE | UK |
| 4 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 5 | VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG | NL |
| 6 | EMPRESA BRASILEIRA DE PESQUISA AGROPECUARIA | BR |
| 7 | UNIVERSITEIT GENT | BE |
| 8 | JOANNEUM RESEARCH FORSCHUNGSGESELLSCHAFT MBH | AT |
| 9 | THE UNIVERSITY OF EDINBURGH | UK |
| 10 | FUNDACION AMIGOS DE LA NATURALEZA | BO |
| 11 | POTSDAM INSTITUT FUER KLIMAFOLGENFORSCHUNG | DE |
| 12 | UNIVERSITY OF LEEDS | UK |
| 13 | UNIVERSIDADE DE SAO PAULO | BR |
| 14 | UNIVERSIDAD NACIONAL DE COLOMBIA | CO |

**Activity Code:** ENV.2011.1.1.1-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Earth system Model Bias Reduction and assessing Abrupt Climate change

**Proposed EC Grant:** 6.999.730 €

**Abstract:**

EMBRACE brings together the leading Earth System Models (ESMs) in Europe around a common set of objectives to improve our ability to (i) simulate the Earth System and (ii) make reliable projections of future global change. EMBRACE builds on the existing European collaboration network in Earth System Modelling and will be the main European input to international efforts in this field over the coming 5 years. The project has a number of key goals; (i) to reduce the main, known biases in existing European ESMs, (ii) to fully evaluate ESM simulation capabilities and improvements made in the project, (iii) to increase the realism of, and interactions between, the physical and biogeochemical components of ESMs, (iv) to assess the risks of abrupt or irreversible changes in key components of the Earth system, in response to the most recent greenhouse gas, aerosol and land-use scenarios proposed for the IPCC AR5.The primary ESM biases targeted for improvement include, (i) the representation of moist atmospheric convection and links to coupled tropical variability and precipitation. (ii) equatorial and coastal ocean upwelling and their impact on the global climate system and carbon cycle, (iii) coupled processes controlling physical and biogeochemical mixing in the Southern ocean, (iv) soil hydrology and its coupling with the atmosphere and (v) the terrestrial carbon cycle, through a more realistic treatment of climate-vegetation interaction. Improvements will be evaluated in the context of the full range of CMIP5 historical simulations, with the CMIP5 protocol forming the basis for future climate projections made to assess the risk of abrupt changes. A cross-cutting theme will be the impact of improved process description, combined with increased coupled model resolution, in reducing ESM biases and improving their reliability of future projections.

**Partners:**

| | | |
|---|---|---|
| 1 | SVERIGES METEOROLOGISKA OCH HYDROLOGISKA INSTITUT | SE |
| 2 | KONINKLIJK NEDERLANDS METEOROLOGISCH INSTITUUT (KNMI) | NL |
| 3 | EUROPEAN CENTRE FOR MEDIUM-RANGE WEATHER FORECASTS | UK |
| 4 | LUNDS UNIVERSITET | SE |
| 5 | MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. | DE |
| 6 | DEUTSCHES ZENTRUM FUER LUFT - UND RAUMFAHRT EV | DE |
| 7 | ILMATIETEEN LAITOS | FI |
| 8 | EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZURICH | CH |
| 9 | UNIVERSITY OF EAST ANGLIA | UK |
| 10 | THE UNIVERSITY OF EXETER | UK |
| 11 | MET OFFICE | UK |
| 12 | UNIVERSITE CATHOLIQUE DE LOUVAIN | BE |
| 13 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 14 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 15 | WAGENINGEN UNIVERSITEIT | NL |
| 16 | SVEUCILISTE U SPLITU (UNIVERSITY OF SPLIT) | HR |
| 17 | IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE | UK |
| 18 | VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG | NL |
| 19 | Karlsruher Institut fuer Technologie | DE |

**Activity Code:** ENV.2011.1.1.2-2 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Evaluating the Climate and Air Quality Impacts of Short-Lived Pollutants

**Proposed EC Grant:** 2.706.051 €

**Abstract:**

ECLIPSE aims to develop and assess effective emission abatement strategies for short-lived climate agents in order to provide sound scientific advice on how to mitigate climate change while improving the quality of air. Current climate policy does not consider a range of short-lived gases and aerosols, and their precursors (including nitrogen oxides, volatile organic compounds, sulphate, and black carbon). These nevertheless make a significant contribution to climate change and directly influence air quality.There are fundamental scientific uncertainties in characterizing both the climate and air quality impacts of short-lived species and many aspects (for example, the regional dependence) are quite distinct to those for the longer-lived climate gases already included in the Kyoto Protocol.ECLIPSE will bring together 11 institutes with established and complementary expertise for a closely co-ordinated 3 year programme. It will build on existing knowledge and use state-of-the-art chemistry and climate models to (i) improve understanding of key atmospheric processes (including the impact of short-lived species on cloud properties) and characterize existing uncertainties; (ii) evaluate model simulations of short-lived species and their long-range transport using ground-based and satellite observations; (iii) perform case studies on key source and receptor regions (focused on Southeastern Europe, China and the Arctic); (iv) quantify the radiative forcing and climate response due to short-lived species, incorporating the dependence on where the species are emitted; (v) refine the calculation of climate metrics, and develop novel metrics which, for example, consider rate of climate warming and go beyond using global-mean quantities; (vi) clarify possible win-win and trade-off situations between climate policy and air quality policy; (vii) identify a set of concrete cost-effective abatement measures of short-lived species with large co-benefits.

**Partners:**

| | | |
|---|---|---|
| 1 | NORSK INSTITUTT FOR LUFTFORSKNING | NO |
| 2 | CICERO SENTER KLIMAFORSKNING STIFTELSE | NO |
| 3 | METEOROLOGISK INSTITUTT | NO |
| 4 | INTERNATIONALES INSTITUT FUER ANGEWANDTE SYSTEMANALYSE | AT |
| 5 | MET OFFICE | UK |
| 6 | THE UNIVERSITY OF READING | UK |
| 7 | UNIVERSITE PIERRE ET MARIE CURIE - PARIS 6 | FR |
| 8 | FOUNDATION FOR RESEARCH AND TECHNOLOGY HELLAS | EL |
| 9 | UNIVERSITAET LEIPZIG | DE |
| 10 | PEKING UNIVERSITY | CN |
| 11 | TSINGHUA UNIVERSITY | CN |

**Activity Code:** ENV.2011.1.1.3-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Changing Permafrost in the Arctic and its Global Effects in the 21st Century

**Proposed EC Grant:** 6.951.895 €

**Abstract:**

Permafrost is defined as ground that remains continuously at or below 0°C for at least two consecutive years; some 24% of the land surface in the northern Hemisphere is classified as permafrost. In the Northern high latitudes, strong warming has been observed over the recent decades, and climate models project strong future warming. A projected decline in the extent of permafrost will have a major impact on the Earth system, affecting global climate through the mobilization of carbon and nitrogen stored in permafrost.PAGE21 aims to understand and quantify the vulnerability of permafrost environments to a changing global climate, and to investigate the feedback mechanisms associated with increasing greenhouse gas emissions from permafrost zones. This research makes use of a unique set of Arctic permafrost investigations performed at stations that span the full range of Arctic bioclimatic zones. The project brings together the best European permafrost researchers and eminent scientists from Canada, Russia, the USA, and Japan.In a truly original approach we combine field measurements of permafrost processes, pools, and fluxes, with remote sensing data and global climate models at local, regional and, for the first time, pan-Arctic scales. The output from this research will help to advance our understanding of permafrost processes at multiple scales, resulting in improvements in global numerical permafrost modeling and the ensuing future climate projections, as well as in the assessment of stabilisation scenarios.These outputs will feed into global assessments and international monitoring programs, in which most of the consortium members are already actively participating in leading roles. This project will, in particular, provide projections on a pan-Arctic scale of greenhouse gas releases from the projected thawing of permafrost terrain during the 21st century, with direct implications for global policy discussions on emission reduction targets.

**Partners:**

| | | |
|---|---|---|
| 1 | ALFRED-WEGENER-INSTITUT FUER POLAR- UND MEERESFORSCHUNG | DE |
| 2 | University Centre in Svalbard | NO |
| 3 | STOCKHOLMS UNIVERSITET | SE |
| 4 | VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG | NL |
| 5 | TECHNISCHE UNIVERSITAET WIEN | AT |
| 6 | UNIVERSITE JOSEPH FOURIER GRENOBLE 1 | FR |
| 7 | THE UNIVERSITY OF EXETER | UK |
| 8 | MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. | DE |
| 9 | LUNDS UNIVERSITET | SE |
| 10 | KOBENHAVNS UNIVERSITET | DK |
| 11 | UNIVERSITAET HAMBURG | DE |
| 12 | COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES | FR |
| 13 | MET OFFICE | UK |
| 14 | ILMATIETEEN LAITOS | FI |
| 15 | Itä-Suomen yliopisto | FI |
| 16 | INSITUTE FOR BIOLOGICAL PROBLEMS OF CRYOLITHOZONE SIBERIAN BRANCH RUSSIAN ACADEMY OF SCIENCES | RU |
| 17 | NORDURSLODAGATTIN EHF | IS |
| 18 | M V LOMONOSOV MOSCOW STATE UNIVERSITY | RU |

**Activity Code:** ENV.2011.1.1.6-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Quantifying projected impacts under 2°C warming

**Proposed EC Grant:** 6.500.000 €

**Abstract:**

Political discussions on the European goal to limit global warming to 2°C demands that discussions are informed by the best available science on projected impacts and possible benefits. IMPACT2C enhances knowledge, quantifies climate change impacts, and adopts a clear and logical structure, with climate and impacts modelling, vulnerabilities, risks and economic costs, as well as potential responses, within a pan-European sector based analysis. IMPACT2C utilises a range of models within a multi-disciplinary international expert team and assesses effects on water, energy, infrastructure, coasts, tourism, forestry, agriculture, ecosystems services, and health and air quality-climate interactions. IMPACT2C introduces key innovations. First, harmonised socio-economic assumptions/scenarios will be used, to ensure that both individual and cross-sector assessments are aligned to the 2°C (1.5°C) scenario for both impacts and adaptation, e.g. in relation to land-use pressures between agriculture and forestry. Second, it has a core theme of uncertainty, and will develop a methodological framework integrating the uncertainties within and across the different sectors, in a consistent way. In so doing, analysis of adaptation responses under uncertainty will be enhanced. Finally, a cross-sectoral perspective is adopted to complement the sector analysis. A number of case studies will be developed for particularly vulnerable areas, subject to multiple impacts (e.g. the Mediterranean), with the focus being on cross-sectoral interactions (e.g. land use competition) and cross-cutting themes (e.g. cities). The project also assesses climate change impacts in some of the world's most vulnerable regions: Bangladesh, Africa (Nile and Niger basins), and the Maldives. IMPACT2C integrates and synthesises project findings suitable for awareness raising and are readily communicable to a wide audience, and relevant for policy negotiations.

**Partners:**

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|---|---|---|
| 1 | HELMHOLTZ-ZENTRUM GEESTHACHT ZENTRUM FUR MATERIAL- UND KUSTENFORSCHUNG GMBH | DE |
| 2 | POTSDAM INSTITUT FUER KLIMAFOLGENFORSCHUNG | DE |
| 3 | UNI RESEARCH AS | NO |
| 4 | METEOROLOGISK INSTITUTT | NO |
| 5 | SVERIGES METEOROLOGISKA OCH HYDROLOGISKA INSTITUT | SE |
| 6 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 7 | AGENZIA NAZIONALE PER LE NUOVE TECNOLOGIE,L'ENERGIA E LO SVILUPPO ECONOMICO SOSTENIBILE | IT |
| 8 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 9 | METEO-FRANCE | FR |
| 10 | UNIVERSITAET GRAZ | AT |
| 11 | JOANNEUM RESEARCH FORSCHUNGSGESELLSCHAFT MBH | AT |
| 12 | INTERNATIONALES INSTITUT FUER ANGEWANDTE SYSTEMANALYSE | AT |
| 13 | DANMARKS METEOROLOGISKE INSTITUT | DK |
| 14 | KONINKLIJK NEDERLANDS METEOROLOGISCH INSTITUUT (KNMI) | NL |
| 15 | WAGENINGEN UNIVERSITEIT | NL |
| 16 | TECHNICAL UNIVERSITY OF CRETE | EL |
| 17 | PAUL WATKISS ASSOCIATES LTD | UK |
| 18 | UNIVERSITE DE LAUSANNE | CH |
| 19 | UNIVERSITY OF SOUTHAMPTON | UK |
| 20 | SEI OXFORD OFFICE LIMITED*STOCKHOLMENVIRONMENT INSTITUTE OXFORD OFFICE SEI LTD | UK |
| 21 | MET OFFICE | UK |
| 22 | MINISTRY OF HOUSING AND ENVIRONMENT | MV |
| 23 | BANGLADESH CENTRE FOR ADVANCED STUDIES ASSOCIATION | BD |
| 24 | INTERNATIONAL WATER MANAGEMENT INSTITUTE IWMI | LK |
| 25 | STICHTING WETLANDS INTERNATIONAL | NL |
| 26 | WORLD HEALTH ORGANIZATION. | CH |
| 27 | INSTITUTE OF WATER MODELLING | BD |
| 28 | AFRICAN CENTRE OF METEOROLOGICAL APPLICATION DEVELOPMENT | NE |
| 29 | GCF - GLOBAL CLIMATE FORUM EV | DE |

**Activity Code:** ENV.2011.1.1.6-2 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Low climate IMpact scenarios and the Implications of required Tight emission control Strategies

**Proposed EC Grant:** 3.462.863 €

**Abstract:**

Now and in the foreseeable future, action on climate mitigation and adaptation doesn't seem to be sufficient to manage greenhouse gases and their impact at the scale required to achieve stringent objectives such as those compatible with the 2°C target. This project aims at carrying out a rigorous assessment of what a stringent climate policy entails, and what is needed to overcome major impediments. This information will allow policymakers to better assess the costs and benefits of aggressive climate targets, and on how to make them implementable. Specifically, LIMITS will avail of the best methodological instruments to assess climate policies, whose analysis will interact with policy evaluation. Key global integrated assessment models will run climate mitigation and adaptation scenarios under new conditions and constraints, and the policy implications will be thoroughly evaluated. The needed physical changes in energy infrastructure and land use needed to comply to climate action will be assessed globally and regionally, for many of major world economies. In addition, the co-relationships of climate strategies with other pressing social and environmental issues, such as economic development, energy security and air pollution, will be analysed to identify a set of robust strategies that have the best chances of making stringent climate policy implementable.

**Partners:**

| | | |
|---|---|---|
| 1 | FONDAZIONE ENI ENRICO MATTEI | IT |
| 2 | INTERNATIONALES INSTITUT FUER ANGEWANDTE SYSTEMANALYSE | AT |
| 3 | POTSDAM INSTITUT FUER KLIMAFOLGENFORSCHUNG | DE |
| 4 | UNIVERSITEIT UTRECHT | NL |
| 5 | LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE | UK |
| 6 | STICHTING ENERGIEONDERZOEK CENTRUM NEDERLAND | NL |
| 7 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 8 | KOZEP-EUROPAI EGYETEM | HU |
| 9 | NATIONAL DEVELOPMENT AND REFORM COMMISSION ENERGY RESEARCH INSTITUTE | CN |
| 10 | INDIAN INSTITUTE OF MANAGEMENT | IN |

**Activity Code:** ENV.2011.1.1.2-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Effects of Climate Change on Air Pollution Impacts and Response Strategies for European Ecosystems

**Proposed EC Grant:** 6.997.001 €

**Abstract:**

ÉCLAIRE investigates the ways in which climate change alters the threat of air pollution on European land ecosystems including soils. Based on field observations, experimental data and models, it establishes new flux, concentration and dose-response relationships, as a basis to inform future European policies.Starting with biosphere-atmosphere exchange measurements, ÉCLAIRE quantifies how global warming and altered precipitation will affect emissions of key European primary pollutants (NOx, NH3, VOCs), including interactions with increasing aerosol and hemispheric O3 background concentrations, modifying atmospheric transport and deposition. An ensemble of chemistry transport models will be applied to assess uncertainty in response to harmonized scenarios for climate, emissions and land-use, while high resolution studies will investigate how climate change alters local patterns of pollutant exposure and threshold exceedance.A network of European experiments for contrasting ecosystems and climates, combined with meta-analysis of unpublished datasets, will quantify how climate change alters ecosystem vulnerability to tropospheric O3 and N deposition, including interaction with increased CO2. Combined with special topics on interactions with N form (wet/dry, NHx/NOy), aerosol-exacerbated drought stress and BVOC self-protection of O3 effects, novel threshold and dose-response approaches will be developed. These will be combined with regional atmospheric and biogeochemical models to estimate interactions and feedbacks on plant/soil carbon stocks, greenhouse gas balance and plant species change.The new risk assessment chain to be developed will be applied at the European scale, quantifying how projected climate change will alter damage estimates. Combined with economic valuation of ecosystem services, improved integrated assessment modelling will allow a cost-benefit analysis to inform future mitigation and adaptation strategies on air pollution and climate change.

**Partners:**

| | | |
|---|---|---|
| 1 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 2 | LUNDS UNIVERSITET | SE |
| 3 | DANMARKS TEKNISKE UNIVERSITET | DK |
| 4 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 5 | INTERNATIONALES INSTITUT FUER ANGEWANDTE SYSTEMANALYSE | AT |
| 6 | METEOROLOGISK INSTITUTT | NO |
| 7 | FORSCHUNGSZENTRUM JUELICH GMBH | DE |
| 8 | STICHTING ENERGIEONDERZOEK CENTRUM NEDERLAND | NL |
| 9 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 10 | Karlsruher Institut fuer Technologie | DE |
| 11 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 12 | UNIVERSITY OF YORK | UK |
| 13 | INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE | FR |
| 14 | RIJKSINSTITUUT VOOR VOLKSGEZONDHEIDEN MILIEU*NATIONAL INSTITUTEFOR PUBLIC HEALTH AND THE ENVIRONMENTEN | NL |
| 15 | EIDGENOESSISCHES VOLKSWIRTSCHAFTSDEPARTEMENT | CH |
| 16 | GOETEBORGS UNIVERSITET | SE |
| 17 | ERDESZETI TUDOMANYOS INTEZET | HU |
| 18 | ILMATIETEEN LAITOS | FI |
| 19 | HELSINGIN YLIOPISTO | FI |
| 20 | UNIVERSITA CATTOLICA DEL SACRO CUORE | IT |
| 21 | ODESSA NATIONAL I.I. MECHNIKOV UNIVERSITY | UA |
| 22 | UNIVERSITAET FUER BODENKULTUR WIEN | AT |
| 23 | UNIVERSIDAD POLITECNICA DE MADRID | ES |
| 24 | CENTRO DE INVESTIGACIONES ENERGETICAS, MEDIOAMBIENTALES Y TECNOLOGICAS-CIEMAT | ES |
| 25 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 26 | SVERIGES METEOROLOGISKA OCH HYDROLOGISKA INSTITUT | SE |
| 27 | DRZAVNI HIDROMETEOROLOSKI ZAVOD | HR |
| 28 | THE UNIVERSITY OF EDINBURGH | UK |
| 29 | RHEINISCHE FRIEDRICH-WILHELMS-UNIVERSITAET BONN | DE |
| 30 | EIDGENOESSISCHE FORSCHUNGSANSTALT WSL | CH |
| 31 | IVL SVENSKA MILJOEINSTITUTET AB | SE |
| 32 | MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. | DE |
| 33 | INSTITUTE OF PHYSICOCHEMICAL AND BIOLOGICAL PROBLEMS IN SOIL SCIENCE OF RUSSIAN ACADEMY OF SCIENCES | RU |
| 34 | HOLLAND MICHAEL | UK |
| 35 | AARHUS UNIVERSITET | DK |

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| 35 | AARHUS UNIVERSITET | DK |
| 36 | WAGENINGEN UNIVERSITEIT | NL |
| 37 | UNIVERSITE LIBRE DE BRUXELLES | BE |
| 38 | INSTITUTE OF PLANT PHYSIOLOGY AND GENETICS OF BULGARIAN ACADEMY OF SCIENCES | BG |
| 39 | NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO | NL |

**Activity Code:** ENV.2011.5.1.0-1 **Funding Scheme:** CSA **Duration (Months):** 42

**Title:** Support in Preparation of the IPCC 5th Assessment Report

**Proposed EC Grant:** 600.000 €

**Abstract:**

The Intergovernmental Panel on Climate Change (IPCC) is the key global climate science-policy interface, underpinning European and international climate policy making and is the leading body responsible for the scientific assessment of climate change. In preparation of the IPCC 5th Assessment Report, support will be provided to increase the participation of experts from EU countries whose governments are unable to provide appropriate funding, consistent with IPCC practices and from developing countries to the IPCC process and enhance visibility of the IPCC goals in Europe.

**Partners:**

1 ORGANISATION METEOROLOGIQUE MONDIALE CH

**Activity Code:** ENV.2012.6.1-5 **Funding Scheme:** CSA **Duration (Months):** 28

**Title:** European Trans-disciplinary Assessment of Climate Engineering

**Proposed EC Grant:** 999.960 €

**Abstract:**

Growing concern over the difficulty of efforts to reduce global greenhouse gas emissions has recently led to an intense discussion of “Climate Engineering” (CE) - techniques for global-scale intervention to offset global warming. These have great potentials, but also entail serious risks and uncertainties. CE is rapidly gaining scientific, political, commercial, and public attention, and the first national and international assessments of CE schemes have already been published. However, a distinct European perspective, particularly with regard to the EU and how CE relates to its ambitious climate targets, is still missing. The project “European Trans-disciplinary Assessment of Climate Engineering” (EuTRACE) has been formed to fill this gap. It will (1) pool top independent experts engaged in CE and general climate research across Europe to develop a next-generation assessment of the potentials, uncertainties, risks, implications, and the criteria to assess whether or not to implement various CE options; (2) actively engage in dialogue with the public and policy makers and other civil society stakeholders to disseminate information about CE and to adequately address concerns and perspectives across Europe and globally and incorporate them in the assessment; (3) outline policy options and pathways for the EU and its partners in Europe and abroad to address the challenges CE poses; and (4) identify the most important gaps in current understanding of climate engineering. 14 partner organizations from five countries ranging from the natural sciences & engineering, social sciences and the humanities have joined forces to address these questions. The assessment approach of EuTRACE is supported by European-level policy makers, and the consortium has already established partnerships with a large international network of top researchers from Europe, North America and Asia.

**Partners:**

| | | |
|---|---|---|
| 1 | INSTITUTE FOR ADVANCED SUSTAINABILITY STUDIES EV | DE |
| 2 | ADELPHI RESEARCH GGMBH | DE |
| 3 | MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. | DE |
| 4 | INSTITUT FUR WELTWIRTSCHAFT | DE |
| 5 | Karlsruher Institut fuer Technologie | DE |
| 6 | THE UNIVERSITY OF EXETER | UK |
| 7 | UNIVERSITY OF BRISTOL | UK |
| 8 | UNIVERSITY OF EAST ANGLIA | UK |
| 9 | THE UNIVERSITY OF EDINBURGH | UK |
| 10 | UNIVERSITETET I OSLO | NO |
| 11 | METEOROLOGISK INSTITUTT | NO |
| 12 | CICERO SENTER KLIMAFORSKNING STIFTELSE | NO |
| 13 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 14 | UNIVERSITAET GRAZ | AT |

**Activity Code:** ENV.2012.6.1-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** EUropean Provision Of Region Impact Assessment on a Seasonal-to-decadal timescale

**Proposed EC Grant:** 8.976.948 €

**Abstract:**

Recent advances in our understanding and forecasting of climate and climate change have brought us to the point where skilful and useful predictions are being made. These forecasts hold the potential for being of great value for a wide range of decision-makers who are affected by the vagaries of the climate and who would benefit from understanding and better managing climate-related risks. However, such climate information is currently under-used, mis-used, or not used at all. Therefore there exists the opportunity to develop new technologies to properly exploit emerging capability from the climate community, and more importantly, to engage with the users of such technologies to develop useful and useable tools. The EUPORIAS project will develop and deliver reliable predictions of the impacts of future climatic conditions on a number of key sectors (to include water, energy, health, transport, agriculture and tourism), on timescales from seasons to years ahead. The project will do this through a strong engagement with the forecast providers and the users/decision-makers, who are both represented within the project. EUPORIAS will develop climate services and tools targeted to the needs of the users, and will share knowledge to promote the technologies created within the project. EUPORIAS will also improve the users' understanding of their vulnerability to varying climatic conditions as well as better prepare them to utilise climate forecasts, thereby reducing risks and costs associated with responding to varying climatic conditions. As a result businesses, governments, NGOs, and society in general will be able to better manage risks and opportunities associated with varying climatic conditions, thus becoming more resilient to the variability of the climate. The project will provide the basis for developing a strong climate service market within Europe, offering the opportunity for businesses to capitalise on improved management of weather and climate risks.

**Partners:**

| | | |
|---|---|---|
| 1 | MET OFFICE | UK |
| 2 | TOURISME TERRITOIRES TRANSPORTS ENVIRONNEMENT CONSEIL | FR |
| 3 | AGENZIA NAZIONALE PER LE NUOVE TECNOLOGIE,L'ENERGIA E LO SVILUPPO ECONOMICO SOSTENIBILE | IT |
| 4 | BUNDESAMT FUR METEOROLOGIE UND KLIMATOLOGIE METEOSCHWEIZ | CH |
| 5 | UNIVERSIDAD DE CANTABRIA | ES |
| 6 | PREDICTIA INTELLIGENT DATA SOLUTIONS SL | ES |
| 7 | AGENCIA ESTATAL DE METEOROLOGIA | ES |
| 8 | DHI | DK |
| 9 | WAGENINGEN UNIVERSITEIT | NL |
| 10 | DEUTSCHER WETTERDIENST | DE |
| 11 | FUNDACIO INSTITUT CATALA DE CIENCIES DEL CLIMA | ES |
| 12 | KONINKLIJK NEDERLANDS METEOROLOGISCH INSTITUUT (KNMI) | NL |
| 13 | UNIVERSIDADE DE LISBOA | PT |
| 14 | UNIVERSITY OF LEEDS | UK |
| 15 | SVERIGES METEOROLOGISKA OCH HYDROLOGISKA INSTITUT | SE |
| 16 | LUNDS UNIVERSITET | SE |
| 17 | METEO-FRANCE | FR |
| 18 | CETAQUA, CENTRO TECNOLOGICO DEL AGUA, FUNDACIÓN PRIVADA | ES |
| 19 | Instituto de Meteorologia | PT |
| 20 | WORLD FOOD PROGRAMME | IT |
| 21 | WORLD HEALTH ORGANIZATION. | CH |
| 22 | FUTUREEVERYTHING CIC | UK |
| 23 | ELECTRICITE DE FRANCE S.A. | FR |
| 24 | ADMINISTRATIA NATIONALA DE METEOROLOGIE R.A. | RO |

**Activity Code:** ENV.2012.6.1-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** North Atlantic Climate: Predictability of the climate in the North Atlantic/European sector related to North Atlantic/Arctic sea surface temperature and sea ice variability and change

**Proposed EC Grant:** 8.998.407 €

**Abstract:**

NACLIM aims at investigating and quantifying the predictability of the climate in the North Atlantic/European sector related to North Atlantic/Arctic sea surface temperature (SST) and sea ice variability and change on seasonal to decadal time scales. SST and sea-ice forcing have a crucial impact on weather and climate in Europe. Rather than running climate forecasts ourselves, we will analyze the multi-model decadal prediction experiments currently performed as part of the fifth Coupled Model Intercomparison Project (CMIP5) and critically assess the quality of predictions of the near-future state of key oceanic and atmospheric quantities relevant to the SST and sea-ice distribution and the related climate. Long-term observations of relevant ocean parameters will be carried out, necessary to assess the forecast skill of the model-based prediction results. We will identify those observations that are key to the quality of the prediction and in turn optimize the present observing system. We will quantify the impact of North Atlantic/European climate change on high trophic levels of the oceanic ecosystem as well as on urban societies.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITAET HAMBURG | DE |
| 2 | MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. | DE |
| 3 | UNIVERSITE PIERRE ET MARIE CURIE - PARIS 6 | FR |
| 4 | UNIVERSITETET I BERGEN | NO |
| 5 | UNI RESEARCH AS | NO |
| 6 | LEIBNIZ-INSTITUT FUER MEERESWISSENSCHAFTEN AN DER UNIVERSITAET KIEL | DE |
| 7 | DANMARKS METEOROLOGISKE INSTITUT | DK |
| 8 | HAVSTOVAN | FO |
| 9 | ILMATIETEEN LAITOS | FI |
| 10 | HAFRANNSOKNASTOFNUNIN | IS |
| 11 | STICHTING KONINKLIJK NEDERLANDS INSTITUUT VOOR ZEEONDERZOEK (NIOZ) | NL |
| 12 | THE SCOTTISH ASSOCIATION FOR MARINE SCIENCE | UK |
| 13 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 14 | STIFTELSEN NANSEN SENTER FOR FJERNMAALING | NO |
| 15 | VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V. | BE |
| 16 | G.I.M. GEOGRAPHIC INFORMATION MANAGEMENT NV | BE |
| 17 | DANMARKS TEKNISKE UNIVERSITET | DK |
| 18 | THE SCOTTISH MINISTERS ACTING THROUGH MARINE SCOTLAND | UK |

**Activity Code:** ENV.2012.6.1-2 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Advanced Model Development and Validation for Improved Analysis of Costs and Impacts of Mitigation Policies

**Proposed EC Grant:** 5.699.168 €

**Abstract:**

Integrated assessment and energy-economy models have become central tools for informing long-term global and regional climate mitigation strategies. There is a large demand for improved representations of complex system interactions and thorough validation of model behaviour in order to increase user confidence in climate policy assessments. ADVANCE aims to respond to this demand by facilitating the development of a new generation of integrated assessment models. This will be achieved by substantial progress in key areas where model improvements are greatly needed: end use and energy service demand; representation of heterogeneity, behaviour, innovation and consumer choices; technical change and uncertainty; system integration, path dependencies and resource constraints; and economic impacts of mitigation policies. In the past, methodological innovations and improvements were hindered by the unavailability of suitable input data. The ADVANCE project will make a large and coordinated effort to generate relevant datasets. These datasets, along with newly developed methodologies, will be made available to the broader scientific community as open-access resources. ADVANCE will also put a focus on improved model transparency, model validation, and data handling.A central objective of ADVANCE is to evaluate and to improve the suitability of models for climate policy impact assessments. The improved models will be applied to an assessment of long-term EU climate policy in a global context, and disseminated to the wider community. The ADVANCE consortium brings together long-standing expertise in integrated assessment and energy-economy modelling with a strong expertise in material flows, energy system integration, and energy service demand.

**Partners:**

| | | |
|---|---|---|
| 1 | POTSDAM INSTITUT FUER KLIMAFOLGENFORSCHUNG | DE |
| 2 | INTERNATIONALES INSTITUT FUER ANGEWANDTE SYSTEMANALYSE | AT |
| 3 | Planbureau voor de Leefomgeving | NL |
| 4 | FONDAZIONE ENI ENRICO MATTEI | IT |
| 5 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 6 | UNIVERSITY COLLEGE LONDON | UK |
| 7 | SOCIETE DE MATHEMATIQUES APPLIQUEES ET DE SCIENCES HUMAINES | FR |
| 8 | UNIVERSITY OF EAST ANGLIA | UK |
| 9 | INSTITUTE OF COMMUNICATION AND COMPUTER SYSTEMS | EL |
| 10 | UNIVERSITE PIERRE MENDES FRANCE | FR |
| 11 | NORGES TEKNISK-NATURVITENSKAPELIGE UNIVERSITET NTNU | NO |
| 12 | DEUTSCHES ZENTRUM FUER LUFT - UND RAUMFAHRT EV | DE |
| 13 | UNIVERSITEIT UTRECHT | NL |

**Activity Code:** ENV.2012.6.1-3 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Bottom-up Climate Adaptation Strategies towards a Sustainable Europe

**Proposed EC Grant:** 5.995.803 €

**Abstract:**

Climate change can disrupt ecological, social and economic systems, with some regions and sectors suffering significantly. Therefore, adaptation plays a paramount role in responding to climate change. Progress has been made, but there are still important obstacles. Knowledge of the benefits and costs of adaptation is sparse, unsystematic and unevenly distributed across sectors and countries. Planning suffers from substantial uncertainties in terms of precise impacts. It is also difficult to reconcile the bottom-up nature of adaptation with top-down strategic policy making on adaptation. To address these challenges BASE will:Improve adaptation knowledge availability, integration and utilization Case studies will be used to understand facilitators of, and barriers to, adaptation. Over 20 cases have been selected to cover the diversity of adaptation, simultaneously paying attention to the need for generalization and comparability. The gap between top-down strategic assessments of costs and benefits and empirical context-sensitive bottom-up analyses will be bridged using novel combinations of models and qualitative analyses. Promote and strengthen stakeholder participation in adaptation BASE will support stakeholder involvement through novel participatory and co-design techniques. Successful bottom-up initiatives will be studied, and the use of knowledge, two-way learning, the role of social media and other awareness raising methods and tools will be explored.Support coherent, multi-level, multi-sector integrated adaptation policiesBASE will provide policy guidelines by integrating lessons from past experiences, case studies, insights provided by modeling and stakeholder participation. Issues of multilevel, cross sectoral and inter-temporal governance that are presently weakly tackled will be highlighted. Potential conflicts and synergies of adaptation with other important policies will be explored to overcome constraints caused by context-related inertias.

**Partners:**

| | | |
|---|---|---|
| 1 | AARHUS UNIVERSITET | DK |
| 1 | AARHUS UNIVERSITET | DK |
| 2 | ECOLOGIC INSTITUT gemeinnützige GmbH | DE |
| 3 | FUNDACAO DA FACULDADE DE CIENCIAS DA UNIVERSIDADE DE LISBOA | PT |
| 4 | CENTRO EURO-MEDITERRANEO PER I CAMBIAMENTI CLIMATICI SCARL | IT |
| 5 | HELMHOLTZ-ZENTRUM FUER UMWELTFORSCHUNG GMBH - UFZ | DE |
| 6 | THE UNIVERSITY OF EXETER | UK |
| 7 | STICHTING DELTARES | NL |
| 8 | BC3 BASQUE CENTRE FOR CLIMATE CHANGE - KLIMA ALDAKETA IKERGAI | ES |
| 9 | SUOMEN YMPARISTOKESKUS | FI |
| 10 | Istituto Superiore per la Protezione e la Ricerca Ambientale | IT |
| 11 | CENTRUM VYZKUMU GLOBALNI ZMENY AV CR VVI | CZ |
| 12 | UNIVERSITY OF LEEDS | UK |
| 13 | UNIVERSIDAD POLITECNICA DE MADRID | ES |
| 14 | TEKNOLOGIRADET-THE DANISH BOARD OF TECHNOLOGY | DK |

**Activity Code:** ENV.2012.6.1-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Seasonal-to-decadal climate Prediction for the improvement of EuropeanClimate Services

**Proposed EC Grant:** 8.524.864 €

**Abstract:**

The World Meteorological Organization (WMO) sponsored the Global Framework on Climate Services (GFCS) where the need for actionable climate information for periods from several months up to several years for economic, industrial and political planning has been expressed. However, progress in seasonal forecasting has been slow and decadal forecasting is still incipient. At the same time, new model components to address the role of sea ice, land surface, stratosphere, ocean and their resolution in global models are now available from the climate change and weather forecasting communities. Methods for sophisticated downscaling and calibration for local, reliable climate predictions are scarce in Europe. In this context, SPECS aims to identify the main problems in climate prediction and investigate a battery of solutions from a seamless perspective. SPECS will undertake research and dissemination activities to deliver a new generation of European climate forecast systems, with improved forecast quality and efficient regionalisation tools to produce reliable, local climate information over land at seasonal-to-decadal time scales, and provide an enhanced communication protocol and services tosatisfy the climate information needs of a wide range of public and private stakeholders. The improved understanding and seamless predictions will offer better estimates of the future frequency of high-impact,extreme climatic events and of the prediction uncertainty. New services toconvey climate information and its quality will be used. SPECS will be,among other things, the glue to coalesce the outcome of previous researchefforts that hardly took climate prediction into account. SPECS will ensure interoperability so as to easily incorporate their application inan operational context, provide the basis for improving the capacity of European policy making, industry and society to adapt to near-future climate variations and a coordinated response to some of the GFCS components.

**Partners:**

| | | |
|---|---|---|
| 1 | FUNDACIO INSTITUT CATALA DE CIENCIES DEL CLIMA | ES |
| 2 | INSTITUTO NACIONAL DE PESQUISAS ESPACIAIS | BR |
| 3 | MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. | DE |
| 4 | KONINKLIJK NEDERLANDS METEOROLOGISCH INSTITUUT (KNMI) | NL |
| 5 | THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF OXFORD | UK |
| 6 | METEO-FRANCE | FR |
| 7 | CENTRE EUROPEEN DE RECHERCHE ET DE FORMATION AVANCEE EN CALCUL SCIENTIFIQUE | FR |
| 8 | NORSK INSTITUTT FOR LUFTFORSKNING | NO |
| 9 | AGENZIA NAZIONALE PER LE NUOVE TECNOLOGIE,L'ENERGIA E LO SVILUPPO ECONOMICO SOSTENIBILE | IT |
| 10 | UNIVERSITY OF LEEDS | UK |
| 11 | THE UNIVERSITY OF EXETER | UK |
| 12 | METEOROLOGISK INSTITUTT | NO |
| 13 | Vortex | ES |
| 14 | MET OFFICE | UK |
| 15 | SVERIGES METEOROLOGISKA OCH HYDROLOGISKA INSTITUT | SE |
| 16 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 17 | THE UNIVERSITY OF READING | UK |
| 18 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 19 | EUROPEAN CENTRE FOR MEDIUM-RANGE WEATHER FORECASTS | UK |
| 20 | UNIVERSITAET HAMBURG | DE |

**Activity Code:** ENV.2012.6.1-4 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Economic iNsTRuments to Achieve Climate Targets in Europe

**Proposed EC Grant:** 2.935.276 €

**Abstract:**

The ENTRACTE research project assesses the EU's climate policy portfolio. While the EU ETS is key to promote the transition towards a low-carbon economy, ambitious GHG emissions reductions will be reached only if this scheme is improved and supported by complementary policies. A carefully considered policy design has to take into account existing market failures other than the climate externality, suboptimal outcomes of international agreements, the necessity to secure competitiveness and reduce carbon leakage and the co-existence and interaction with several other political goals. ENTRACTE looks at the EU ETS and additional policy instruments like energy efficiency standards, renewable policies, carbon taxes, innovation policies, and trade measures. ENTRACTE provides a deep understanding of how climate policy instruments interact with each other and with related policy instruments. It takes the "real-world" and its imperfections comprehensively into account and considers practical barriers in the implementation (like information asymmetry, uncertainty, political and legal constraints, behavioural aspects). ENTRACTE integrates empirical findings from ex-post assessments using broad sets of empirical data as well as ex-ante analyses with simulation models and experimental approaches with theoretical findings in order to optimize the policy mix. By adopting a project-wide harmonization of assumptions and scenarios about the current and future policy environment, ENTRACTE allows to pursue an integrated approach and and to arrive at a synthesis of research results which identifies strengths and weaknesses of different instrument mixes. Based on these findings, ENTRACTE makes a major step in providing practically applicable recommendations for policy makers on how to design the environmentally effective, economically efficient and politically and legally feasible climate policy mix needed to achieve medium-term and long-term GHG reduction targets in Europe.

**Partners:**

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|---|---|---|
| 1 | ZENTRUM FUER EUROPAEISCHE WIRTSCHAFTSFORSCHUNG GmbH | DE |
| 2 | POTSDAM INSTITUT FUER KLIMAFOLGENFORSCHUNG | DE |
| 3 | FONDAZIONE ENI ENRICO MATTEI | IT |
| 4 | LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE | UK |
| 5 | IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE | UK |
| 6 | STICHTING KATHOLIEKE UNIVERSITEIT BRABANT UNIVERSITEIT VAN TILBURG | NL |
| 7 | Stiftelsen Frischsenteret for samfunnsøkonomisk forskning | NO |
| 8 | AP ENVECON LIMITED | IE |
| 9 | EUROPEAN RESEARCH AND PROJECT OFFICE GMBH | DE |

**Activity Code:** ENV.2012.6.1-3 **Funding Scheme:** CP **Duration (Months):** 60

**Title:** Reconciling Adaptation, Mitigation and Sustainable Development for Cities

**Proposed EC Grant:** 5.200.000 €

**Abstract:**

The RAMSES project will develop a rigorous, analytical framework for the implementation of adaptation strategies and measures in EU and international cities. It will develop a set of innovative methods and tools that will quantify the impacts of climate change and the costs and benefits of adaptation to climate change and thus provide the evidence to enable policy makers to design adaptation strategies. It integrates the assessment of impacts and costs to provide a much more coherent approach than currently exists. As major centres of population, economic importance, greenhouse gas emissions and infrastructure, RAMSES focuses on adaptation issues in cities. RAMSES will deliver: 1. A strategic frame for evidence-based adaptation decision-making. A pragmatic and standardised framework for decision making using comparable climate change impact assumptions, impact and adaptation costs while taking account of uncertainty. This will apply and combine smart and unconventional scientific methodologies. 2. Multi-level analysis–as local administrative units, cities will be used to develop adaptation (and more generally sustainable development) strategies from the bottom-up/top-down, that can be aggregated to consider costs at the national, EU and international levels. 3. Quantification of adaptation costs–a framework for assessment of full economic costs and benefits of adaptation (to date a woefully under-researched area). 4. Policy relevance and acceptance of adaptation measures–city case studies and stakeholder engagement will ensure the relevance of the framework for policy makers and ensure adaptation measures become better accepted by other stakeholders. The frameworks will be converted into a user-friendly guide for stakeholders who need to prioritize adaptation and mitigation decisions. This reduces costs and enhances understanding and acceptance of adaptation. The data will be fed into the European Clearinghouse Mechanism to increase transparency/stakeholder access.

**Partners:**

| | | |
|---|---|---|
| 1 | POTSDAM INSTITUT FUER KLIMAFOLGENFORSCHUNG | DE |
| 2 | LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE | UK |
| 3 | UNIVERSITY OF NEWCASTLE UPON TYNE | UK |
| 4 | VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V. | BE |
| 5 | FONDATION INSTITUT DE RECHERCHE POUR LE DEVELOPPEMENT DURABLE ET LES RELATIONS INTERNATIONALES | FR |
| 6 | FUNDACION TECNALIA RESEARCH & INNOVATION | ES |
| 7 | NORGES TEKNISK-NATURVITENSKAPELIGE UNIVERSITET NTNU | NO |
| 8 | WORLD HEALTH ORGANIZATION. | CH |
| 9 | T6 ECOSYSTEMS S.R.L. | IT |
| 10 | ICLEI EUROPEAN SECRETARIAT GMBH (ICLEI EUROPASEKRETARIAT GMBH)* | DE |
| 11 | The Climate Centre | BE |
| 12 | Climate Media Factory UG | DE |
| 13 | Institut Veolia Environnement | FR |

**Activity Code:** ENV.2012.6.1-2 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Knowledge Based Climate Mitigation Systems for a Low Carbon Economy

**Proposed EC Grant:** 5.428.606 €

**Abstract:**

The new science of complex systems often distinguishes linear (continuous) from non-linear (step-change) dynamics. The distinction is not that between true and false models of reality, but between different space-time scales and perspectives. Linear systems are generally simplex and locally predictable - the past is a good guide to the future. Non-linear systems, however, are time-asymmetric - they can be explained with the wisdom of hindsight, but not predicted. In practice, non-linear dynamics are significant both at the micro-scale of small history and at the macro-scale of deep time. The brilliant young scientist, for example, may experience a series of epiphanies that change his/her understanding and behaviour in an unpredictable and irreversible way. The scientific community may experience innovation-cascades that have a similar effect on a much larger scale.Current models of climate change and carbon emission work well on the meso-scale, but struggle to represent the complex causal structures and time-asymmetries we see on the micro- and macro-levels. COMPLEX will pioneer an approach that can be called comparative regional studies. It will integrate the quasi-classic models of meso-scale science with our best understanding of fine-grained space-time patterns and the system-flips that are likely to occur in the long interval between now and 2050. We believe the region is the key point of entry for studying climate change. It is small enough to be sensitive to local factors, large enough to interact with supra-national agencies and stable enough to be historically and culturally distinctive. In addition to undertaking case studies in Norway, Sweden, Netherlands, Spain and Italy, COMPLEX will develop a suite of economic and environmental modelling tools and decision-support systems to inform national and supra-national policy and support communities across Europe working to make the transition to a low-carbon economy.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITY OF NEWCASTLE UPON TYNE | UK |
| 2 | UNIVERSITEIT TWENTE | NL |
| 3 | KUNGLIGA VETENSKAPSAKADEMIEN | SE |
| 4 | SVERIGES LANTBRUKSUNIVERSITET | SE |
| 5 | UNIVERSITA DEGLI STUDI DI PADOVA | IT |
| 6 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 7 | SINTEF ENERGI AS | NO |
| 8 | INTERNATIONALES INSTITUT FUER ANGEWANDTE SYSTEMANALYSE | AT |
| 9 | Observatorio para una Cultura del Territorio | ES |
| 10 | STOCKHOLMS UNIVERSITET | SE |
| 11 | Scientific foundation Nansen International Environmental and Remote Sensing Centre | RU |
| 12 | NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO | NL |
| 13 | INSTITUT NATIONAL DE RECHERCHE EN SCIENCES ET TECHNOLOGIES POUR L'ENVIRONNEMENT ET L'AGRICULTURE | FR |
| 14 | EDF EN FRANCE SA | FR |
| 15 | UNIVERSITY OF SUSSEX | UK |
| 16 | BC3 BASQUE CENTRE FOR CLIMATE CHANGE - KLIMA ALDAKETA IKERGAI | ES |
| 17 | MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. | DE |

**Activity Code:** ENV.2012.6.1-3 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Tool-supported policy-development for regional adaptation

**Proposed EC Grant:** 4.556.233 €

**Abstract:**

Adaptation in the face of climate change is currently a major challenge, not only in the EU, but all around the world. Climate change has two distinct characters: the slower trends in climatic variables such as sea water temperatur, and the extreme weather phenomena, such as heavy precipitation. The fundamental driver for regional adaptation are regional climate scenarios. Crucial for local societies is the resilience of critical infrastructures, such as Energy and Transport, against the envisaged climate scenarios. Without proper functioning of such infrastructures, many service sectors, such as Tourism, will be negatively affected. ToPDAd developes state-of-the-art socioeconomic methods&tools for an integrated assessment supporting regional adaptation decision-making. Based on these, conjectures with respect to EU level policies for the considered sectors Energy, Transport, as well as, Tourism are made. Two time frames are specified; 2010-2050 and 2050-2100 for mid-term and long-term strategy formulations. Regional strategies and EU-level policies need to be consistent across the time frames in order to avoid maladaptation. ToPDAd will also develop the Clearing House Mechanism (CHM) in the domain of adaptation. The CHM is key for continuous learning, and a repository of data and tools supporting adaptation decision-making.

**Partners:**

| | | |
|---|---|---|
| 1 | TEKNOLOGIAN TUTKIMUSKESKUS VTT | FI |
| 2 | CICERO SENTER KLIMAFORSKNING STIFTELSE | NO |
| 3 | THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE | UK |
| 4 | JOANNEUM RESEARCH FORSCHUNGSGESELLSCHAFT MBH | AT |
| 5 | TRANSPORT & MOBILITY LEUVEN NV | BE |
| 6 | UNIVERSITY OF EAST ANGLIA | UK |
| 7 | EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZURICH | CH |
| 8 | ILMATIETEEN LAITOS | FI |
| 9 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 10 | GESELLSCHAFT FUR WIRTSCHAFTLICH STRUKTURFORSCHUNG MBH | DE |

**Activity Code:** ENV.2012.6.1-4 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Choosing Efficient Combinations of Policy Instruments for Low-carbon development and Innovation to Achieve Europe's 2050 climate targets

**Proposed EC Grant:** 2.797.381 €

**Abstract:**

Europe needs to transform itself to a low-carbon economy by mid-century. The existing instrument mix needs to be scaled up drastically to initiate the changes needed across the economy. As the scale and scope of instruments increases, their interaction becomes more important, as do constraints on the political, legal and administrative feasibility. To evaluate their efficiency and effectiveness, instruments cannot be viewed in isolation; understanding and managing their interaction becomes key.The CECILIA2050 project analyses the performance of existing climate policy instruments and their interaction, and maps pathways for the evolution of the instrument mix in Europe. It describes ways to improve the economic efficiency and environmental effectiveness of the instrument mix, and to address constraints that limit their performance or feasibility. These include public acceptance, availability of finance and the physical infrastructure, but also the administrative and legal framework.The first, backward-looking part of the project takes stock of the existing instrument mix in the EU and its Member States, and assesses their coherence and past performance. It describes which factors determine their efficiency and effectiveness, and measures their effects on equity, innovation and competitiveness. The second, forward-looking part maps pathways towards a more ambitious policy mix for 2030 and 2050, starting from the current EU climate policy. With economic instruments at the heart of the mix, it describes and models how the instrumentation could evolve, based on scenarios of the magnitude of change required for the low-carbon transformation. To this end, it combines the state of the art modelling tools with qualitative and participatory methods. To complement the EU-level analysis, the effects of EU climate policies are quantified at the global level. To ensure policy relevance and mobilise practitioners' knowledge, the project engages with stakeholders in different way.

**Partners:**

| | | |
|---|---|---|
| 1 | ECOLOGIC INSTITUT gemeinnützige GmbH | DE |
| 2 | UNIVERSITY COLLEGE LONDON | UK |
| 3 | UNIVERSITEIT LEIDEN | NL |
| 4 | UNIVERZITA KARLOVA V PRAZE | CZ |
| 5 | GESELLSCHAFT FUR WIRTSCHAFTLICH STRUKTURFORSCHUNG MBH | DE |
| 6 | VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG | NL |
| 7 | SOCIETE DE MATHEMATIQUES APPLIQUEES ET DE SCIENCES HUMAINES | FR |
| 8 | UNIWERSYTET WARSZAWSKI | PL |
| 9 | BC3 BASQUE CENTRE FOR CLIMATE CHANGE - KLIMA ALDAKETA IKERGAI | ES |
| 10 | UNIVERSITA DEGLI STUDI DI FERRARA | IT |

**Activity Code:** ENV.2012.6.1-6 **Funding Scheme:** CSA **Duration (Months):** 36

**Title:** Joint Programming Initiative Connecting Climate Knowledge for Europe - Coordination and Support Action

**Proposed EC Grant:** 1.998.999 €

**Abstract:**

The overall objective of this Coordination and Support Action is to coordinate and support the development and the implementation plans of the Joint Programming Initiative 'Connecting Climate Knowledge for Europe' (JPI Climate). The CSA will serve as a tool integrated in JPI Climate to enable it to address the challenges of climate change. Hence, it will contribute to the EU objective of building the European Research Area through enhanced cooperation and coordination of national research programmes.The CSA will coordinate preparatory activities within JPI Climate and will support the capacity-building process, with the aim of shortening the time required to reach the implementation phase. This will be done by further developing the common strategic research agenda and by refining the mapping exercise. With regard to the implementation a general concept for JPI Climate as a whole will be developed with preparing a catalogue of possible joint activities, developing and revising implementation schemes. Another main task of the CSA will be developing of a network strategy and the establishment of JPI Climate as the leading European platform to align policies in the area of climate research. This includes the coordination and development of synergies with the existing research and innovation schemes in the EU. The development of a strategy how to engage with member states not yet involved in JPI Climate and involve international institutions outside of Europe will complement this task.Further, the adaptation of the Framework Conditions will be an important step towards the implementation of JPI Climate. An appropriate use of the research findings requires effective communication strategies (web-sites, conferences, brochures). Therefore, the development of an optimized dissemination strategy will be part of the CSA as well.

**Partners:**

| | | |
|---|---|---|
| 1 | DEUTSCHES ZENTRUM FUER LUFT - UND RAUMFAHRT EV | DE |
| 2 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 3 | ILMATIETEEN LAITOS | FI |
| 4 | UNIVERSITAET FUER BODENKULTUR WIEN | AT |
| 5 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 6 | THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF OXFORD | UK |
| 7 | AGENCE NATIONALE DE LA RECHERCHE | FR |
| 8 | VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG | NL |
| 9 | CENTRO EURO-MEDITERRANEO PER I CAMBIAMENTI CLIMATICI SCARL | IT |
| 10 | SERVICE PUBLIC FEDERAL DE PROGRAMMATION POLITIQUE SCIENTIFIQUE | BE |
| 11 | NORGES FORSKNINGSRAD | NO |
| 12 | HELSINGIN YLIOPISTO | FI |
| 13 | AARHUS UNIVERSITET | DK |
| 13 | AARHUS UNIVERSITET | DK |
| 14 | THE UNIVERSITY OF READING | UK |
| 15 | SVERIGES METEOROLOGISKA OCH HYDROLOGISKA INSTITUT | SE |
| 16 | ENVIRONMENTAL PROTECTION AGENCY OF IRELAND | IE |
| 17 | KONINKLIJK NEDERLANDS METEOROLOGISCH INSTITUUT (KNMI) | NL |
| 18 | FORSKNINGSRÅDET FÖR MILJÖ, AREELLA NÄRINGAR OCH SAMHÄLLSBYGGANDE | SE |
| 19 | VETENSKAPSRADET - SWEDISH RESEARCH COUNCIL | SE |
| 20 | BUNDESMINISTERIUM FUER BILDUNG UND FORSCHUNG | DE |
| 21 | BUNDESMINISTERIUM FUR WISSENSCHAFT UND FORSCHUNG BMWF | AT |

**Activity Code:** ENV.2007.1.2.2.2. **Funding Scheme:** CP **Duration (Months):** 54

**Title:** European Study of Cohorts for Air Pollution Effects

**Proposed EC Grant:** 5.858.974 €

**Abstract:**

European policy making is hampered by considerable uncertainty about the magnitude and nature of the impacts of long term exposure to air pollution on human health. ESCAPE is a collaboration of more than 30 European cohort studies including some 900,000 subjects. It is aimed at quantifying health impacts of air pollution and at reducing uncertainty. ESCAPE will also test new hypotheses on specific health effects of air pollution. ESCAPE will focus on effects of within-city, within-area and within-country contrasts in air pollution, and so will enable Europe to remain at the cutting edge worldwide for further development and application of methods which have been largely pioneered here. ESCAPE will make measurements of airborne particulate matter and nitrogen oxides in selected regions in Europe. It will measure the chemical composition of the collected particles and it will store samples for future chemical and toxicological analyses. Escape will focus on four categories of cohort studies: 1. Pregnancy outcome and birth cohort studies; 2. Studies on respiratory disease in adults; 3. Studies on cardiovascular disease in adults; 4. Studies on cancer incidence and mortality. ESCAPE responds to a specific FP7 call for a large collaborative project in the Environment and Health program. The call asks for research within existing cohorts among children as well as elderly adults as sensitive groups, and it asks to consider the role of other environmental exposures such as noise, and of biomarkers and gene-environment interactions. Whereas ESCAPE will focus, as requested, on air pollution and to a lesser extent traffic noise exposures, studies have been included which contain a wealth of data on other exposures (e.g., drinking water contaminants), on biomarkers and on genetics. ESCAPE will actively engage stakeholder organisations and policy makers so that results can be swiftly translated to support policy development and implementation.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITEIT UTRECHT | NL |
| 2 | NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS | EL |
| 3 | PANEPISTIMIO KRITIS (UNIVERSITY OF CRETE) | EL |
| 4 | AZIENDA SANITARIA LOCALE ROMA | IT |
| 5 | UNIVERSITAET BASEL | CH |
| 6 | FUNDACIO CENTRE DE RECERCA EN EPIDEMIOLOGIA AMBIENTAL - CREAL | ES |
| 7 | IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE | UK |
| 8 | THE UNIVERSITY OF MANCHESTER | UK |
| 9 | HELMHOLTZ ZENTRUM MUENCHEN DEUTSCHES FORSCHUNGSZENTRUM FUER GESUNDHEIT UND UMWELT GMBH | DE |
| 10 | INSTITUT FUR UMWELTMEDIZINISCHE FORSCHUNG AN DER HEINRICH-HEINE-UNIVERSITAT DUSSELDORF GMBH | DE |
| 11 | UNIVERSITAET DUISBURG-ESSEN | DE |
| 12 | UNIVERSITAET ULM | DE |
| 13 | KRAEFTENS BEKAEMPELSE | DK |
| 14 | NASJONALT FOLKEHELSEINSTITUTT | NO |
| 15 | KAROLINSKA INSTITUTET | SE |
| 16 | UMEA UNIVERSITET | SE |
| 17 | INSTITUT DE VEILLE SANITAIRE | FR |
| 18 | INSTITUT NATIONAL DE LA SANTE ET DE LA RECHERCHE MEDICALE (INSERM) | FR |
| 19 | TERVEYDEN JA HYVINVOINNIN LAITOS | FI |
| 20 | VYTAUTO DIDZIOJO UNIVERSITETAS | LT |
| 21 | ORSZAGOS KORNYEZETEGESZSEGUGYI INTEZET | HU |
| 22 | INSTITUTE OF OCCUPATIONAL MEDICINE | UK |
| 23 | RIJKSINSTITUUT VOOR VOLKSGEZONDHEIDEN MILIEU*NATIONAL INSTITUTEFOR PUBLIC HEALTH AND THE ENVIRONMENTEN | NL |
| 24 | MEDICAL RESEARCH COUNCIL | UK |
| 25 | NATIONAL TAIWAN UNIVERSITY | TW |
| 26 | HELLENIC HEALTH FOUNDATION | EL |

**Activity Code:** ENV.2007.1.2.1.1. **Funding Scheme:** CP **Duration (Months):** 60

**Title:** Health Effects of Indoor Pollutants: Integrating microbial, toxicological and epidemiological approaches

**Proposed EC Grant:** 2.753.694 €

**Abstract:**

Healthy housing and good indoor air quality are important goals of public health. However, biological indoor pollution due to dampness, moisture and mold is an emerging environmental health issue, as recognized in EU indoor air policy documents. Prevalence of dampness is remarkable, and may still increase due to demands of energy savings and extreme weather periods and floods associated with climate change. The exposure may lead to long-term impacts such as asthma. The documentation is strong on association between building mold and health, but the causative agents and disease mechanisms are largely unknown, which impedes recognition of a mold-affected patient in health care. Efficient control and regulation are hampered by the insufficient understanding of these causalities. Understanding of the links between building practices and health is lacking. There is an urgent need for European-wide knowledge to form a basis for establishing building-associated criteria for healthy indoor environments. The aim of this proposal is to clarify the health impacts of indoor exposures on children and adults by providing comprehensive exposure data on biological and chemical factors in European indoor environments, and by combining this information with extensive health data obtained from a field study and from existing population cohorts. Modern microbiological, toxicological and immunological techniques will be used that allow the revealing of the links between the harmful exposures and long term impacts on health, and the mechanisms behind. Data on determinants and distributions of indoor microbial agents will be provided for development of avoidance measures and other dissemination for stakeholders. The study networks experts on environmental epidemiology, microbiology, immunology, toxicology and building sciences. They cover the multidisciplinary field needed for adequate risk assessment. This approach has been successfully applied in the previous research.

**Partners:**

| | | |
|---|---|---|
| 1 | TERVEYDEN JA HYVINVOINNIN LAITOS | FI |
| 2 | UNIVERSITEIT UTRECHT | NL |
| 3 | FUNDACIO CENTRE DE RECERCA EN EPIDEMIOLOGIA AMBIENTAL - CREAL | ES |
| 4 | HELMHOLTZ ZENTRUM MUENCHEN DEUTSCHES FORSCHUNGSZENTRUM FUER GESUNDHEIT UND UMWELT GMBH | DE |
| 5 | Itä-Suomen yliopisto | FI |
| 6 | UNIVERSITAET FUER BODENKULTUR WIEN | AT |
| 7 | LUNDS UNIVERSITET | SE |
| 8 | IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE | UK |

**Activity Code:** ENV.2007.1.2.1.2. **Funding Scheme:** CP **Duration (Months):** 54

**Title:** Contaminant mixtures and human reproductive health - novel strategies for health impact and risk assessment of endocrine disrupters

**Proposed EC Grant:** 3.494.352 €

**Abstract:**

Disruption of hormonal signalling in fetal life can irreversibly affect human development and reproductive health at a later age. Of considerable concern in Europe is a decline in male semen quality and a high prevalence of congenital malformations and hormone-dependent cancers. Although it appears plausible that environmental chemicals with endocrine activity may be involved in the causation of these disorders, there is no evidence for adverse effects of individual substances at relevant human exposure levels. However, there are indications that combinations of chemicals play a cumulative role. CONTAMED aims to explore the hypothesis that combined exposure to endocrine disrupting chemicals in fetal life may lead to adverse delayed impacts on human reproductive health. To achieve this goal, CONTAMED will combine epidemiological approaches with laboratory science. The work plan for CONTAMED is organised in three major strands focusing on human studies, animal models and in vitro assays including metabolomics. The project will deliver new epidemiological insights into associations between cumulative exposure and reproductive health, improved toxicological risk assessment for the anticipation of reproductive effects of chemicals, validated biomarkers for cumulative exposures and new mechanistic information about the ways in which chemicals may disrupt sexual differentiation during development. CONTAMED will provide the knowledge necessary to set the scene for Europe-wide human health impact studies of cumulative exposures to endocrine active chemicals and their possible role in the deterioration of reproductive health in Europe. Finally, the project will analyze the implications of new scientific findings for the European Environment and Health Action Plan and the Community Strategy for Endocrine Disrupters.

**Partners:**

| | | |
|---|---|---|
| 1 | BRUNEL UNIVERSITY | UK |
| 2 | DANMARKS TEKNISKE UNIVERSITET | DK |
| 3 | UNIVERSITY OF SUSSEX | UK |
| 4 | UNIVERSIDAD DE GRANADA | ES |
| 5 | ERASMUS UNIVERSITAIR MEDISCH CENTRUM ROTTERDAMERASMUS MC | NL |
| 6 | GREEN TOX GMBH | CH |
| 7 | FAUST UND BACKHAUS ENVIRONMENTAL CONSULTING GBR | DE |
| 8 | UNIVERSITY OF BRISTOL | UK |
| 9 | THE SCHOOL OF PHARMACY, UNIVERSITY OF LONDON | UK |

**Activity Code:** ENV.2007.1.2.1.2. **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Developmental effects of environment on reproductive health

**Proposed EC Grant:** 3.499.028 €

**Abstract:**

The multidisciplinary research teams in this consortium have played lead roles in establishing that fetal and childhood periods are vulnerable to environmental disruption leading to common reproductive disorders. This proposal will investigate: (1) connections between normal/abnormal perinatal reproductive development and maturation of reproductive function at puberty and in adulthood; (2) systemic gene-environment interactions underlying reproductive disorders taking account of genetic susceptibility, multiple exposures (e.g. mixtures of environmental chemicals) and their timing (perinatal, peripubertal, adult); (3) connection between perinatal reproductive development and later obesity/metabolic disorders. To achieve this we will utilize large cohorts generated in previous EU projects and collect new data from these on reproductive maturation and adult function. Existing genomic and proteomics data, exposure data for >100 potentially toxic environmental chemicals, lifestyle, dietary and medical history information will be analysed using integrative systems biology approaches to pinpoint critical (interacting) factors influencing development. Established animal models will be used to test putative mechanisms by analysing the roles of neuroendocrine regulation, intrauterine growth, time windows of reproductive development, metabolic balance and xenobiotic metabolism. Toxicogenomics, proteomics and metabolomics results from these studies will identify pathways for study in the human cohorts. The overall aim is to create new cause-effect frameworks and knowledge networks to refine research in this critical area and to identify novel biomarkers of exposure and disease. The proposed studies will facilitate prediction and prevention of reproductive disorders and provide large new datasets and exposure-outcome information to improve environmental risk assessment and risk management.

**Partners:**

| | | |
|---|---|---|
| 1 | TURUN YLIOPISTO | FI |
| 2 | RIGSHOSPITALET | DK |
| 3 | MEDICAL RESEARCH COUNCIL | UK |
| 4 | UNIVERSIDAD DE CORDOBA | ES |
| 5 | UNIVERSITE DE RENNES 1 | FR |
| 6 | INSTITUTE OF EXPERIMENTAL MORPHOLOGY AND ANTHROPOLOGY WITH MUSEUM- BAS | BG |
| 7 | DANMARKS TEKNISKE UNIVERSITET | DK |
| 9 | UNIVERSITY OF ROCHESTER | US |
| 10 | ECOLE NATIONALE VETERINAIRE, AGROALIMENTAIRE ET DE L'ALIMENTATION NANTES ATLANTIQUE | FR |

**Activity Code:** ENV.2007.1.2.3.2. **Funding Scheme:** CSA **Duration (Months):** 33

**Title:** HEalth Risk from Environmental Pollution Levels in Urban Systems

**Proposed EC Grant:** 1.399.837 €

**Abstract:**

HEREPLUS will: 1) involve coordination among epidemiologists, biostatisticians, environmental scientists, GIS specialists in order to realize the full potential of GIS technology in environmental health research; 2) develop risk maps relating to human health, and O3 and PM concentrations using the ArcGis approach, taking into account existing and validated epidemiological models, for selection of important and problematic large European urban areas such as Rome, Madrid, Dresden, Athens; 3) improve the knowledge of the potential role of different urban vegetation types for mitigating the O3 and PM pollution levels, and provide best practices regarding the selection of no-VOCs emitting species and management of large green areas located in different neighbouring urban areas; 4) furnish guidelines for municipal managers and administrators deputed to establish urban-environmental measures which combine risk maps, urban vegetation as a sink for ozone and PM, and minimization of sanitary costs, all based on results and knowledge achieved by the project activities as a whole. These guidelines will take the form of best practices recommendations and designs for municipal laws that may be used as a base-line for municipal administrations; 5) disseminate guidelines and best practice indications at a European level, through international workshops and a conclusive report. Specific cardio-respiratory disease, such as asthma, bronchitis, COPD exacerbation, ischemic heart disease, and the morbidity and mortality for these diseases, associated to O3 and PM, will be considered in HEREPLUS. HEREPLUS will produce the above mentioned risk maps starting from pre-existent environmental and health data, by development of new epidemiological and statistical approach, also in support for the implementation of Global Earth Observation System of Systems (GEOSS) initiative and the Environment and Health Action Plan.

**Partners:**

| | | |
|---|---|---|
| 1 | CONSORZIO SAPIENZA INNOVAZIONE | IT |
| 2 | UNIVERSITA DEGLI STUDI DI ROMA LA SAPIENZA | IT |
| 3 | TECHNISCHE UNIVERSITAET DRESDEN | DE |
| 4 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 5 | ACADEMY OF ATHENS | EL |
| 6 | CENTRO DE INVESTIGACIONES ENERGETICAS, MEDIOAMBIENTALES Y TECNOLOGICAS-CIEMAT | ES |
| 7 | FACULTY OF MEDICINE, UNIVERSITY OF BELGRADE | RS |
| 8 | UNIVERSITY OF KEELE | UK |
| 9 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 10 | INSTITUTO DE SALUD CARLOS III | ES |

**Activity Code:** ENV.2007.1.2.1.2. **Funding Scheme:** CP **Duration (Months):** 42

**Title:** Reproductive effects of environmental chemicals in females

**Proposed EC Grant:** 2.923.363 €

**Abstract:**

It is increasingly evident that in-utero exposure to environmental chemicals (ECs), including endocrine disrupting compounds (EDCs) and heavy metals, disturbs reproductive development in wildlife, domestic species and humans. Current thinking is that exposure to ECs is part of the mechanism driving increasing incidences of reproductive dysfunction in males and females, the latter characterised by statistics such as the 2% annual increase in EU breast cancer rates. Studies on a wide range of ECs, including phthalates, PCBs and dioxins, suggest the whole female reproductive tract is sensitive to chemical perturbation. However, many studies have focused on single or small numbers of ECs on short-lived rodent species at high doses. These exposure modalities have no relationship with normal human exposure. We will use a long-lived species, mono-ovulating, the sheep, with a pattern of gestational development similar to humans, exposed long-term to a broad range of ECs at low/environmental concentrations. This will provide a real-life model for human exposure. We will investigate follicle formation, oocyte maturation, ovaries, uteri and mammary glands in fetal sheep exposed in-utero and in adult offspring. Selected ECs preferentially concentrated in fetal tissues will be investigated using sheep and mouse models, the latter primarily for mechanistic studies. Our scale of investigation will encompass epigenetic right up to transgenerational effects of exposure and will utilise cutting-edge methodologies including proteomics, transcriptomics and organotypic cultures. To ensure we understand the link with human reproductive development, we will investigate EC-sensitive genes and proteins identified in the animal models in normal second trimester human fetuses and culture of fetal human ovaries with ECs identified as potential key chemicals in the animal models. This study will establish the potential risks of environmental chemicals on human female reproductive development.

**Partners:**

| | | |
|---|---|---|
| 1 | THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN | UK |
| 3 | INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE | FR |
| 4 | MARTIN-LUTHER-UNIVERSITAET HALLE-WITTENBERG | DE |
| 5 | THE UNIVERSITY OF NOTTINGHAM | UK |
| 6 | UNIVERSITA DEGLI STUDI DI MILANO | IT |
| 7 | THE MACAULAY LAND USE RESEARCH INSTITUTE | UK |

**Activity Code:** ENV.2007.1.2.3.1. **Funding Scheme:** CSA **Duration (Months):** 52

**Title:** Coordination of national environment and health research programmes - Environment and health ERA-NET

**Proposed EC Grant:** 1.999.936 €

**Abstract:**

It is estimated that around 20% of the burden of disease in industrialized countries can be attributed to environmental factors, and the magnitude of the problem is perceived by the majority of Europeans. The assessment of health impacts is based mostly on scarce exposure data and limited information on the relationship between exposure and health. There is, therefore, a need to strengthen research in this area and to develop methods and tools which will improve the comparability of data. Member States have developed skills and expertise using different mechanisms to fund environment and health research. The scientific boundaries created by the remits of different funding organisations have frequently acted as a disincentive to collaborative working. Although aims are towards relevance and efficiency, the results remain dispersed and not of actual support for policy-making. Therefore, results of the studies in ERA-ENVHEALTH will lead to the proposal of a coherent set of proposed priorities, implementation of joint activities, and common calls. ERA-ENVHEALTH, by bringing together 16 participants from 10 countries, will contribute to establish collaboration among the different funding organisations of environmental and public health research communities.

**Partners:**

| | | |
|---|---|---|
| 1 | AGENCE NATIONALE DE SECURITE SANITAIRE DE L'ALIMENTATION, DE L'ENVIRONNEMENT ET DU TRAVAIL | FR |
| 2 | AGENCE DE L'ENVIRONNEMENT ET DE LA MAITRISE DE L'ENERGIE | FR |
| 3 | MINISTERE DE L'ECOLOGIE, DU DEVELOPPEMENT DURABLE DES TRANSPORTS ET DU LOGEMENT | FR |
| 4 | SERVICE PUBLIC FEDERAL DE PROGRAMMATION POLITIQUE SCIENTIFIQUE | BE |
| 5 | SERVICE PUBLIC FEDERAL SANTE PUBLIQUE, SECURITE DE LA CHAINE ALIMENTAIRE ET ENVIRONNEMENT | BE |
| 6 | ENVIRONMENTAL PROTECTION AGENCY OF IRELAND | IE |
| 7 | Istituto Superiore per la Protezione e la Ricerca Ambientale | IT |
| 9 | NATURVARDSVERKET | SE |
| 10 | MINISTERIE VAN INFRASTRUCTUUR EN MILIEU | NL |
| 11 | RIJKSINSTITUUT VOOR VOLKSGEZONDHEIDEN MILIEU*NATIONAL INSTITUTEFOR PUBLIC HEALTH AND THE ENVIRONMENTEN | NL |
| 12 | URAD VEREJNEHO ZDRAVOTNICTVA SLOVENSKEJ REPUBLIKY | SK |
| 15 | ENVIRONMENT AGENCY OF ENGLAND AND WALES | UK |
| 16 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 17 | MINISTRY OF HEALTH | IL |
| 18 | UMWELTBUNDESAMT | DE |
| 19 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |

**Activity Code:** ENV.2008.1.2.1.2. **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Climate change, Environmental contaminants and Reproductive health

**Proposed EC Grant:** 2.377.604 €

**Abstract:**

The research project investigates the possible impact of global climate change on reproductive health in one Arctic and two European populations. The key questions to be addressed are, firstly, how may climate change influence human exposure to widespread environmental contaminants and, secondly, how may contaminants impact occurrence of reproductive disorders as sensitive indicators of health? To provide affirmative answers to these questions the proposal will as a first step identify and describe mechanisms by which a changing climate may affect the exposure of Arctic and other human populations to contaminants through change in chemical use and emissions, delivery to the arctic ecosystem as well as processing within the arctic physical environment and human food chain. This work relies on modelling of existing data. Secondly, the project will expand the existing knowledge database on human exposure to polybrominated biphenylethers, perfluorinated surfactants and phthalates by analyses of 1000 biobanked serum samples collected in a EU FP5 project. Thirdly, the project will increase the limited knowledge on links between human exposure to contaminants and reproductive health. This work relies on a large existing parent-child-cohort, where a follow-up survey provide new data that are fed into risk assessment. Furthermore we will perform reviews of experimental and epidemiological literature to identify critical reproductive effects and exposure-response data for selected compounds as input to the risk assessment. Finally the project will integrate data on climate induced changes in contaminant mobility and distribution and links between contaminant exposure and reproductive health into a risk evaluation providing insight into possible future risk scenarios related to global climate change. The project draws upon a network of experts in climate modelling and in experimental, epidemiological and risk assessment methodologies and builds upon three established cohorts in Greenland, Poland and Ukraine.

**Partners:**

| | | |
|---|---|---|
| 1 | AARHUS UNIVERSITETSHOSPITAL, AARHUS SYGEHUS | DK |
| 2 | LUNDS UNIVERSITET | SE |
| 3 | THE GOVERNING COUNCIL OF THE UNIVERSITY OF TORONTO | CA |
| 4 | GRONLANDS NATURINSTITUT | GL |
| 5 | NARODOWY INSTYTUT ZDROWIA PUBLICZNEGO-PANSTWOWY ZAKLAD HIGIENY | PL |
| 6 | Kharkiv National Medical University | UA |
| 7 | AGENZIA NAZIONALE PER LE NUOVE TECNOLOGIE,L'ENERGIA E LO SVILUPPO ECONOMICO SOSTENIBILE | IT |
| 8 | UNIVERSITEIT UTRECHT | NL |

**Activity Code:** ENV.2008.1.2.1.6. **Funding Scheme:** CSA **Duration (Months):** 24

**Title:** ENVIRONMENTAL HEALTH RISKS IN EUROPEAN BIRTH COHORTS

**Proposed EC Grant:** 919.424 €

**Abstract:**

The overall aim of ENRIECO is to advance our knowledge on specific environment and health causal relationships in pregnancy and birth cohorts by providing support to exploitation of the wealth of data generated by past or ongoing studies funded by the EC and national programmes. Specific objectives are to make inventories of birth cohorts, assure quality and interoperability of exposure, health and exposure-response data, obtain data access, build databases, conduct analysis, make recommendations for data collection in the future to improve environment-health linkages and information, and disseminate the information. The project will bring together over 30 pregnancy and birth cohorts and information on around 250,000 newborns, infants and children from across Europe. The outcome will be structuring and consolidation of often fragmented data from various studies undertaken throughout Europe and will improve the knowledge base for FP 7 Cooperation Work Programme 2008: Environment (including climate change) environment and health linkages. Data regarding environment-health causal relationships will be more readily available in a form useful for policy makers.

**Partners:**

| | | |
|---|---|---|
| 1 | FUNDACIO CENTRE DE RECERCA EN EPIDEMIOLOGIA AMBIENTAL - CREAL | ES |
| 2 | INSTITUT NATIONAL DE LA SANTE ET DE LA RECHERCHE MEDICALE (INSERM) | FR |
| 3 | UNIVERSITEIT UTRECHT | NL |
| 4 | HELMHOLTZ ZENTRUM MUENCHEN DEUTSCHES FORSCHUNGSZENTRUM FUER GESUNDHEIT UND UMWELT GMBH | DE |
| 6 | PANEPISTIMIO KRITIS (UNIVERSITY OF CRETE) | EL |
| 7 | KAROLINSKA INSTITUTET | SE |
| 8 | CHARITE - UNIVERSITAETSMEDIZIN BERLIN | DE |
| 9 | AARHUS UNIVERSITETSHOSPITAL, AARHUS SYGEHUS | DK |

**Activity Code:** ENV.2008.1.2.1.3. **Funding Scheme:** CSA **Duration (Months):** 29

**Title:** European Network on Noise And Health

**Proposed EC Grant:** 993.852 €

**Abstract:**

This proposal puts forward plans to establish a research network of experts on noise and health in Europe. This network will establish future research directions and policy needs in Europe. The network will review the existing literature on environmental noise exposure and health focussing on the consolidation of existing state of the art knowledge and the identification of gaps in the evidence and future research needs and hypotheses to be tested. In the network we will train junior researchers in noise and health through setting up an exchange network across Europe. The network will focus on noise exposure assessment in health studies in order to build more complex analytical models of noise and health effects that take into account moderating factors including the joint effects of air pollution and noise. A specific function of the network will be to establish communication between researchers on noise and researchers on air pollution. We will improve the measurement of health outcomes relevant to noise research and strengthen the available methodologies for future research, by extending analyses on existing research taking advantage of the large EU-funded RANCH and HYENA studies and relevant national studies. We will develop novel designs for research on noise and health to provide to the EU a new strategy for the development of noise and health research in the future. We will disseminate the results to the EU, to national governments, to fellow researchers, and other stakeholders.

**Partners:**

| | | |
|---|---|---|
| 1 | QUEEN MARY AND WESTFIELD COLLEGE, UNIVERSITY OF LONDON | UK |
| 2 | AZIENDA SANITARIA LOCALE ROMA | IT |
| 3 | UMWELTBUNDESAMT | DE |
| 4 | Berry Environmental Ltd | UK |
| 5 | STOCKHOLMS UNIVERSITET | SE |
| 6 | UNIVERSITEIT GENT | BE |
| 7 | AGENZIA REGIONALE PER LA PROTEZIONE AMBIENTALE DEL PIEMONTE | IT |
| 8 | UNIVERSITAET STUTTGART | DE |
| 9 | FORSCHUNGSGESELLSCHAFT FUR ARBEITSPHYSIOLOGIE UND ARBEITSSCHUTZ E.V. | DE |
| 10 | KAROLINSKA INSTITUTET | SE |
| 11 | RIJKSINSTITUUT VOOR VOLKSGEZONDHEIDEN MILIEU*NATIONAL INSTITUTEFOR PUBLIC HEALTH AND THE ENVIRONMENTEN | NL |
| 12 | THE MANCHESTER METROPOLITAN UNIVERSITY | UK |
| 13 | Centre for Musculoskeletal Research - University of Gävle | SE |
| 14 | IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE | UK |
| 15 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 16 | TRANSPORTOKONOMISK INSTITUTT | NO |
| 17 | NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO | NL |
| 18 | INSTITUT FRANCAIS DES SCIENCES ET TECHNOLOGIES DES TRANSPORTS, DE L'AMENAGEMENT ET DES RESEAUX | FR |
| 19 | CARDIFF UNIVERSITY | UK |
| 20 | FACULTY OF MEDICINE, UNIVERSITY OF BELGRADE | RS |
| 22 | NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS | EL |
| 23 | SCHWEIZERISCHES TROPEN- UND PUBLIC HEALTH-INSTITUT | CH |
| 24 | MEDIZINISCHE UNIVERSITAET INNSBRUCK | AT |
| 25 | Agenzia Regionale per la Protezione Ambientale della Toscana (ARPAT) | IT |
| 26 | UNIWERSYTET IM. ADAMA MICKIEWICZA W POZNANIU | PL |
| 27 | DEUTSCHES ZENTRUM FUER LUFT - UND RAUMFAHRT EV | DE |
| 28 | Memolix | IT |
| 29 | TECHNISCHE UNIVERSITAT BERLIN | DE |
| 32 | INSTYTUT MEDYCYNY PRACY NOFERA | PL |
| 33 | REPUBLICKI ZAVOD ZA ZDRAVSTVENA ZASTITA | MK |
| 34 | UNIVERZITA KOMENSKEHO V BRATISLAVE | SK |
| 35 | INSTITUT ZA VAROVANJE ZDRAVJA REPUBLIKE SLOVENIJE | SI |
| 36 | HELMHOLTZ ZENTRUM MUENCHEN DEUTSCHES FORSCHUNGSZENTRUM FUER GESUNDHEIT UND UMWELT GMBH | DE |
| 37 | THE TRUSTEES OF THE UNIVERSITY OF PENNSYLVANIA | US |

**Activity Code:** ENV.2008.1.2.1.2. **Funding Scheme:** CP **Duration (Months):** 54

**Title:** Arctic Health Risks: Impacts on health in the Arctic and Europe owing to climate-induced changes in contaminant cycling

**Proposed EC Grant:** 3.499.052 €

**Abstract:**

Long-range transport of contaminants to the Arctic, the resulting exposures observed in Arctic human populations, and impacts of such exposures on human health have been the subject of considerable work in recent years, providing a baseline against which to compare future developments. Global climate change has the potential to remobilize environmental contaminants and alter contaminant transport pathways, fate, and routes of exposure in human populations. The Arctic is particularly sensitive to climate change and already exhibits clear impacts. Research into contaminant exposure and its effects on human health in the Arctic, in comparison with other exposed populations in Europe, presents an opportunity to gain insight into changes that may later impact other areas. The influence of climate change on contaminant spreading and transfer and the resultant risk to human populations in the Arctic and other areas of Europe will be studied by: 1) Research on the ways in which climate change will affect the long-range transport and fate of selected groups of contaminants, and possible implications for the re-distribution of contaminants (geographically and between relevant environmental media). This will involve modelling, utilizing the information base that exists on the distribution of such contaminants in the Arctic and other areas of Europe; 2) Research on the impacts that changing pathways and climatic conditions will have on contaminant uptake and transfer within food webs, leading to foods consumed by humans. This will involve experimental work, process studies and targeted analytical studies, the latter focussed on supporting the modelling work and process studies related to human exposure to contaminants; 3) Research focussing on human health, aimed at determining how climate-mediated changes in the environmental fate of selected groups of contaminants will result in changes in exposure of human populations, in the Arctic and in selected areas of Europe.

**Partners:**

| | | |
|---|---|---|
| 1 | Arctic Monitoring and Assessment Programme Secretariat | NO |
| 2 | STOCKHOLMS UNIVERSITET | SE |
| 3 | AARHUS UNIVERSITET | DK |
| 3 | AARHUS UNIVERSITET | DK |
| 4 | ALFRED-WEGENER-INSTITUT FUER POLAR- UND MEERESFORSCHUNG | DE |
| 5 | LANCASTER UNIVERSITY | UK |
| 6 | University Centre in Svalbard | NO |
| 7 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 8 | IVL SVENSKA MILJOEINSTITUTET AB | SE |
| 9 | OULUN YLIOPISTO | FI |
| 10 | NORSK INSTITUTT FOR LUFTFORSKNING | NO |
| 11 | INSTITUT JOZEF STEFAN | SI |
| 12 | O.A. SYS - OCEAN ATMOSPHERE SYSTEMS GMBH | DE |
| 13 | MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. | DE |
| 14 | EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZURICH | CH |
| 15 | MASARYKOVA UNIVERZITA | CZ |
| 16 | NASJONALT FOLKEHELSEINSTITUTT | NO |
| 18 | Northwest Public Health Research Center (Russian Ministry of Health and Sciences) | RU |
| 19 | ENVIRONMENT CANADA | CA |
| 20 | FISHERIES AND OCEANS CANADA | CA |
| 21 | HEALTH CANADA | CA |
| 22 | UNIVERSITETET I TROMSOE | NO |

**Activity Code:** ENV.2008.1.2.1.4. **Funding Scheme:** CP **Duration (Months):** 48

**Title:** The development, validation and implementation of human systemic Toxic Equivalencies (TEQs) as biomarkers for dioxin-like compounds

**Proposed EC Grant:** 2.703.596 €

**Abstract:**

Chlorinated dioxins and biphenyls (PCBs) commonly occur in the human food chain and can still be detected at levels that might cause long term health effects. Exposure to dioxin-like compounds involves a complex mixture with a common mechanism of action involving endocrine, developmental, carcinogenic, immuno and neurological effects. Risk assessment is done with an additive model for mixture toxicity. Based on this the Toxic Equivalency (TEQ) concept was developed as a biomarker for exposure and risk. TEQs are the sum of congener-specific toxic equivalency factors (TEFs) multiplied by the concentration in a matrix, e.g. blood. TEF values are a composite quantitative value from a range of biomarkers that are congener and endpoint specific. Present human TEQs have been derived from oral administration experiments providing 'intake' TEFs. Regulatory authorities frequently use 'intake' TEQs for blood and tissues considering it a biomarker for exposure or effect. Experimental evidence shows that using 'uptake' TEQs as 'systemic' biomarkers may lead to misinterpretation of risks. Therefore, development and validation of 'systemic' TEFs and TEQs as biomarkers is necessary. Major objectives of SYSTEQ are: i) establish 'systemic' TEFs and TEQs, ii) identify novel quantifiable biomarkers with newest molecular methods, e.g. genetic fingerprinting profiles, iii) extra focus on effects in peripheral lymphocytes as biomarkers, iv) identify differences between humans and experimental species. The 'systemic' TEFs and TEQs from SYSTEQ will be used in conjunction with results of the completed EU PCBRISK project, in which two populations from Slovakia with very different exposure were studied. Individual blood levels and different biomarkers are already available. Results of SYSTEQ are also going to be used to establish international consensus values of 'systemic' TEFs at WHO level, facilitating the global use of 'systemic' TEQs as biomarkers of effect and exposure.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITEIT UTRECHT | NL |
| 2 | UMEA UNIVERSITET | SE |
| 3 | KAROLINSKA INSTITUTET | SE |
| 4 | TECHNISCHE UNIVERSITAET KAISERSLAUTERN | DE |
| 5 | VYZKUMNY USTAV VETERINARNIHO LEKARSTVI | CZ |
| 7 | SLOVENSKA ZDRAVOTNICKA UNIVERZITA V BRATISLAVE | SK |

**Activity Code:** ENV.2008.1.2.1.4. **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Genomics biomarkers of environmental health

**Proposed EC Grant:** 3.500.000 €

**Abstract:**

This project concerns the first large-scale application of the full range of –omics technologies in a population study aiming at a) the discovery and validation of novel biomarkers predictive of increased risks of a number of chronic diseases, b) the exploration of the association of such biomarkers with environmental exposures, including high-priority pollutants and emerging exposures, and c) the discovery and validation of biomarkers of exposure to the above and other high-priority environmental exposures. The project will utilise three existing prospective cohorts. Cancer-related -omics biomarkers will be developed using a case-control study nested within 2 cohorts which contain biosamples collected prior to disease diagnosis, exposure and followup health information. Biomarkers will be compared in 600 breast cancer cases, 300 NHL cases and equal numbers of matched controls, to evaluate their risk predictivity. Biomarkers of chronic diseases which establish themselves in early childhood but persist into adult life will be evaluated using a mother-child cohort. Biosamples collected from 600 children at birth and at ages 2 and 4 years will be analysed and results compared with clinical indices obtained at age 4. Thanks to the availability of repeat samples, collected over a wide range of time intervals, the intra-individual variation of biomarkers and their relationship with disease progression will be evaluated. Biomarker search will utilize state-of-the-art metabonomics, epigenomics, proteomics and transcriptomics, in combination with advanced bioinformatics and systems biology tools. It will also include technical validation of -omics technology's utilisation with biobank samples. Exposure assessment will utilize exposure biomarkers, questionnaires, modelling and GIS technology. Additional data on exposure, biomarkers (including SNP data) and health indices, available through other projects, will be utilised, thus generating substantial added value.

**Partners:**

| | | |
|---|---|---|
| 1 | ETHNIKO IDRYMA EREVNON | EL |
| 2 | UNIVERSITEIT MAASTRICHT | NL |
| 3 | IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE | UK |
| 4 | UMEA UNIVERSITET | SE |
| 5 | Istituto per lo Studio e la Prevenzione Oncologica | IT |
| 6 | PANEPISTIMIO KRITIS (UNIVERSITY OF CRETE) | EL |
| 7 | UNIVERSITEIT UTRECHT | NL |
| 8 | ISTITUTO SUPERIORE DI SANITA | IT |
| 9 | TERVEYDEN JA HYVINVOINNIN LAITOS | FI |
| 10 | UNIVERSITY OF LEEDS | UK |
| 11 | LUNDS UNIVERSITET | SE |
| 12 | NATIONAL TAIWAN UNIVERSITY | TW |

**Activity Code:** ENV.2008.1.2.1.1. **Funding Scheme:** CP **Duration (Months):** 60

**Title:** Risk of brain cancer from exposure to radiofrequency fields in childhood and adolescence

**Proposed EC Grant:** 3.499.748 €

**Abstract:**

The rapid worldwide increase in mobile phone use in adolescents and, more recently, children has generated considerable interest in the possible health effects of exposure to radio frequency (RF) fields. The current project aims to assess the potential carcinogenic effects of childhood and adolescent exposure to RF and ELF from mobile telephones on tumours of the central nervous system. The study will include over 1,900 cases of malignant and benign brain tumours aged 10 to 24 years and their respective controls from 11 countries. 1,400 of these cases, from 7 European countries and Israel, will be collected within this grant application. The rest of the cases will be recruited, at no expense to the project, from Australia, Canada and New Zealand. The project will build upon the methodological experience (both in terms of exposure assessment and epidemiological design) collected within the INTERPHONE study. Particular attention will be paid to issues of: potential selection bias related to the very low response rates of population-based controls – by selecting hospitalized controls with specific diagnoses, representative of the general population and unrelated to mobile phone use –; and potential recall errors – by validating questionnaire responses with the help of network operators and repeat questionnaires. Improved exposure indices for RF will be derived taking into account spatial distribution of energy in the brain at different ages; ELF from the phones will also be considered, as well as other important sources of EMF in the general environment of young people. The proposed age range is the most cost efficient to answer the question (because of latency) of brain cancer risk from exposure in childhood and adolescence. The timing of the project is optimal (2009-2010/11) because of the increasing prevalence of heavy use among adolescents and, in the last 5-10 years, children, without hands-free kits, particularly in Southern European countries and Israel.

**Partners:**

| | | |
|---|---|---|
| 1 | FUNDACIO CENTRE DE RECERCA EN EPIDEMIOLOGIA AMBIENTAL - CREAL | ES |
| 2 | FUNDACIO IMIM | ES |
| 3 | UNIVERSITEIT UTRECHT | NL |
| 4 | FRANCE TELECOM SA | FR |
| 5 | HEALTH PROTECTION AGENCY HPA | UK |
| 6 | LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN | DE |
| 7 | MEDIZINISCHE UNIVERSITAET WIEN | AT |
| 8 | UNIVERSITA DEGLI STUDI DI TORINO | IT |
| 9 | Association pour la Recherche Epidemiologique dans les Cancers de l'Enfant et l'Adolescent | FR |
| 10 | NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS | EL |
| 11 | The Gertner Institute for Epidemiology & Health Policy Research, Ltd | IL |
| 12 | UNIVERSITY OF OTTAWA | CA |
| 13 | MONASH UNIVERSITY | AU |
| 14 | THE UNIVERSITY OF AUCKLAND | NZ |

**Activity Code:** ENV.2008.1.2.1.5. **Funding Scheme:** CP **Duration (Months):** 48

**Title:** The impact of climatic and environmental factors on personal ultraviolet radiation exposure and human health

**Proposed EC Grant:** 3.497.616 €

**Abstract:**

We will determine the adverse and beneficial health effects of personal UVR exposure and their relationships with climatic and environmental factors that modify the solar UVR spectrum. Date and time stamped personal electronic wristwatch dosimeters will be worn to measure individual UVR exposure over extended periods. Satellite and ground station data will be gathered to establish terrestrial UVR spectral irradiance, cloud, albedo, ozone and aerosol data, at the locations and times of exposure. These dosimeters will be used in field studies in working, water, beach and snow situations in four different countries, including studies with children. The personal dosimetric data combined with diary, ground station and satellite data will show the influence of behaviour, meteorological, environmental and cultural factors on individual UVR exposure doses. The interaction between the personal exposure parameters and the satellite and ground station data will enable the development of a humanized radiative transfer model to assess the future impact of climate change on UVR exposure. This is in contrast to previous models that assume exposure to a given fraction of ambient UVR. We will also determine the effect of UVR exposure on DNA damage and immunity in field conditions. Furthermore, the relationship between UVR exposure and vitamin D status will be determined, thus enabling a direct correlation between important risk and benefit biomarkers. We will also determine the spectral relationship between erythema, UVR-induced immunosuppression and vitamin D status. These studies will determine the value of erythema as a biological weighing function for UVR related health outcomes. Finally, we will perform a systematic review of a wide range of health outcomes from UVR exposure, and integrate our personal UVR exposure and modelling data into existing epidemiological data to estimate measurement error and any effects on current UVR dose response relationships and health outcome.

**Partners:**

| | | |
|---|---|---|
| 1 | KING'S COLLEGE LONDON | UK |
| 2 | REGION HOVEDSTADEN | DK |
| 3 | UNIVERSYTET MEDYCZNY W LODZI. | PL |
| 4 | KAROLINSKA INSTITUTET | SE |
| 5 | FUNDACIO CENTRE DE RECERCA EN EPIDEMIOLOGIA AMBIENTAL - CREAL | ES |
| 6 | VETERINAERMEDIZINISCHE UNIVERSITAET WIEN | AT |
| 7 | HEALTH PROTECTION AGENCY HPA | UK |
| 8 | DANMARKS METEOROLOGISKE INSTITUT | DK |

**Activity Code:** ENV.2009.1.2.2.1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Transport related Air Pollution and Health impacts – Integrated Methodologies for Assessing Particulate Matter

**Proposed EC Grant:** 6.915.554 €

**Abstract:**

TRANSPHORM brings together leading air quality and health researchers and users to improve the knowledge of transport related airborne particulate matter (PM) and its impact on human health and to develop and implement assessment tools for scales ranging from city to Europe. Over four years, TRANSPHORM will aim to develop and implement an integrated methodology to assess the health impacts of PM air pollution covering the whole chain from emissions to disease burden. The objectives will be: (i) To improve our understanding of transport sources of size-resolved and speciated PM air pollution including non-exhaust, shipping, aviation and railways; (ii) To improved emission factors of ultrafine particle number (PN0.1) and mass fractions of PM1, PM2.5 and PM10 for key transport sources; (iii) To conduct targeted measurements in Rotterdam, Helsinki and Thessaloniki for source apportionment, exposure assessment and model evaluation; (iv) To quantify exposure to airborne PM in urban environments resulting from traffic, road, shipping, rail and aviation; (v) To improve and integrate air quality dispersion and exposure models for urban and regional scales including long-range transport; (vi) To develop new concentration-response (CRF) linking long and short-term ambient residential exposure to size-resolved and speciated PM with key health endpoints; (vii) To develop and implement integrated assessment tool to investigate and analyse the whole chain of processes for selected cities and Europe; (viii) To incorporate micro-environmental PM concentrations, time-activity patterns, and estimates of internal dose into the health impact assessment; (ix) To conduct integrated health assessment of selected European cities; (x) To design and implement mitigation and adaptation strategies for European and international policy refinement and development; (xi) To exploit the results of TRANSPHORM through global dissemination and interactions with stakeholders.

**Partners:**

| | | |
|---|---|---|
| 1 | THE UNIVERSITY OF HERTFORDSHIRE HIGHER EDUCATION CORPORATION | UK |
| 2 | NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO | NL |
| 3 | UNIVERSITEIT UTRECHT | NL |
| 4 | NORSK INSTITUTT FOR LUFTFORSKNING | NO |
| 5 | ILMATIETEEN LAITOS | FI |
| 6 | DEUTSCHES ZENTRUM FUER LUFT - UND RAUMFAHRT EV | DE |
| 7 | TRANSPORT & MOBILITY LEUVEN NV | BE |
| 8 | ARISTOTELIO PANEPISTIMIO THESSALONIKIS | EL |
| 9 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 10 | INSTITUTE OF OCCUPATIONAL MEDICINE | UK |
| 11 | IVL SVENSKA MILJOEINSTITUTET AB | SE |
| 12 | TERVEYDEN JA HYVINVOINNIN LAITOS | FI |
| 13 | METEOROLOGISK INSTITUTT | NO |
| 14 | HELMHOLTZ ZENTRUM MUENCHEN DEUTSCHES FORSCHUNGSZENTRUM FUER GESUNDHEIT UND UMWELT GMBH | DE |
| 15 | KAROLINSKA INSTITUTET | SE |
| 16 | DANMARKS METEOROLOGISKE INSTITUT | DK |
| 17 | IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE | UK |
| 18 | SCHWEIZERISCHES TROPEN- UND PUBLIC HEALTH-INSTITUT | CH |
| 19 | VALSTYBINIS MOKSLINIU TYRIMU INSTITUTAS FIZINIU IR TECHNOLOGIJOS MOKSLU CENTRAS | LT |
| 20 | UNIVERSITAET STUTTGART | DE |
| 21 | URM - UTVAR ROZVOJE HL.MESTA PRAHY | CZ |

**Activity Code:** ENV.2009.1.2.1.1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Impact of climate change on the transport, fate and risk management of viral pathogens in water

**Proposed EC Grant:** 2.421.016 €

**Abstract:**

The use of hydrological models to determine the effects of climate change on the variation in viral flux, and therefore in risk associated with viral disease, constitutes a novel approach to the management of water-related disease. Tools developed in previous EU Projects will be used to conduct case studies on five selected sites (in Sweden, Spain, Hungary, Greece and Brazil) vulnerable to climate change (principally rainfall events), and the empirical baseline data accrued will be used in mathematical models constructed to estimate changes in exposure under defined conditions. Exposure levels will then be used to estimate risk of disease associated with such changes. Tools will include novel methods for processing of sewage, effluent and water samples, for quantitative detection of the target viruses, and for the determination of the source (human or animal) of viral pollution. Models will be adapted from existing epidemiological models for viral disease in the community, or will be generated de novo as required. Bacterial faecal indicator analysis will permit the determination of any relationships between virus levels and water quality standards, and also between changes in virus concentration in water and risk to public health activities, such as bathing in polluted water or consumption of shellfish.

**Partners:**

| | | |
|---|---|---|
| 1 | ABERYSTWYTH UNIVERSITY | UK |
| 2 | UNIVERSITAT DE BARCELONA | ES |
| 3 | VELINDRE NATIONAL HEALTH SERVICE TRUST | UK |
| 4 | UNIVERSITY OF PATRAS | EL |
| 5 | UMEA UNIVERSITET | SE |
| 6 | FUNDACAO OSWALDO CRUZ | BR |
| 7 | ORSZAGOS KORNYEZETEGESZSEGUGYI INTEZET | HU |
| 8 | FUNDACIO INSTITUT CATALA DE CIENCIES DEL CLIMA | ES |

**Activity Code:** ENV.2009.1.2.1.2 **Funding Scheme:** CP **Duration (Months):** 42

**Title:** Quantifying Weather and Climate Impacts on Health in Developing Countries

**Proposed EC Grant:** 3.499.401 €

**Abstract:**

One of the most dramatic and immediate impacts of climate variation is that on disease, especially the vector-borne diseases that disproportionally affect the poorest people in Africa. Although we can clearly see that, for example, an El Nino event triggers Rift Valley Fever epidemics, we remain poor at understanding why particular areas are vulnerable and how this will change in coming decades, since climate change is likely to cause entirely new global disease distributions. This applies to most vector borne disease. At the same time, we do not know currently the limit of predictability of the specific climate drivers for vector-borne disease using state-of-the-art seasonal forecast models, and how best to use these to produce skilful infection-rate predictions on seasonal timescales. The QWeCI project thus aims to understand at a more fundamental level the climate drivers of the vector-borne diseases of malaria, Rift Valley Fever, and certain tick-borne diseases, which all have major human and livestock health and economic implications in Africa, in order to assist with their short-term management and make projections of their future likely impacts. QWeCI will develop and test the methods and technology required for an integrated decision support framework for health impacts of climate and weather. Uniquely, QWeCI will bring together the best in world integrated weather/climate forecasting systems with heath impacts modelling and climate change research groups in order to build an end-to-end seamless integration of climate and weather information for the quantification and prediction of climate and weather on health impacts in Africa.

**Partners:**

| | | |
|---|---|---|
| 1 | THE UNIVERSITY OF LIVERPOOL | UK |
| 2 | CENTRE DE SUIVI ECOLOGIQUE | SN |
| 3 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 4 | EUROPEAN CENTRE FOR MEDIUM-RANGE WEATHER FORECASTS | UK |
| 5 | FUNDACIO INSTITUT CATALA DE CIENCIES DEL CLIMA | ES |
| 6 | UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION -UNESCO | FR |
| 7 | International Livestock Research Institute | KE |
| 8 | INSTITUT PASTEUR DE DAKAR | SN |
| 9 | Kwame Nkrumah University of Science and Technology Kumasi | GH |
| 10 | UNIVERSITE CHEIKH ANTA DIOP DE DAKAR | SN |
| 11 | UNIVERSITY OF MALAWI | MW |
| 12 | UNIVERSITAET ZU KOELN | DE |
| 13 | UNIVERSITY OF PRETORIA | ZA |

**Activity Code:** ENV.2009.1.2.2.2 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Sound Exposure and Risk Assessment of Wireless Network Devices

**Proposed EC Grant:** 2.989.600 €

**Abstract:**

Public exposure to electromagnetic fields in the radio frequency spectrum has increased dramatically in the last two decades. Although research has mainly focused on the exposure and health risk evaluations of cellular networks and mobile phones in recent years, studies on the effects of the pervasive and prolonged EMF exposure on human health due to the exponential growth of wireless network device usage in homes, offices and schools are lacking. The proposed project SEAWIND aims (1) to provide a comprehensive assessment of the incident field exposure in typical living scenarios such as in homes, offices and classrooms by installed wireless local area networks (WLAN or WiFi) or wireless metropolitan area networks (WMAN or WiMAX), body-mounted and body-worn wireless personal area networks (WPAN) and WLAN devices, and specific wireless applications in industry, e.g., novel RFID logistic applications; (2) to numerically determine the induced fields in the human body using a set of models representing the human population; and (3) to screen potential biological sensitivities at the molecular, developmental and functional levels in cells. The necessary technology will also be developed to accurately assess the exposures for device compliance testing and to accurately assess in situ exposures. The comprehensive risk assessment will be based on the findings of this project, addressing the specificity of the exposure of wireless networks combined with the current body of literature on biological interactions of EMF covering the entire radio-frequency spectrum. A comparison to other exposures such as cellular mobile devices, base stations, TV, Radio, etc will also be included.

**Partners:**

| | | |
|---|---|---|
| 1 | Foundation for Research on Information Technologies in Society | CH |
| 2 | INTERDISCIPLINARY INSTITUTE FOR BROADBAND TECHNOLOGY | BE |
| 3 | AALBORG UNIVERSITET | DK |
| 4 | ARISTOTELIO PANEPISTIMIO THESSALONIKIS | EL |
| 5 | FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V | DE |
| 6 | UNIVERSITAET BASEL | CH |
| 7 | DIALOGIK GEMEINNUETZIGE GESELLSCHAFT FUER KOMMUNIKATIONS- UND KOOPERATIONSFORSCHUNG mbH | DE |
| 8 | Schmid & Partner Engineering AG | CH |

**Activity Code:** ENV.2009.1.2.3.1 **Funding Scheme:** CSA **Duration (Months):** 36

**Title:** European coordination action on human biomonitoring

**Proposed EC Grant:** 3.999.000 €

**Abstract:**

This proposal has been elaborated by a consortium of 35 partners coming from 27 European countries and including scientists, government institutions and authorities, NGOs and industry. The main goal is to develop a coherent approach to HBM in Europe as requested by ACTION 3 of the EU Environment and Health Action Plan through coordination of ongoing and planned HBM activities. The project will exploit existing and planned HBM projects and programmes of work and capabilities in Europe. The consortium will investigate what is needed to advance and improve comparability of HBM data across Europe. Work prepared under DG Research and DG Environment activities dealing with development, validation and use of novel biomarkers including non-invasive markers and effect markers will be exploited. Through close collaboration with similar initiatives in the field of Health - such as the EU Health Examination Survey - appropriate economies and efficiencies will be assessed. Key issues such as Ethics and human Biobanks will be addressed. The project will deliver a number of key outputs including: 1. Tested Proofs of Concept and/or Demonstration project assessing the feasibility of a coordinated approach, including strategies for data interpretation & integration with environmental and health data. 2. A rationale and strategy for communication and dissemination of information, results and key messages to all stakeholders from the public to policy makers 3. Training and capacity building will aim to promote knowledge and experience exchange and development in the field of HBM within Europe A common understanding within all parties involved on the potential of HMB in supporting and evaluating current/future policy making (including e.g. REACH) and for environmental health awareness raising will be promoted This project aim is to significantly advance the process towards a fully operational, continuous, sustainable and scientifically sound EU HBM programme.

**Partners:**

| | | |
|---|---|---|
| 1 | BIPRO GMBH | DE |
| 2 | KATHOLIEKE UNIVERSITEIT LEUVEN | BE |
| 3 | UMWELTBUNDESAMT | DE |
| 4 | INSTITUTO DE SALUD CARLOS III | ES |
| 5 | VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V. | BE |
| 6 | HEALTH PROTECTION AGENCY HPA | UK |
| 7 | INSTITUT DE VEILLE SANITAIRE | FR |
| 8 | KOBENHAVNS UNIVERSITET | DK |
| 9 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 10 | INSTITUT JOZEF STEFAN | SI |
| 12 | EHSI | NL |
| 13 | Federale Overheidsdienst Volksgezondheid, Veiligheid van de Voedselketen en Leefmilieu | BE |
| 14 | UMWELTBUNDESAMT GMBH | AT |
| 15 | Centrul de Mediu si Sanatate | RO |
| 16 | VYTAUTO DIDZIOJO UNIVERSITETAS | LT |
| 17 | Institut za medicinska istrazivanja i medicinu rada | HR |
| 19 | RIJKSINSTITUUT VOOR VOLKSGEZONDHEIDEN MILIEU*NATIONAL INSTITUTEFOR PUBLIC HEALTH AND THE ENVIRONMENTEN | NL |
| 20 | ETHNIKO IDRYMA EREVNON | EL |
| 21 | Ministry of Health of the Republic of Cyprus | CY |
| 22 | Associação para Investigação e Desenvolvimento da Faculdade de Medicina | PT |
| 23 | KAROLINSKA INSTITUTET | SE |
| 24 | Conseil Européen de l'Industrie Chimique | BE |
| 25 | NASJONALT FOLKEHELSEINSTITUTT | NO |
| 26 | TERVISE ARENGU INSTITUUT | EE |
| 27 | ISTITUTO SUPERIORE DI SANITA | IT |
| 28 | ORSZAGOS KORNYEZETEGESZSEGUGYI INTEZET | HU |
| 29 | Federal Office of Public Health | CH |
| 30 | Úrad verejného zdravotníctva SR | SK |
| 31 | INSTYTUT MEDYCYNY PRACY NOFERA | PL |
| 32 | STATNI ZDRAVOTNI USTAV | CZ |
| 33 | HEALTH SERVICE EXECUTIVE HSE | IE |
| 34 | Health & Environment Alliance | BE |
| 35 | TERVEYDEN JA HYVINVOINNIN LAITOS | FI |
| 37 | Centre de Recherche Public - Gabriel Lippmann | LU |
| 38 | DEUTSCHE GESETZLICHE UNFALLVERSICHERUNG | DE |

**Activity Code:** ENV.2010.1.2.3-2 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Urban Reduction of GHG Emissions in China and Europe

**Proposed EC Grant:** 3.499.993 €

**Abstract:**

In URGENCHE, a team of internationally recognised scientists in the areas of health risk assessment, urban energy demand and supply scenarios, urban planning, environmental science and epidemiology - in close collaboration with city partners in both Europe and China - develops and applies a methodological framework for the assessment of the overall risks and benefits of alternative greenhouse gas (GHG) emission reduction policies for health and well-being. These GHG reduction policies may affect public health in various ways, such as the choices made regarding the selection of fuels and means for space heating and transport, building codes to improve thermal efficiency, or urban development and zoning. A methodological framework will be developed and applied. This framework considers GHG emission reductions of energy demand and supply and transport scenarios in urban areas, the effect of these policies, and subsequently the impacts on human health and well-being. The GIS-based approach takes into account the advances made in integrated assessment in a large range of studies in Europe over recent years (many with participation of the project partners). The impact on human health and well-being of GHG policies may be the result of changes in exposure patterns of the urban population to environmental contaminants such as ambient and indoor air pollution as well as changes in housing, urban green spaces, workplaces, transport and lifestyles. Distribution of the impacts across different socioeconomic groups will be addressed. Results will be demonstrated for the year 2030 on a business-as-usual and two GHG emission reduction scenarios with emphasis on transport and buildings. URGENCHE will deliver a validated, methodological framework to assess urban GHG policies with the greatest co-benefits for health and well-being in cities ranging in population from 50,000 to 10 million, across various climatological conditions and differences in socio-economic background.

**Partners:**

| | | |
|---|---|---|
| 1 | THE UNIVERSITY OF EXETER | UK |
| 2 | Municipality of Suzhou (Suzhou Municipal Government) | CN |
| 3 | BEIDA INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCE AND TECHNOLOGY (XI' ANJUNHENG COMPANY LIMITED) | CN |
| 4 | DEPARTEMENT FUER WIRTSCHAFT, SOZIALES UND UMWELT | CH |
| 5 | KUOPION KAUPUNKI | FI |
| 6 | DCMR MILIEUDIENST RIJNMOND | NL |
| 7 | LANDESHAUPTSTADT STUTTGART | DE |
| 8 | PEKING UNIVERSITY | CN |
| 9 | NANJING UNIVERSITY | CN |
| 10 | CENTRE FOR RESEARCH AND TECHNOLOGY HELLAS | EL |
| 11 | INSTITUTE OF OCCUPATIONAL MEDICINE | UK |
| 12 | SUOMEN YMPARISTOKESKUS | FI |
| 13 | TERVEYDEN JA HYVINVOINNIN LAITOS | FI |
| 14 | NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO | NL |
| 15 | UNIVERSITAET STUTTGART | DE |
| 16 | SCHWEIZERISCHES TROPEN- UND PUBLIC HEALTH-INSTITUT | CH |
| 17 | WORLD HEALTH ORGANIZATION. | CH |

**Activity Code:** ENV.2010.1.2.2-2 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Fate and effects of cytostatic pharmaceuticals in the environment and the identification of biomarkers for and improved risk assessment on environmental exposure

**Proposed EC Grant:** 2.582.959 €

**Abstract:**

CytoThreat addresses the need to assess the risks of pharmaceuticals released in the environment, focusing on cytostatic drugs because they are highly hazardous compounds due to their genotoxic properties which may cause unexpected long term effects. Their release in the environment may lead to systemic ecological effects and increased cancer incidence, reduced fertility and malformations in the offspring in humans. The occurrence, distribution and fate of selected widely used cytostatics in different aquatic matrices, their acute and chronic toxicity and impact on the stability of the genetic material in a variety of aquatic organisms representing different trophic levels is addressed to provide data sets necessary for scientifically based risk assessment. Special emphasis is put on the combined effects of environmentally relevant mixtures. A combination of state-of-the art analytical chemistry, in vivo and in vitro systems, and 'OMICS' technologies is applied. In vivo studies with zebrafish models aim at identifying linkages between the genomic profiles, exposure conditions and adverse effects in vertebrates to identify molecular biomarkers for adverse effects of specific groups of cytostatics to be used as diagnostic markers and for predicting synergistic effects of combined exposures. Comparative in vitro genotoxicity and transcriptomic studies with zebrafish and human derived cells will provide additional information for the extrapolation of toxicological data to humans. Comparisons with the hazardous effects of other groups of pharmaceuticals will provide knowledge on the magnitude of the problem. CytoThreat will generate new knowledge on environmental and health risks of cytostatics and provide objective arguments for recommendations and regulations. Partners form 5 member states and 2 associated countries with complementary expertise in analytical chemistry, aquatic and genetic toxicology, and genomics and bioinformatics are involved.

**Partners:**

| | | |
|---|---|---|
| 1 | NACIONALNI INSTITUT ZA BIOLOGIJO | SI |
| 2 | INSTITUT JOZEF STEFAN | SI |
| 3 | MEDIZINISCHE UNIVERSITAET WIEN | AT |
| 4 | SZENT ISTVAN EGYETEM | HU |
| 5 | SECONDA UNIVERSITÀ DEGLI STUDI DI NAPOLI | IT |
| 6 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 7 | Institut za medicinska istrazivanja i medicinu rada | HR |
| 8 | INSTITUT ZA MULTIDISCIPLINARNA ISTRAZIVANJA | RS |
| 9 | RR & CO. RAZISKAVE RAZVOJ IN PRENOS ZNANJA DOO | SI |

**Activity Code:** ENV.2010.1.2.2-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** On the reduction of health effects from combined exposure to indoor air pollutants in modern offices

**Proposed EC Grant:** 2.867.121 €

**Abstract:**

Modern offices usually have several sorts of electronic equipment and other dominant heat sources indoors, making them almost unaffected by local climatic conditions. Air conditioning and mechanical ventilation coupled with the often excessive levels of artificial lighting, require high levels of energy. At the European Union (EU) level, the Directive 91/2002, (EPBD), is a major step towards rational energy use. An important issue to consider regards IAQ. It is anticipated that developments in the field of energy use in offices will lead to its reduction through various strategies, including comfort/health standards and ventilation levels. In such a context and given the technological evolution of the functions and services accomplished in offices, it is time to address the issue of IAQ in offices. The participants of this proposal are fully aware of the issues described above and, particularly, of the difficulties to launch solid policies on IAQ, both generally and specifically in offices, related simultaneously to ventilation, energy and health. The uncertainties that justify those difficulties are derived from the lack of information regarding the toxicity of a number of compounds that pollute indoor air. Furthermore, the lack of knowledge of their indoor concentrations and exposures in the current conditions means that the real impact of these compounds on IAQ, comfort/ health and productivity in offices is unknown. The overall objective of the OFFICAIR proposal is twofold. Firstly, to establish a framework that will provide new knowledge in terms of databases, modelling tools and assessment methods towards an integrated approach in assessing the health risk from indoor air pollution, focusing on modern office buildings. Secondly, to support current EU policies, such as, the Thematic Strategy on Air Pollution and the European Environment and Health Strategy and Action Plan.

**Partners:**

| | | |
|---|---|---|
| 1 | PANEPISTIMIO DYTIKIS MAKEDONIAS (UNIVERSITY OF WESTERN MACEDONIA) | EL |
| 2 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 3 | VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V. | BE |
| 4 | DET NATIONALE FORSKNINGSCENTER FORARBEJDSMILJO | DK |
| 5 | UNIVERSITY OF YORK | UK |
| 6 | UNIVERSITA DEGLI STUDI DI MILANO | IT |
| 7 | INSTITUTO DE ENGENHARIA MECANICA | PT |
| 8 | KING'S COLLEGE LONDON | UK |
| 9 | NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO | NL |
| 10 | CENTRE SCIENTIFIQUE ET TECHNIQUE DU BATIMENT | FR |
| 11 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 12 | ACCIONA INFRAESTRUCTURAS S.A. | ES |
| 13 | EÖTVÖS LORÁND TUDOMÁNYEGYETEM | HU |
| 14 | PANEPISTIMIO IOANNINON | EL |
| 15 | UNIVERSITA DEGLI STUDI DELL'INSUBRIA | IT |

**Activity Code:** ENV.2010.1.2.3-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Bystanders, Residents, Operators and WorkerS Exposure models for plant protection products

**Proposed EC Grant:** 1.999.507 €

**Abstract:**

The BROWSE proposal is focussed directly and precisely on all the requirements of the call text. Specifically, it will:- Review, improve and extend the models currently used in the risk assessment of plant protection products (PPPs) to evaluate the exposure of operators, workers, residents and bystanders.- Use the new and improved exposure models to contribute to the implementation of Regulation 1107/2009 on authorisation of PPPs, replacing Directive 91/414/EC.- Use the new and improved exposure models to contribute to the implementation of the Thematic Strategy on the Sustainable Use of Pesticides.- Involve all relevant stakeholders and end-users and take full account of relevant gender issues in developing the exposure models and policy tools.The workplan is aligned with these key objectives. In addition, several key cross-cutting themes are established to ensure their consistent and integrated treatment throughout the project. These are: exposure scenarios, volatilisation, transfer coefficients, statistical modelling and calibration, and data management. Key stakeholder groups will be represented on the project Advisory Panel as well as participating directly via consultations and workshops, and in surveys to obtain new data on practices and sociobehavioural and gender factors influencing exposure. Models for key exposure scenarios covering different regions of the EU will be developed in order of priority based on consultation with stakeholders, implemented as user-friendly software, and tested with end-users. Project outputs will be delivered through established networks with end-users in EU and national authorities, national training organisations, the pesticide industry, and relevant trade unions and NGOs. The consortium is superbly equipped to address the project objectives, including international leading experts on every aspect and long experience in both the science and the regulatory aspects of exposure assessment.

**Partners:**

| | | |
|---|---|---|
| 1 | THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS | UK |
| 2 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 3 | BENAKI PHYTOPATHOLOGICAL INSTITUTE | EL |
| 4 | The Arable Group Limited | UK |
| 5 | NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO | NL |
| 6 | UNIVERSITEIT GENT | BE |
| 7 | UNIVERSITA CATTOLICA DEL SACRO CUORE | IT |
| 8 | WAGENINGEN UNIVERSITEIT | NL |

**Activity Code:** ENV.2010.1.2.3-2 **Funding Scheme:** CP **Duration (Months):** 42

**Title:** Public health impacts in URban environments of Greenhouse gas Emissions reduction strategies

**Proposed EC Grant:** 3.416.332 €

**Abstract:**

The project will examine the health impacts of greenhouse gas (GHG) reduction policies in urban settings in Europe, China and India, using case studies of 3-4 large urban centres and three smaller urban centres. Sets of realistic interventions will be proposed, tailored to local needs, to meet published abatement goals for GHG Emissions for 2020, 2030 and 2050.Mitigation actions will be defined in four main sectors: power generation/industry, household energy, transport and food and agriculture. The chief pathways by which such measures influence health will be described, and models developed to quantify changes in health-related 'exposures' and health behaviours. Models will include ones relating to outdoor air pollution, indoor air quality and temperature, physical activity, dietary intake, road injury risks and selected other exposures.Integrated quantitative models of health impacts will be based on life table methods encompassing both mortality and morbidity outcomes modelled over 20 year time horizons. Where possible, exposure-response relationships will be based on review evidence published by the Comparative Risk Assessment initiative or systematic reviews. Uncertainties in model estimates will be characterized using a mathematical framework to quantify the influence of uncertainties in both model structure and parameter estimates. Particular attention will be given to economic assessments, both in terms of behavioural choices/uptake of various forms of mitigation measure (with new surveys to address evidence gaps), and in terms of health benefits and costs calculated from societal, health service and household perspectives. A decision analysis framework will be developed to compare different mitigation options.Experts and user groups will be consulted to define the mitigation questions to be examined, and the results will be discussed in consultative workshops scheduled for the final months of the project.

**Partners:**

| | | |
|---|---|---|
| 1 | LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE | UK |
| 2 | Arup International Consultants (Shanghai) Co. Ltd. | CN |
| 3 | BC3 BASQUE CENTRE FOR CLIMATE CHANGE - KLIMA ALDAKETA IKERGAI | ES |
| 4 | UNIVERZITA KARLOVA V PRAZE | CZ |
| 5 | FONDAZIONE ENI ENRICO MATTEI | IT |
| 6 | FOUNDATION FOR INNOVATION AND TECHNOLOGY TRANSFER | IN |
| 7 | PEKING UNIVERSITY | CN |
| 8 | INSTITUT ZA NUKLEARNE NAUKE VINCA | RS |
| 9 | UNIVERSITY COLLEGE LONDON | UK |

**Activity Code:** ENV.2010.1.2.2-2 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Ecological and human health risk assessments of antibiotics and anti-cancer drugs found in the environment.

**Proposed EC Grant:** 2.798.900 €

**Abstract:**

A consortium of world-class scientists from both academia and industry has been assembled to assess the risks to wild animals and humans posed by environmental exposure to pharmaceuticals. Their expertise will be supplemented by an advisory group consisting of representatives of all stakeholders. This project will concentrate on two classes of human pharmaceuticals, namely antibiotics and anti-cancer drugs, because there are good reasons for thinking that these could be of particular concern. In order to conduct sound risk assessments, including providing estimates of uncertainty, it will be necessary to obtain accurate data on both exposure concentrations and effects levels. Hence, new data on both environmental concentrations and effects on aquatic organisms will be produced during the project. The comparative sensitivities of embryos and adults will be determined, and used to reduce uncertainty in the risk assessments. The stable transformation products of the selected pharmaceuticals will also be investigated. All stakeholders and beneficiaries will be represented in the project, so that results are rapidly and reliably transferred to all interested parties. A prototype web-based classification system will be developed during the project with the intention of enabling all EU citizens to make their own informed decisions about the risk posed by human pharmaceuticals to their health and to the health of the environment. The results will able EU regulators and policy makers to make better informed decisions on the issue of pharmaceuticals in the environment.

**Partners:**

| | | |
|---|---|---|
| 1 | BRUNEL UNIVERSITY | UK |
| 2 | ASSOCIATION POUR LA RECHERCHE ET LE DEVELOPPEMENT DES METHODES ET PROCESSUS INDUSTRIELS - ARMINES | FR |
| 3 | GOETEBORGS UNIVERSITET | SE |
| 4 | STICHTING KATHOLIEKE UNIVERSITEIT | NL |
| 5 | IVL SVENSKA MILJOEINSTITUTET AB | SE |
| 6 | LEUPHANA UNIVERSITAT LUNEBURG | DE |
| 7 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 8 | ECOLE DES HAUTES ETUDES EN SANTE PUBLIQUE | FR |
| 9 | VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG | NL |
| 10 | ECOLOGIC INSTITUT gemeinnützige GmbH | DE |
| 11 | INSTITUT FUR SOZIAL OKOLOGISCHE FORSCHUNG GMBH | DE |
| 12 | DANMARKS TEKNISKE UNIVERSITET | DK |
| 13 | VEOLIA ENVIRONNEMENT RECHERCHE ET INNOVATION SNC | FR |

**Activity Code:** ENV.2010.1.2.1-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Health, environmental change and adaptive capacity: mapping, examining and anticipating future risks of water-related vector-borne diseases in eastern Africa

**Proposed EC Grant:** 3.377.998 €

**Abstract:**

The HEALTHY FUTURES project is motivated by concern for the health impacts of environmental changes. HEATHLY FUTURES aims to respond to this concern through construction of a disease risk mapping system for three water-related high-impact VBDs (malaria, Rift valley fever and schistosomiasis) in Africa, accounting for environmental/climatic trends and changes in socio-economic conditions to predict future risk. Concentrating on eastern Africa as a study area, HEALTHY FUTURES comprises a comprehensive, inter-disciplinary consortium of health, environment, socio-economic, disease modelling and climate experts in addition to governmental health departments. To achieve its aims, HEALTHY FUTURES will deploy a bottom-up, end-user/stakeholder-focused approach combining field-, laboratory- and library-based research.

**Partners:**

| | | |
|---|---|---|
| 1 | THE PROVOST, FELLOWS, FOUNDATION SCHOLARS & THE OTHER MEMBERS OF BOARD OF THE COLLEGE OF THE HOLY & UNDIVIDED TRINITY OF QUEEN ELIZABETH NEAR DUBLIN | IE |
| 2 | UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION -UNESCO | FR |
| 3 | PARIS-LODRON-UNIVERSITÄT SALZBURG | AT |
| 4 | SVERIGES METEOROLOGISKA OCH HYDROLOGISKA INSTITUT | SE |
| 5 | UNIVERSITY OF NAIROBI | KE |
| 6 | AquaTT UETP Ltd | IE |
| 7 | International Livestock Research Institute | KE |
| 8 | National University of Rwanda | RW |
| 9 | UNIVERSITY OF YORK | UK |
| 10 | Vector Control Division - Ministry of Health | UG |
| 11 | KENYA MEDICAL RESEARCH INSTITUTE | KE |
| 12 | IKIGO GISHINZWE UBUVUZI N'UBUSHAKASHATSI KURI SIDA, MALARIYA, IGITUNTUN'IZINDI NDWARA Z'IBYOREZO (TRAC PLUS) | RW |
| 13 | UNIVERSITY OF CAPE TOWN | ZA |
| 14 | UNIVERSITY OF DURHAM | UK |
| 15 | THE UNIVERSITY OF LIVERPOOL | UK |

**Activity Code:** ENV.2011.1.2.1-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Atopic diseases in changing climate, land use and air quality

**Proposed EC Grant:** 3.497.160 €

**Abstract:**

There is an urgent need to understand how global and regional climate, land use and air quality changes will impact human health. Our consortium constitutes an innovative and multidisciplinary approach to explore the combined pan-European impact of changes in climate, land use and air pollution on allergen pollen-induced diseases through a chain of quantitative physical and statistical models. We plan to develop integrated and cross-disciplinary approaches to assess the health risks resulting from severe environmental change and to design suitable adaptation policies. We will study vulnerable groups of atopic patients and search for predictive biomarkers, and establish statistical models of disease response to pollen for assessing future trends and risks. We will examine the effects of climate and air quality directly on pollen allergenicity using experimental animals. Furthermore, we will maintain a dialogue with relevant stakeholders and provide recommendations for policy makers. We chose to focus on the invasive and highly allergenic Ambrosia pollen because of the high rate at which it is spreading through Europe and the high frequency at which Europeans are becoming allergic to it with its consequent negative impact on health and the European economy. The outcome of this state-of-the-art project is; 1) improved understanding of the changes of multiple environmental factors and stressors on allergic disease, 2) scenarios of allergic disease risk currently and in the future, 3) useful information for response policies at national and European levels, 4) increased awareness of allergic disease risk in response to multiple environmental changes, 5) improved communication strategies between science and stakeholders, 6) contribution to the Fifth IPCC Assessment Report (AR5) due in 2013-14, and 7) policy-relevant guidance to combat Ambrosia invasion and air pollutant interactions with aeroallergens.

**Partners:**

| | | |
|---|---|---|
| 1 | MEDIZINISCHE UNIVERSITAET WIEN | AT |
| 2 | UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION -UNESCO | FR |
| 3 | Srebrnjak Children's Hospital | HR |
| 4 | INSTITUT NATIONAL DE L ENVIRONNEMENT ET DES RISQUES INERIS | FR |
| 5 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 6 | MOVERIM CONSULTING SPRL | BE |
| 7 | Promoscience srl | IT |
| 8 | ROTHAMSTED RESEARCH LIMITED | UK |
| 9 | UNIVERSITAET ULM | DE |
| 10 | UNIVERSITY OF EAST ANGLIA | UK |

**Activity Code:** ENV.2011.1.2.2-2 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Advanced Research on Interaction Mechanisms of electroMagnetic exposures with Organisms for Risk Assessment

**Proposed EC Grant:** 3.249.971 €

**Abstract:**

Based on epidemiological evidence supporting an ssociation between residential exposure to extremelylow frequency magnetic fields (ELF MF) and childhood leukaemia, ELF MF have been classified as possibly carcinogenic to humans. The proposed project aims to scrutinize the underlying biophysical mechanisms andto clarify a possible causal relationship between ELF MF exposure and cancer, especially childhood leukaemia. This will be achieved by 1) developing and applying novel experimental and computational techniques to close knowledge gaps in the exposure assessment to ELF MF and 2) applying advanced biological in vitro, ex vivo and in vivo models and techniques under well-defined exposure conditions to test likely interaction mechanisms. The selected experimental approach is based on epidemiological evidence and current knowledge about the molecular processes underlying acute leukaemia in children. It aims to investigate the possible impact of ELF-MF exposure: 1) on the epigenetic dynamics associated with hematopoietic cell lineage commitment anddifferentiation; epigenetic signatures will be monitored genome-wide, and mechanisms underlying eventual “misprogramming” will be addressed in gene promoter models; 2) on the alteration of signalling processes in cells; 3) on the induction of possible cytotoxic effects on CD8 positive T cells; and 4) on the genesis or evolution of childhood leukaemia by generating genetically modified advanced animal models. Advanced biophysical simulations with efficient numerical solvers combined with the latest tissue and cellular models will be implemented to support the bioexperiments. A risk assessment will be performed at the end based on studies conducted within the project and correlated to recent studies conducted outside the consortium by adapting andapplying procedures as outlined by the International Agency for Research on Cancer (IARC) Monographs on the Evaluation of Carcinogenic Risks to Humans.

**Partners:**

| | | |
|---|---|---|
| 1 | Foundation for Research on Information Technologies in Society | CH |
| 2 | UNIVERSITAET BASEL | CH |
| 3 | WEIZMANN INSTITUTE OF SCIENCE | IL |
| 4 | FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V | DE |
| 5 | STIFTUNG TIERAERZTLICHE HOCHSCHULE HANNOVER | DE |
| 6 | Schmid & Partner Engineering AG | CH |
| 7 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 8 | CENTRE INTERNATIONAL DE RECHERCHE SUR LE CANCER | FR |
| 9 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |

**Activity Code:** ENV.2011.1.2.3-1 **Funding Scheme:** CSA **Duration (Months):** 36

**Title:** Health and Environmental Risks: Organisation, Integration and Cross-fertilisation of Scientific Knowledge

**Proposed EC Grant:** 980.279 €

**Abstract:**

Today, human risk assessment and environmental risk assessment are typically separated. Existing risk assessment (RA) experience and regulations are challenged by future RA needs.- There is a lack of mutual understanding between subject matter experts of individual disciplines.- Data from toxicological and ecotoxicological studies is not readily accessible by risk assessors across disciplines.- The need for RA will continue to increase (e.g. REACH or toxicity of mixtures) along with budget restrictions and political and public pressure to reduce the number of animal tests. Therefore, more cost effective, predictive and rapid tests for high quality sustainable RA are needed including a better exploitation of existing data.- More transparency in RA is needed to allow better risk communication to regain consumer/public trust and to give unambiguous guidance for improved risk management.- Scientific RA plays an increasing role internationally for global risk governance and as a tool to support sustainable trade practices. Divergence often arises on risk policies and measures, sometimes due to different RA approaches. Therefore, stronger international co-operation in this area is needed.Against this background, the overall objective of the proposed coordination action HEROIC is to establish and co-ordinate a global network of European and international experts and stakeholders from different disciplines to establish stronger interfaces between human and environmental RA, between RA and risk management, between the various agencies and countries within the EU and between agencies and industry.To this end, the HEROIC consortium members will make full use of their own extensive networks to involve stakeholders and experts in workshops, roundtables and outreach activities. These coordinating activities will result in enhanced sharing of knowledge, building consensus and development of clear, easily understood, transparent and unambiguous integrated RA procedures.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITAET BASEL | CH |
| 2 | UNIVERSITA CATTOLICA DEL SACRO CUORE | IT |
| 3 | ELECTRICITE DE FRANCE S.A. | FR |
| 4 | THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS | UK |
| 5 | INSTITUT NATIONAL DE L ENVIRONNEMENT ET DES RISQUES INERIS | FR |
| 6 | HELMHOLTZ-ZENTRUM FUER UMWELTFORSCHUNG GMBH - UFZ | DE |
| 7 | BENAKI PHYTOPATHOLOGICAL INSTITUTE | EL |
| 8 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 9 | FAUST UND BACKHAUS ENVIRONMENTAL CONSULTING GBR | DE |

**Activity Code:** ENV.2011.1.2.2-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Developmental neurotoxicity assessment of mixtures in children

**Proposed EC Grant:** 6.993.863 €

**Abstract:**

Various recent epidemiological studies have indicated that exposure to low doses of environmental biologically active contaminants during human development can alter gene expression and have deleterious effects on cognitive development in childhood. The DENAMIC project is ultimately focused on reducing such effects of environmental contamination on learning and developmental disorders in children. It aims to study and evaluate environment-health relationships in children. Key elements are: development of sophisticated tools and methods for early warning and screening of compounds for neurotoxicity, to study mechanisms of disease development and the role of individual susceptibility, to improve assessment of exposures and effects, focus on combined exposures to environmental agents that can interact to enhance adverse effects and reduction of health inequalities of children through Europe. One of the main aims of DENAMIC is to develop tools and methods for neurotoxic effects of mixtures of environmental pollutants at low levels, possibly resulting in (subclinical) effects on learning (cognitive skills) and developmental disorders in children (e.g ADHD, autism spectrum disorders and anxiety disorders). A broad suite of contaminants will be included in the studies, with options to bring in new chemicals in case evidence comes up during the project. With 14 partners from ten different countries DENAMIC has a true international character. It is a comprehensive, multi-disciplinary project. Six SME's will play a key role in the development of biotechnological screening tools. The most modern techniques in the fields of genomics, proteomics, metabolomics and transcriptomics will be applied. Dissemination will ensure the project results to arrive at policymakers' desks, and will also illustrate the subject for a scientific audience and the public. The very large network of the consortium ensures dissemination to European industries, and every other interested stakeholder.

**Partners:**

| | | |
|---|---|---|
| 1 | VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG | NL |
| 2 | UNIVERSITEIT UTRECHT | NL |
| 3 | UPPSALA UNIVERSITET | SE |
| 4 | FUNDACION DE LA COMUNIDAD VALENCIANA CENTRO DE INVESTIGACION PRINCIPE FELIPE | ES |
| 5 | SLOVENSKA ZDRAVOTNICKA UNIVERZITA V BRATISLAVE | SK |
| 6 | CALLISTO PRODUCTIONS LTD | UK |
| 7 | CENTRO SUPERIOR DE INVESTIGACION EN SALUD PUBLICA | ES |
| 8 | NASJONALT FOLKEHELSEINSTITUTT | NO |
| 9 | Instituto de Medicina Genómica | ES |
| 10 | VIEW POINT SA | FR |
| 11 | Proteome Sciences R&D GmbH & Co. KG | DE |
| 12 | INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE PENTRU ELECTROCHIMIE SI MATERIE CONDENSATA - INCEMC TIMISOARA | RO |
| 13 | GEN-INFO ZA USLUGE D.O.O. | HR |

**Activity Code:** ENV.2011.1.2.3-2 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Positive health effects of the natural outdoor environment in typical populations in different regions in Europe (PHENOTYPE)

**Proposed EC Grant:** 3.499.403 €

**Abstract:**

Indications exist that close contact with nature brings benefits to human health and well-being. The proposed work will investigate the interconnections between exposure to natural outdoor environments, in both rural and urban settings, and better human health and well-being in the North West, South and East of Europe. The project will explore the underlying mechanisms at work (stress reduction/restorative function, physical activity, social interaction, exposure to environmental hazards) and examine the health effects (general health and well-being, mental health/neural development, stress, cardiovascular, cancer and respiratory mortality and morbidity, birth outcomes and obesity) for different population groups (pregnant women and/or foetus, different age groups, socio-economic status, ethnic minorities and patients). We will use conventional and new innovative high tech methods to characterize the natural environment in terms of quality and quantity. Preventive as well as therapeutic effects of contact with the natural environment will be covered. We will address implications for land-use planning and green space management. The work will produce more robust evidence base on links between exposure to natural outdoor environment and human health and well-being, and a better integration of human health needs into land use planning and green space management in rural as well as urban areas.

**Partners:**

| | | |
|---|---|---|
| 1 | FUNDACIO CENTRE DE RECERCA EN EPIDEMIOLOGIA AMBIENTAL - CREAL | ES |
| 2 | RIJKSINSTITUUT VOOR VOLKSGEZONDHEIDEN MILIEU*NATIONAL INSTITUTEFOR PUBLIC HEALTH AND THE ENVIRONMENTEN | NL |
| 3 | STAFFORDSHIRE UNIVERSITY. | UK |
| 4 | VYTAUTO DIDZIOJO UNIVERSITETAS | LT |
| 5 | UNIVERSITE DE GENEVE | CH |
| 6 | VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG | NL |
| 7 | HULPVERLENING GELDERLAND MIDDEN | NL |
| 8 | THE REGENTS OF THE UNIVERSITY OF CALIFORNIA | US |

**Activity Code:** ENV.2012.6.4-3 **Funding Scheme:** CP **Duration (Months):** 54

**Title:** The Human Early-Life Exposome – novel tools for integrating early-life environmental exposures and child health across Europe

**Proposed EC Grant:** 8.997.595 €

**Abstract:**

The aim of HELIX is to exploit novel tools and methods (remote sensing/GIS-based spatial methods, omics-based approaches, biomarkers of exposure, exposure devices and models, statistical tools for combined exposures, novel study designs, and burden of disease methodologies), to characterise early-life exposure to a wide range of environmental hazards, and integrate and link these with data on major child health outcomes (growth and obesity, neurodevelopment, immune system), thus developing an “Early-Life Exposome” approach.HELIX uses six existing, prospective birth cohort studies as the only realistic and feasible way to obtain the comprehensive, longitudinal, human data needed to build this early-life exposome. These cohorts have already collected large amounts of data as part of national and EU-funded projects. Results will be integrated with data from European cohorts (>300,000 subjects) and registers, to estimate health impacts at the large European scale.HELIX will make a major contribution to the integrated exposure concept by developing an exposome toolkit and database that will: 1) measure a wide range of major chemical and physical environmental hazards in food, consumer products, water, air, noise, and the built environment, in pre and postnatal periods; 2) integrate data on individual, temporal, and toxicokinetic variability, and on multiple exposures, which will greatly reduce uncertainty in exposure estimates; 3) determine molecular profiles and biological pathways associated with multiple exposures using omics tools; 4) provide exposure-response estimates and thresholds for multiple exposures and child health; and 5) estimate the burden of childhood disease in Europe due to multiple environmental exposures. This integration of the chemical, physical and molecular environment during critical early-life periods will lead to major improvements in health risk and impact assessments and thus to improved prevention strategies for vulnerable populations.

**Partners:**

| | | |
|---|---|---|
| 1 | FUNDACIO CENTRE DE RECERCA EN EPIDEMIOLOGIA AMBIENTAL - CREAL | ES |
| 2 | NASJONALT FOLKEHELSEINSTITUTT | NO |
| 3 | PANEPISTIMIO KRITIS (UNIVERSITY OF CRETE) | EL |
| 4 | INSTITUT NATIONAL DE LA SANTE ET DE LA RECHERCHE MEDICALE (INSERM) | FR |
| 5 | BRADFORD TEACHING HOSPITALS NHS FOUNDATION TRUST | UK |
| 6 | VYTAUTO DIDZIOJO UNIVERSITETAS | LT |
| 7 | IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE | UK |
| 8 | FUNDACIO PRIVADA CENTRE DE REGULACIO GENOMICA | ES |
| 9 | HULPVERLENING GELDERLAND MIDDEN | NL |
| 10 | THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL | US |
| 11 | HYLOBATES CONSULTING S.R.L. | IT |
| 12 | SENSING & CONTROL SYSTEMS SL | ES |
| 13 | INSTITUT NATIONAL DE L ENVIRONNEMENT ET DES RISQUES INERIS | FR |

**Activity Code:** ENV.2012.6.5-4 **Funding Scheme:** CSA **Duration (Months):** 36

**Title:** Air Pollution Policies foR Assesement of Integrated Strategies At regional and Local scales

**Proposed EC Grant:** 999.990 €

**Abstract:**

Air quality in Europe is still facing a continued wide-spread of exceedances, particularly regarding PM, NOx and O3. The 2008 Air Quality Directive requests Member States (MS) to design local and regional plans and assess their impacts on air quality and human health. MS have therefore developed and applied a wide range of modeling methods to cope with these obligations. Today, with the revision of the EU air quality policy pending, there is the need to consolidate and assess the research results in the field and to make them accessible to policy makers. This is the main aim of APPRAISAL project, split in the following objectives:-Undertake on overall review of the methodologies used in different countries, from the simple (scenario analysis) to the more comprehensive (cost-benefit, cost-effectiveness analysis). This would include evaluating top-down and bottom-up approaches to systematically analyze their strengths and weaknesses and to identify key areas to be addressed by further research. The result would be captured in a readily updatable, user friendly relational data base.-Design an integrated assessment (IA) modeling framework where existing components are efficiently inter-connected, produce guidelines describing the key components of best practices. A number of test cases will be explored to confirm the robustness of the guidelines in practice.-Communicate with key stake-holders and in particular to policy-makers the state-of-the-art scientific knowledge on emission abatement assessment.APPRAISAL includes 15 highly experienced groups working on both air quality and health impacts assessment. Partners come from all over Europe to guarantee the review process representativeness. A group of stakeholders will closely be connected to the Consortium to ensure a direct line of communication with key policy makers. APPRAISAL will contribute to improved knowledge on regional and local IA methodologies and will support the revision of EU air quality policies.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITA DEGLI STUDI DI BRESCIA | IT |
| 2 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 3 | VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V. | BE |
| 4 | SUOMEN YMPARISTOKESKUS | FI |
| 5 | INSTITUT NATIONAL DE L ENVIRONNEMENT ET DES RISQUES INERIS | FR |
| 6 | ARISTOTELIO PANEPISTIMIO THESSALONIKIS | EL |
| 7 | UNIVERSIDADE DE AVEIRO | PT |
| 8 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 9 | SYSTEMS RESEARCH INSTITUTE OF THE POLISH ACADEMY OF SCIENCES IBS PAN | PL |
| 10 | TERRARIA SRL | IT |
| 11 | CENTRO DE INVESTIGACIONES ENERGETICAS, MEDIOAMBIENTALES Y TECNOLOGICAS-CIEMAT | ES |
| 12 | UNIVERSITE LIBRE DE BRUXELLES | BE |
| 13 | BARCELONA SUPERCOMPUTING CENTER - CENTRO NACIONAL DE SUPERCOMPUTACION | ES |
| 14 | UMWELTBUNDESAMT | DE |
| 15 | LES WHITE ASSOCIATES LIMITED | UK |

**Activity Code:** ENV.2012.6.4-3 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Enhanced exposure assessment and omic profiling for high priority environmental exposures in Europe.

**Proposed EC Grant:** 8.998.786 €

**Abstract:**

This project aims to predict individual disease risk related to the environment, by characterizing the external and internal exposome for common exposures (air and drinking water contaminants) during critical periods of life, including in utero. A large amount of health data is now available from longitudinal cohorts in both children and adults, with detailed information on risk factors, confounders and outcomes, but these are not well linked with environmental exposure data. The exposome concept refers to the totality of environmental exposures from conception onwards, and is a novel approach to studying the role of the environment in human disease. This project will move the field forward by utilising data on individual external exposome (including sensors, smartphones, geo-referencing, satellites), and omic profiles in an agnostic search for new and integrated biomarkers. These tools will be applied in both experimental short-term studies and log-term longitudinal studies in humans. The ultimate goal is to use the new tools in risk assessment and in the estimation of the burden of environmental disease. The involvement of two SMEs, one specialized in sensors and smartphone development, the other in complex data integration, will increase the chances of a successful impact on European Public Health. This multidisciplinary proposal combines:•development of a general framework for the systematic measurement of the internal and external exposome in Europe in relation to air and water contamination, as a way to reduce uncertainty in risk assessment and to address the effects of mixtures and complex exposures;•evaluation of health outcomes and key physiological changes in short-term studies (including a randomized trial) and life-course studies with a large amount of information on diet, physical activity and anthropometry;•evaluation of the burden of disease in the European population, based on state-of-the-art assessment of population exposures.

**Partners:**

| | | |
|---|---|---|
| 1 | IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE | UK |
| 2 | UNIVERSITEIT UTRECHT | NL |
| 3 | CENTRE INTERNATIONAL DE RECHERCHE SUR LE CANCER | FR |
| 4 | FUNDACIO CENTRE DE RECERCA EN EPIDEMIOLOGIA AMBIENTAL - CREAL | ES |
| 5 | UNIVERSITEIT MAASTRICHT | NL |
| 6 | ETHNIKO IDRYMA EREVNON | EL |
| 7 | SCHWEIZERISCHES TROPEN- UND PUBLIC HEALTH-INSTITUT | CH |
| 8 | KING'S COLLEGE LONDON | UK |
| 9 | GENEDATA AG | CH |
| 10 | THE REGENTS OF THE UNIVERSITY OF CALIFORNIA | US |
| 11 | UNIVERSITY OF BRISTOL | UK |
| 12 | CENTRE DE RECERCA I INNOVACIO DE CATALUNYA S.A. | ES |

**Activity Code:** ENV.2007.1.3.1.1. **Funding Scheme:** CP **Duration (Months):** 40

**Title:** Morphological Impacts and COastal Risks induced by Extreme storm events

**Proposed EC Grant:** 3.499.954 €

**Abstract:**

The project is specifically targeted to contribute to the development of a probabilistic mapping of the morphological impact of marine storms and to the production of early warning and information systems to support long-term disaster reduction. A review of historical storms that had a significant impact on a representative number of sensitive European sites will be undertaken. The nine sites are selected according to wave exposure, tidal regime and socio-economical pressures. They include outmost regions of the European Union at the border with surrounding states (e.g. the area of the Gibraltar Strait, the Baltic and Black Sea). All data will be compiled into in a homogeneous database of occurrence and related socio-economic damages, including the following information on the characteristics of the storms, on their morphological impacts, on the damages caused on society, on the Civil Protection schemes implemented after the events. Monitoring of selected sites will take place for a period of one year to collect new data sets of bathymetry and topography using state-of-the-arts technology (Lidar, ARGUS, Radar, DGPS). The impact of the storms on living and non-living resources will be done using low-cost portable GIS methods. Numerical models of storm-induced morphological changes will be tested and developed, using both commercial packages and developing a new open-source morphological model. The models will be linked to wave and surge forecasting models to set-up a real-time warning system and to implement its usage within Civil Protection agencies. The most important product of the project will be the conception of Storm Impact Indicators (SIIs) with defined threshold for the identification of major morphological changes and flooding associated risks. Finally, the results of the project will be disseminated as risk maps through an effective Web_GIS system.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITA DEGLI STUDI DI FERRARA | IT |
| 2 | AGENZIA REGIONALE PREVENZIONE E AMBIENTE DELL'EMILIA-ROMAGNA | IT |
| 3 | REGIONE EMILIA ROMAGNA | IT |
| 4 | UNIVERSIDADE DO ALGARVE | PT |
| 5 | FUNDACAO DA FACULDADE DE CIENCIAS DA UNIVERSIDADE DE LISBOA | PT |
| 6 | UNIVERSIDAD DE CADIZ | ES |
| 7 | BUREAU DE RECHERCHES GEOLOGIQUES ET MINIERES | FR |
| 8 | INTERNATIONAL MARINE AND DREDGING CONSULTANTS | BE |
| 9 | UNIVERSITY OF PLYMOUTH | UK |
| 10 | UNIWERSYTET SZCZECINSKI | PL |
| 11 | INSTITUTE OF OCEANOLOGY - BULGARIAN ACADEMY OF SCIENCES | BG |
| 12 | STICHTING DELTARES | NL |
| 13 | TECHNISCHE UNIVERSITEIT DELFT | NL |
| 14 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 15 | UNIVERSIDAD PABLO DE OLAVIDE | ES |
| 16 | CONSORZIO FERRARA RICERCHE | IT |

**Activity Code:** ENV.2007.1.3.3.1. **Funding Scheme:** CP **Duration (Months):** 50

**Title:** Mitigate and assess risk from volcanic impact on terrain and human activities

**Proposed EC Grant:** 3.475.164 €

**Abstract:**

In EU countries, volcanic risks assessment and management are tackled through scientific knowledge and monitoring, although there is still a need for integration between all risk management components. For international cooperation partner countries (ICPCs), the risk management depends on local situations but is often less favourable. Therefore, following UN International Strategy for Disaster Reduction recommendations and starting from shared existing knowledge and practices, the MIA-VITA project aims at developing tools and integrated cost effective methodologies to mitigate risks from various hazards on active volcanoes (prevention, crisis management and recovering). Such methodology will be designed for ICPCs contexts but will be helpful for European stakeholders to improve their experience in volcanic risk management. The project multidisciplinary team gathers civil defence agencies, scientific teams (earth sciences, social sciences, building, soil, agriculture, Information Technologies and telecommunications) and an IT private company. The scientific work will focus on: 1) risk assessment methodology based on a multi-risk approach developed at Mt Cameroon by one of the partners in cooperation with Cameroonian institutions 2) cost efficient monitoring tools designed for poorly monitored volcanoes (satellite & gas analysis & volcano-seismology) 3) improvement in terms of vulnerability assessment (people, buildings and biosphere) 4) socio-economic surveys to enhance community resilience 5) Integrated information system (data organisation and transfers, communications) taking advantage of GEONETCast initiative Results will be achieved with help from local scientists and stakeholders in Africa (Cameroon, Cape Verde), in Asia (Indonesia, Philippines) and will be validated on a European volcano (Montserrat). The objectives will be reached through sharing/transfer of know-how, through scientific and technological developments, and through dissemination/training.

**Partners:**

| | | |
|---|---|---|
| 1 | BUREAU DE RECHERCHES GEOLOGIQUES ET MINIERES | FR |
| 2 | ISTITUTO NAZIONALE DI GEOFISICA E VULCANOLOGIA | IT |
| 3 | INSTITUTO SUPERIOR TECNICO | PT |
| 4 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 5 | NORSK INSTITUTT FOR LUFTFORSKNING | NO |
| 6 | KELL SRL | IT |
| 7 | INESC ID - INSTITUTO DE ENGENHARIA DE SISTEMAS E COMPUTADORES, INVESTIGACAO E DESENVOLVIMENTO EM LISBOA | PT |
| 8 | UNIVERSITAET HOHENHEIM | DE |
| 9 | THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE | UK |
| 10 | MINISTERE DE L'INTERIEUR, DE L'OUTREMER ET DES COLLECTIVITES TERRITORIALES DIRECTION DE LA DEFENSE ET DE LA SECURITE CIVILES | FR |
| 11 | PRESIDENZA DEL CONSIGLIO DEI MINISTRI - DIPARTIMENTO DELLA PROTEZIONE CIVILE | IT |
| 12 | INSTITUTO NACIONAL DE METEOROLOGIA E GEOFISICA | CV |
| 13 | MINISTERE DE L'INDUSTRIE, DES MINES ET DU DEVELOPPEMENT TECHNOLOGIQUE | CM |
| 14 | Departemen Energi dan Sumber Daya Mineral | ID |
| 15 | PHILIPPINE INSTITUTE OF VOLCANOLOGY AND SEISMOLOGY | PH |

**Activity Code:** ENV.2007.1.3.2.1. **Funding Scheme:** CP **Duration (Months):** 39

**Title:** Methods for the improvement of Vulnerability Assessment in Europe

**Proposed EC Grant:** 2.078.067 €

**Abstract:**

MOVE will create knowledge, frameworks and methods for the assessment of vulnerability to natural hazards in Europe. It will use indices and indicators to help improve societal and environmental resilience. Floods, temperature extremes, droughts, landslides, earthquakes, wildfires and storms will be studied. Emphasis will be placed on clear, capable measurement and accounting for uncertainties. MOVE will identify gaps in existing methodologies. It will produce a conceptual framework that is independent of scale and hazard type. It analyse physical (technical), environmental, economic, social, cultural and institutional vulnerability. These will be measured for specific hazards and at different geographical scales. Methodologies will be tested in case study regions on vulnerable elements and appropriate hazard types. Case studies will enable the availability and quality of existing data at sub-national (NUTS 3-5) and local scales to be examined. MOVE will evaluate statistical data (for cities, from EUROSTAT, etc.) and remote sensing information. The case studies will integrate and combine economic damage and social vulnerability methods. The generic framework, data analysis and applicability tests will result in a standard approach to vulnerability assessment in Europe. Stakeholders will be consulted systematically in order to understand their needs and to enable MOVE to draw attention to the practical value of its methodologies. There will be six work-packages. First, terms will be defined and gaps in existing methodologies identified. Next, a generic framework will be developed, with variants for particular scales, hazards and situations. Thirdly, the methods will be applied to case studies. The fourth and fifth packages will develop co-operation processes with stakeholders and ensure that the framework and the methods are disseminated for the benefit of European citizens. Project co-ordination will occupy the final package.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITA DEGLI STUDI DI FIRENZE | IT |
| 2 | BUREAU DE RECHERCHES GEOLOGIQUES ET MINIERES | FR |
| 3 | PARIS-LODRON-UNIVERSITÄT SALZBURG | AT |
| 4 | ACCADEMIA EUROPEA PER LA RICERCA APPLICATA ED IL PERFEZIONAMENTO PROFESSIONALE BOLZANO (ACCADEMIA EUROPEA BOLZANO) | IT |
| 5 | ATLAS INNOGLOBE TERVEZO ES SZOLGALTATO KFT | HU |
| 6 | KING'S COLLEGE LONDON | UK |
| 7 | STIFTELSEN NORGES GEOTEKNISKE INSTITUTT | NO |
| 8 | RUPPRECHT CONSULT - FORSCHUNG & BERATUNG GMBH | DE |
| 9 | CENTRE INTERNACIONAL DE METODES NUMERICS EN ENGINYERIA | ES |
| 10 | UNITED NATIONS UNIVERSITY INSTITUTE FOR ENVIRONMENT AND HUMAN SECURITY | DE |
| 11 | TECHNISCHE UNIVERSITAET DORTMUND | DE |
| 12 | FACULDADE DE LETRAS DA UNIVERSIDADE DO PORTO | PT |
| 13 | UNIVERSITAET WIEN | AT |

**Activity Code:** ENV.2007.1.3.3.3. **Funding Scheme:** CSA **Duration (Months):** 24

**Title:** An Exercise to Assess Research Needs and Policy Choices in Areas of Drought

**Proposed EC Grant:** 1.500.889 €

**Abstract:**

In recent years large parts of Europe suffered from extreme drought, a phenomenon that likely will become more frequent and more severe, as predicted by the climate models. This will lead to significant socio-economic and environmental impacts and associated damages. There is therefore an urgent need to develop a roadmap toward a European Drought Policy, in accordance with the EU-Water Framework Directive (WFD) and related EU Legislation and Actions. The aim is to mitigate and to adapt to droughts, and hence reduce the risks they pose in Europe. XEROCHORE SA compiles a roadmap that comprises of: 1) a state-of-the-art review and identification of the research gaps in the natural system, in impact assessment, in policy-making and in integrated water resources management, and 2) an assessment of the possible impacts of droughts and guidance on appropriate responses for stakeholders. An extended network of experts will gather inputs for the roadmap through focussed workshops, round table discussions, which integrate the various aspects, and a concluding conference. A Core Group will guide and facilitate the discussion and synthesis process, and eventually write the integrated roadmap. The project network consists of over 80 organizations including research institutes, universities, ministries, water management organizations, stakeholders, consultants, international organizations and programmes. It includes key members of the European Drought Centre and the WFD-CIS Working Group on Water Scarcity and Drought and representatives from overseas and neighbourhood countries, in particular around the Mediterranean Basin. The large number of organizations covering different aspects and geographic regions guarantee that all drought aspects will be covered. The drought network will be embedded in the already-existing European Drought Centre to reach the wider scientific and to provide research advice and policy support to the EC beyond the lifetime of this action.

**Partners:**

| | | |
|---|---|---|
| 1 | FONDAZIONE ENI ENRICO MATTEI | IT |
| 2 | WAGENINGEN UNIVERSITEIT | NL |
| 3 | Water Management Center, Bauer & Olsson GbR | DE |
| 4 | UNIVERSITETET I OSLO | NO |
| 5 | MINISTERO DELL'AMBIENTE E DELLA TUTELA DEL TERRITORIO E DEL MARE | IT |
| 6 | Ministerio de Medio Ambiente | ES |
| 7 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 8 | NATIONAL TECHNICAL UNIVERSITY OF ATHENS | EL |
| 9 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 10 | INSTITUT NATIONAL DE RECHERCHE EN SCIENCES ET TECHNOLOGIES POUR L'ENVIRONNEMENT ET L'AGRICULTURE | FR |
| 11 | UNION INTERNATIONALE POUR LA CONSERVATION DE LA NATURE ET DE SES RESSOURCES | CH |
| 12 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |

**Activity Code:** ENV.2007.1.3.2.1. **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Enhancing resilience of communities and territories facing natural and na-tech hazards

**Proposed EC Grant:** 1.388.634 €

**Abstract:**

Since a long time vulnerability is a key concept in disaster literature. Nevertheless the majority of studies and grants have been allocated to hazards related research, neglecting the influence of vulnerability of exposed systems on the death toll and losses in case of natural or man made disasters. There is the need to better identify and measure also the ability of menaced and affected communities and territorial systems to respond. This is the starting point of the ENSURE project. The overall objective of ENSURE is to structure vulnerability assessment model(s) in a way that different aspects of physical, systemic, social and economic vulnerability will be integrated as much as possible in a coherent framework. The ENSURE approach starts from the recognition that for all considered hazards most of damages and most of vulnerabilities arise from the territory, including artefacts, infrastructures and facilities. They may well represent its material skeleton: physical vulnerability is therefore entirely “contained” at a territorial level. Other vulnerabilities, such as systemic, economic and social have interactions with the territory, but cannot be entirely determined at a territorial level. The project will start by assessing the state of the art in different fields related to various vulnerability aspects as they have been tackled until today in Europe and internationally. The core of the project consists in integrated models comprising already existing models to assess vulnerability and develop new ones for those aspects that have been neglected until now. The research objective is therefore to achieve progress with respect to each individual sector of vulnerability and to enhance the capability of assessing interconnections among them in a dynamic way, identifying driving forces of vulnerability, that make communities change for the good or for the worse as far as their ability to cope with extreme events is concerned.

**Partners:**

| | | |
|---|---|---|
| 1 | BUREAU DE RECHERCHES GEOLOGIQUES ET MINIERES | FR |
| 2 | UNIVERSITA DEGLI STUDI DI NAPOLI FEDERICO II. | IT |
| 3 | UNIVERSITEIT TWENTE | NL |
| 4 | UNIVERSITE DE GENEVE | CH |
| 5 | HAROKOPIO UNIVERSITY | EL |
| 6 | TEL AVIV UNIVERSITY | IL |
| 7 | MIDDLESEX UNIVERSITY HIGHER EDUCATION CORPORATION | UK |
| 8 | T6 ECOSYSTEMS S.R.L. | IT |
| 9 | POLITECNICO DI MILANO | IT |
| 10 | POTSDAM INSTITUT FUER KLIMAFOLGENFORSCHUNG | DE |

**Activity Code:** ENV.2008.1.3.3.1. **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Living with landslide risk in Europe: Assessment, effects of global change, and risk management strategies

**Proposed EC Grant:** 6.610.000 €

**Abstract:**

SafeLand will develop generic quantitative risk assessment and management tools and strategies for landslides at local, regional, European and societal scales and establish the baseline for the risk associated with landslides in Europe, to improve our ability to forecast landslide hazard and detect hazard and risk zones. The scientific work packages in SafeLand are organised in five Areas: Area 1 focuses on improving the knowledge on triggering mechanisms, processes and thresholds, including climate-related and anthropogenic triggers, and on run-out models in landslide hazard assessment; Area 2 does an harmonisation of quantitative risk assessment methodologies for different spatial scales, looking into uncertainties, vulnerability, landslide susceptibility, landslide frequency, and identifying hotspots in Europe with higher landslide hazard and risk; Area 3 focuses on future climate change scenarios and changes in demography and infrastructure, resulting in the evolution of hazard and risk in Europe at selected hotspots; Area 4 addresses the technical and practical issues related to monitoring and early warning for landslides, and identifies the best technologies available both in the context of hazard assessment and in the context of design of early warning systems; Area 5 provides a toolbox of risk mitigation strategies and guidelines for choosing the most appropriate risk management strategy. Maintaining the database of case studies, dissemination of the project results, and project management and coordination are defined in work packages 6, 7 and 8.

**Partners:**

| | | |
|---|---|---|
| 1 | STIFTELSEN NORGES GEOTEKNISKE INSTITUTT | NO |
| 2 | UNIVERSITAT POLITECNICA DE CATALUNYA | ES |
| 3 | AMRA - ANALISI E MONITORAGGIO DEL R ISCHIO AMBIENTALE SCARL | IT |
| 4 | BUREAU DE RECHERCHES GEOLOGIQUES ET MINIERES | FR |
| 5 | UNIVERSITA DEGLI STUDI DI FIRENZE | IT |
| 6 | INTERNATIONALES INSTITUT FUER ANGEWANDTE SYSTEMANALYSE | AT |
| 7 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 8 | FUNDACION AGUSTIN DE BETANCOURT | ES |
| 9 | ARISTOTELIO PANEPISTIMIO THESSALONIKIS | EL |
| 10 | UNIVERSITA' DEGLI STUDI DI MILANO-BICOCCA | IT |
| 11 | MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. | DE |
| 12 | CENTRO EURO-MEDITERRANEO PER I CAMBIAMENTI CLIMATICI SCARL | IT |
| 13 | STUDIO GEOTECNICO ITALIANO SRL | IT |
| 14 | UNIVERSITA DEGLI STUDI DI SALERNO | IT |
| 15 | UNIVERSITEIT TWENTE | NL |
| 16 | EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZURICH | CH |
| 17 | UNIVERSITE DE LAUSANNE | CH |
| 18 | C.S.G. Centro Servizi di Geoingegneria | IT |
| 19 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 20 | KING'S COLLEGE LONDON | UK |
| 21 | GEOLOGISCHE BUNDESANSTALT | AT |
| 22 | ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE | CH |
| 23 | TRL LIMITED | UK |
| 24 | INSTITUTUL GEOLOGIC AL ROMANIEI | RO |
| 25 | GEOLOSKI ZAVOD SLOVENIJE | SI |
| 26 | RISQUES ET DEVELOPPEMENT | FR |
| 27 | CENTRALE RECHERCHE SA | FR |

**Activity Code:** ENV.2008.1.3.3.2. **Funding Scheme:** CP **Duration (Months):** 42

**Title:** IMproving Preparedness and RIsk maNagemenT for flash floods and debriS flow events

**Proposed EC Grant:** 3.280.000 €

**Abstract:**

The aim of IMPRINTS is to contribute to reduce loss of life and economic damage through the improvement of the preparedness and the operational risk management for Flash Flood and Debris Flow [FF/DF] generating events, as well as to contribute to sustainable development through reducing damages to the environment. To achieve this ultimate objective the project is oriented to produce methods and tools to be used by emergency agencies and utility companies responsible for the management of FF/DF risks and associated effects. Impacts of future changes, including climatic, land use and socioeconomic will be analysed in order to provide guidelines for mitigation and adaptation measures. Specifically, the consortium will develop an integrated probabilistic forecasting FF/ DF system as well as a probabilistic early warning and a rule-based probabilistic forecasting system adapted to the operational use by practitioners. These systems will be tested on five selected flash flood prone areas, two located in mountainous catchments in the Alps, and three in Mediterranean catchments. The IMPRINTS practitioner partners, risk management authorities and utility company managers in duty of emergency management in these areas, will supervise these tests. The development of such systems will be carried out using and capitalising the results of previous and ongoing research on FF/DF forecasting and warning systems, in which several of the partners have played a prominent role. One major result of the project will be a operational prototype including the tools and methodologies developed under the project. This prototype will be designed under the premise of its ultimate commercialization and use worldwide. The consortium, covering all the actors involved in the complex chain of FF & DF forecasting, has been carefully selected to ensure the achievement of this. Specific actions to exploit and protect the results and the intellectual property of the partners have been also defined.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITAT POLITECNICA DE CATALUNYA | ES |
| 2 | BUNDESAMT FUR METEOROLOGIE UND KLIMATOLOGIE METEOSCHWEIZ | CH |
| 3 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 4 | LANCASTER UNIVERSITY | UK |
| 5 | EIDGENOESSISCHE FORSCHUNGSANSTALT WSL | CH |
| 6 | WAGENINGEN UNIVERSITEIT | NL |
| 7 | CETAQUA, CENTRO TECNOLOGICO DEL AGUA, FUNDACIÓN PRIVADA | ES |
| 8 | CENTRO UNIVERSITARIO PER LA PREVISIONE E PREVENZIONE DEI GRANDI RISCHI | IT |
| 9 | UNIVERSITY OF KWAZULU-NATAL | ZA |
| 10 | Servei Meteorològic de Catalunya | ES |
| 11 | Hydrometeorological Innovative Solutions | ES |
| 12 | Ministère de l'Ecologie, de l'Energie, du Développement durable et de la Mer | FR |
| 13 | Agència Catalana de l'Aigua | ES |
| 14 | Departement Bau und Umwelt, Kanton Glarus | CH |
| 15 | VERZASCA SA | CH |
| 16 | Azienda Elettrica Ticinese | CH |
| 17 | Autorità di Bacino destra Sele | IT |
| 19 | AGENCIA DE MEDIO AMBIENTE Y AGUA DE ANDALUCIA | ES |

**Activity Code:** ENV.2008.1.3.1.1. **Funding Scheme:** CP **Duration (Months):** 42

**Title:** Seismic Hazard Harmonization in Europe

**Proposed EC Grant:** 3.200.000 €

**Abstract:**

SHARE will deliver measurable progress in all steps leading to a harmonized assessment of seismic hazard – in the definition of engineering requirements, in the collection and analysis of input data, in procedures for hazard assessment, and in engineering applications. SHARE will create a unified framework and computational infrastructure for seismic hazard assessment and produce an integrated European probabilistic seismic hazard assessment (PSHA) model and specific scenario based modeling tools. The SHARE results will deliver long-lasting structural impact in areas of societal and economic relevance, they will serve as a reference for the Eurocode 8 application, and will provide homogeneous input for the correct seismic safety assessment for critical industry, such as the energy infrastructures and the re-insurance sector. SHARE will cover the whole European territory, the Maghreb countries in the Southern Mediterranean and Turkey in the Eastern Mediterranean.

**Partners:**

| | | |
|---|---|---|
| 1 | EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZURICH | CH |
| 2 | Helmholtz-Zentrum Potsdam Deutsches GeoForschungsZentrum | DE |
| 3 | ISTITUTO NAZIONALE DI GEOFISICA E VULCANOLOGIA | IT |
| 4 | UNIVERSITE JOSEPH FOURIER GRENOBLE 1 | FR |
| 5 | UNIVERSITA DEGLI STUDI DI PAVIA | IT |
| 6 | ARISTOTELIO PANEPISTIMIO THESSALONIKIS | EL |
| 7 | BUREAU DE RECHERCHES GEOLOGIQUES ET MINIERES | FR |
| 8 | CENTRE DE RECHERCHE EN ASTRONOMIE ASTROPHYSIQUE ET GEOPHYSIQUE | DZ |
| 9 | INSTITUTO SUPERIOR TECNICO | PT |
| 10 | BOGAZICI UNIVERSITESI | TR |
| 11 | LABORATORIO NACIONAL DE ENGENHARIA CIVIL | PT |
| 12 | MIDDLE EAST TECHNICAL UNIVERSITY | TR |
| 13 | SEIZMOLOSKI ZAVOD CRNE GORE | ME |
| 14 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 15 | INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE PENTRU FIZICA PAMANTULUI | RO |
| 16 | NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS | EL |
| 17 | STIFTELSEN NORSAR | NO |
| 18 | KONINKLIJKE STERRENWACHT VAN BELGIE | BE |

**Activity Code:** ENV.2008.1.3.2.1. **Funding Scheme:** CSA **Duration (Months):** 36

**Title:** Social Capacity Building for Natural Hazards: Toward More Resilient Societies

**Proposed EC Grant:** 910.000 €

**Abstract:**

The main objectives of CapHaz-Net are to identify and assess existing practices and policies for social capacity building in the field of natural hazards and to elaborate strategies and recommendations for activities to enhance the resilience of European societies to the impacts of natural hazards. This will be achieved by bringing together different scientific disciplines and by enhancing and fostering communication between researchers, policy-makers and practitioners from across Europe. CapHaz-Net focuses on synthesising and integrating knowledge and perspectives from five topics: risk perception, social vulnerability, risk communication, risk education, risk governance. These are central for developing social capacities of societies and communities for natural hazards. For each topic, main perspectives, actions and initiatives are identified and assessed that can improve capacity building. The project is structured in three phases: In a first phase key studies and initiatives will be identified and assessed within each of the main topics, achieved through literature review work and thematic meetings. The outcome will be a living document representing the state of the art and providing initial suggestions on how to improve societies' capacity building. In the second phase these results will be down-scaled in particular regional contexts and evaluated in respect of local experiences and existing practices and tools, achieved through a series of regional hazard workshops. The network will consider three geographical areas representing different natural hazards types. During these workshops best practices and chances of improved legal tools and strategies but also gaps of knowledge are identified and assessed. In the final phase, the network will integrate findings and develop recommendations that provide a synthesis concerning specific steps to improve social capacity building of European societies' facing natural hazards and give guidance for future research.

**Partners:**

| | | |
|---|---|---|
| 1 | HELMHOLTZ-ZENTRUM FUER UMWELTFORSCHUNG GMBH - UFZ | DE |
| 2 | Istituto di Sociologia Internazionale di Gorizia I.S.I.G | IT |
| 3 | MIDDLESEX UNIVERSITY HIGHER EDUCATION CORPORATION | UK |
| 4 | UNIVERSITAT AUTONOMA DE BARCELONA | ES |
| 5 | ZNANSTVENORAZISKOVALNI CENTER SLOVENSKE AKADEMIJE ZNANOSTI IN UMETNOSTI | SI |
| 6 | EIDGENOESSISCHE FORSCHUNGSANSTALT WSL | CH |
| 7 | DIALOGIK GEMEINNUETZIGE GESELLSCHAFT FUER KOMMUNIKATIONS- UND KOOPERATIONSFORSCHUNG mbH | DE |
| 8 | LANCASTER UNIVERSITY | UK |

**Activity Code:** ENV.2009.1.3.1.1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Forest fires under climate, social and economic changes in Europe, the Mediterranean and other fire-affected areas of the world

**Proposed EC Grant:** 6.178.153 €

**Abstract:**

Fire regimes result from interactions between climate, land-use and land-cover (LULC), and socioeconomic factors, among other. These changed during the last decades, particularly around the Mediterranean. Our understanding of how they affected fire regime in the past is limited. During this century temperatures, drought and heat waves will very likely increase, and rainfall decrease. These and further socioeconomic change will affect LULC. Additional areas will be abandoned due to being unsuitable for agriculture or other uses. Fire danger and fire hazard are very likely to increase, affecting fire regimes. FUME will learn from the past to understand future impacts. Mod. 1 we will study how LULC and socioeconomics changed and how climate and weather affected fire in dynamically changing landscapes. Fires will be mapped throughout Europe to determine hazard burning functions for LULC types. Since climate has changed, an attempt to attribute (sensu IPCC) fire regime change to climate, differentiating it from socioeconomic change, will be made. Mod. 2 will produce scenarios of change (climate, including extremes, land-use land-cover, socioeconomics, vegetation) for various emissions pathways and three time-slices during this century. With these and results from Mod.1, models and field experiments projected impacts on fire-regime and vegetation vulnerabilities will be calculated, including climate extremes (drought, heat-waves). Mod. 3 will investigate adaptation options in fire- and land-management, including restoration. Fire prevention and fire fighting protocols will be tested/developed under the new conditions to mitigating fire risks. A company managing fire will be a key player. Costs and policy impacts of changes in fire will be studied. Research will focus on old and new fire areas, the rural interface, whole Europe and the Mediterranean, including all Mediterranean countries of the world. Users will be involved in training and other activities.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSIDAD DE CASTILLA - LA MANCHA | ES |
| 2 | FUNDACION CENTRO DE ESTUDIOS AMBIENTALES DEL MEDITERRANEO | ES |
| 3 | UNIVERSITA DEGLI STUDI DELLA TUSCIA | IT |
| 4 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 5 | POTSDAM INSTITUT FUER KLIMAFOLGENFORSCHUNG | DE |
| 6 | FUNDACAO DA FACULDADE DE CIENCIAS DA UNIVERSIDADE DE LISBOA | PT |
| 7 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 8 | CENTRO EURO-MEDITERRANEO PER I CAMBIAMENTI CLIMATICI SCARL | IT |
| 9 | UNIVERSITA DEGLI STUDI DI SASSARI | IT |
| 10 | INSTITUT NATIONAL DE RECHERCHE EN SCIENCES ET TECHNOLOGIES POUR L'ENVIRONNEMENT ET L'AGRICULTURE | FR |
| 11 | NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS | EL |
| 12 | PANEPISTIMIO IOANNINON | EL |
| 13 | LUNDS UNIVERSITET | SE |
| 14 | UNIVERSIDAD DE CANTABRIA | ES |
| 15 | INSTITUT DE RECHERCHE POUR LE DEVELOPPEMENT | FR |
| 16 | ILMATIETEEN LAITOS | FI |
| 17 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 18 | Mediterranean Agronomic Institute of Zaragoza / International Centre for Advanced Mediterranean Agronomic Studies | ES |
| 19 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 20 | TECNOLOGIAS Y SERVICIOS AGRARIOS, S.A. | ES |
| 21 | Instituto Superior de Agronomia | PT |
| 22 | CENTRE FOR EUROPEAN POLICY STUDIES | BE |
| 23 | Universté Ferhat Abbas- Sétif- Laboratoire d'Optique Appliquée | DZ |
| 24 | INSTITUT NATIONAL DE RECHERCHES EN GENIE RURAL, EAUX ET FORETS | TN |
| 25 | Secrétariat d'Etat auprès du Ministère de l'Energie, des Mines, de l'Eau et de l'Environnement, chargé de l'Eau et de l'Environnement | MA |
| 26 | MINISTRY OF ENVIRONMENT AND FORESTRY, SOUTHWEST ANATOLIA FOREST RESEARCH INSTITUTE | TR |
| 27 | South African National Biodiversity Institute | ZA |
| 28 | US FOREST SERVICE - PACIFIC SOUTHWEST RESEARCH STATION | US |
| 29 | Arizona Board of Regents | US |
| 31 | UNITED STATES GEOLOGICAL SURVEY | US |
| 32 | University of Wollongong | AU |
| 33 | Universidad Austral de Chile | CL |

**Activity Code:** ENV.2009.1.3.3.1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Collaborative research on flood resilience in urban areas

**Proposed EC Grant:** 3.490.000 €

**Abstract:**

Collaborative research on flood resilience in urban areas (CORFU) is an interdisciplinary international project that will look at advanced and novel strategies and provide adequate measures for improved flood management in cities. The differences in urban flooding problems in Asia and in Europe range from levels of economic development, infrastructure age, social systems and decision making processes, to prevailing drainage methods, seasonality of rainfall patterns and climate change trends. Our vision is that this project will use these differences to create synergies that will bring new quality to flood management strategies globally. Through a 4-year collaborative research programme, the latest technological advances will be cross-fertilised with traditional and emerging approaches to living with floods. The overall aim of CORFU is to enable European and Asian institutions to learn from each other through joint investigation, development, implementation and dissemination of strategies that will enable more scientifically sound management of the consequences of urban flooding in the future. Flood impacts in urban areas – potential deaths, damage to infrastructure and health problems and consequent effects on individuals and on communities – and possible responses will be assessed by envisaging different scenarios of relevant drivers: urban development, socio-economic trends and climate changes. The cost-effectiveness of resilience measures and integrative and adaptable flood management plans for these scenarios will be quantified. CORFU is structured in six Work Packages. WP1 will look at drivers that impact on urban flooding. WP2 will enhance methodologies and tools for flood hazard assessment based on urban flood modelling. WP3 will improve, extend and integrate modern methods for flood impact assessment. WP4 will aim to assess and enhance existing flood risk management strategies. WP5 will disseminate the outputs. WP6 will co-ordinate the project.

**Partners:**

| | | |
|---|---|---|
| 1 | THE UNIVERSITY OF EXETER | UK |
| 2 | DHI | DK |
| 3 | TECHNISCHE UNIVERSITAET HAMBURG-HARBURG | DE |
| 5 | UNIVERSITE DE NICE - SOPHIA ANTIPOLIS | FR |
| 6 | INDIAN INSTITUTE OF TECHNOLOGY BOMBAY | IN |
| 8 | AREP Ville | FR |
| 9 | INSTITUTE OF WATER MODELLING | BD |
| 10 | BEIJING UNIVERSITY OF TECHNOLOGY | CN |
| 13 | China Academy of Urban Planning and Design | CN |
| 14 | BEIJING MUNICIPAL INSTITUTE OF CITY PLANNING AND DESIGN | CN |
| 15 | CETAQUA, CENTRO TECNOLOGICO DEL AGUA, FUNDACIÓN PRIVADA | ES |
| 17 | Hydrometeorological Innovative Solutions | ES |
| 18 | CRANFIELD UNIVERSITY | UK |
| 19 | Dura Vermeer Groep NV | NL |
| 20 | Hamburgisches WeltWirtschaftsInstitut gemeinnützige GmbH | DE |
| 21 | NATIONAL TAIWAN UNIVERSITY | TW |
| 22 | INTERNATIONAL CENTER FOR URBAN WATER HYDROINFORMATICS RESEARCH & INNOVATION FOUNDATION | KR |

**Activity Code:** ENV.2009.1.3.2.2 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Systemic Seismic Vulnerability and Risk Analysis for Buildings, Lifeline Networks and Infrastructures Safety Gain

**Proposed EC Grant:** 3.500.000 €

**Abstract:**

SYNER-G is research project which has the following main goals: (1) To elaborate appropriate, in the European context, fragility relationships for the vulnerability analysis and loss estimation of all elements at risk, for buildings, building aggregates, utility networks (water, waste water, energy, gas), transportation systems (road, railways, harbors) as well as complex medical care facilities (hospitals) and fire-fighting systems. (2) To develop social and economic vulnerability relationships for quantifying the impact of earthquakes. (3) To develop a unified methodology, and tools, for systemic vulnerability assessment accounting for all components (structural and socio-economic) exposed to seismic hazard, considering interdependencies within a system unit and between systems, in order to capture the increased loss impact due to the interdependencies and the interactions among systems and systems of systems. The methodology and the proposed fragility functions will be validated in selected sites (urban scale) and systems and it will implemented in an appropriate open source and unrestricted access software tool. Guidelines will be prepared and the results and outputs will be disseminated in Europe and world wide with appropriate dissemination schemes. SYNER-G is integrated across different disciplines with an internationally recognized partnership from Europe, USA and Japan. The objectives and the deliverables are focused to the needs of the administration and local authorities, which are responsible for the management of seismic risk, as well as the needs of the construction and insurance industry. URL: http://www.vce.at/SYNER-G

**Partners:**

| | | |
|---|---|---|
| 1 | ARISTOTELIO PANEPISTIMIO THESSALONIKIS | EL |
| 2 | VCE Holding GmbH | AT |
| 3 | BUREAU DE RECHERCHES GEOLOGIQUES ET MINIERES | FR |
| 4 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 5 | STIFTELSEN NORGES GEOTEKNISKE INSTITUTT | NO |
| 6 | UNIVERSITA DEGLI STUDI DI PAVIA | IT |
| 7 | UNIVERSITA DEGLI STUDI DI ROMA LA SAPIENZA | IT |
| 8 | MIDDLE EAST TECHNICAL UNIVERSITY | TR |
| 9 | AMRA - ANALISI E MONITORAGGIO DEL R ISCHIO AMBIENTALE SCARL | IT |
| 10 | Karlsruher Institut fuer Technologie | DE |
| 11 | UNIVERSITY OF PATRAS | EL |
| 12 | Willis Limited | UK |
| 13 | THE BOARD OF TRUSTEES OF THE UNIVERSITY OF ILLINOIS | US |
| 14 | National University Corporation Kobe University | JP |

**Activity Code:** ENV.2009.1.3.2.1 **Funding Scheme:** CSA **Duration (Months):** 24

**Title:** Costs of Natural Hazards

**Proposed EC Grant:** 899.487 €

**Abstract:**

Cost assessments of damages of natural hazards supply crucial information to policy development in the fields of natural hazard management and adaptation planning to climate change. There exists significant diversity in methodological approaches and terminology in cost assessments of different natural hazards and in different impacted sectors. ConHaz provides insight into cost assessment methods, which is needed for an integrated planning and overall budgeting, and to prioritise policies. To strengthen the role of cost assessments in natural hazard management and adaptation planning, existing approaches and best practices as well as knowledge gaps are identified. ConHaz has three key objectives. The first objective is to compile state-of-the-art methods and terminology as used in European case studies, taking a comprehensive perspective on the costs of natural that includes droughts, floods, storms, and alpine hazards. ConHaz also considers various impacted economic sectors such as housing, industry and transport, and non-economic sectors such as health and nature. It will consider single and multi-hazards, leading to direct, indirect and intangible costs. ConHaz moreover looks at costs and benefits of risk-prevention and emergency response policies. The second objective of ConHaz is to evaluate the compiled methods. The analysis addresses theoretical issues, such as the principal assumptions that underlie economic valuation of damage types, as well as practical issues, such as the qualifications needed for data collection and quality assurance. ConHaz also looks at the reliability of the end result by considering the accuracy of cost predictions and best-practice-methods of validation. A central issue of the evaluation is to compare available methods with end-user needs. The third objective of ConHaz is to synthesize the results and give recommendations according to current best practice as well as to resulting research needs.

**Partners:**

| | | |
|---|---|---|
| 1 | HELMHOLTZ-ZENTRUM FUER UMWELTFORSCHUNG GMBH - UFZ | DE |
| 2 | UNIVERSITAET INNSBRUCK | AT |
| 3 | SOCIETE DE MATHEMATIQUES APPLIQUEES ET DE SCIENCES HUMAINES | FR |
| 4 | MIDDLESEX UNIVERSITY HIGHER EDUCATION CORPORATION | UK |
| 5 | Helmholtz-Zentrum Potsdam Deutsches GeoForschungsZentrum | DE |
| 6 | UNIVERSITA DEGLI STUDI DI FERRARA | IT |
| 7 | UNIVERSITAT AUTONOMA DE BARCELONA | ES |
| 8 | VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG | NL |

**Activity Code:** ENV.2010.1.3.4-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** New Multi-HAzard and MulTi-RIsK Assessment MethodS for Europe

**Proposed EC Grant:** 3.395.871 €

**Abstract:**

Across Europe, people suffer losses not just from single hazards, but also from multiple events in combination. In both their occurrence and their consequences, different hazards are often causally related. Classes of interactions include triggered events, cascade effects, and rapid increases of vulnerability during successive hazards. Effective and efficient risk reduction, therefore, often needs to rest on a place-based synoptic view.MATRIX will tackle multiple natural hazards and risks in a common theoretical framework. It will integrate new methods for multi-type assessment, accounting for risk comparability, cascading hazards, and time-dependent vulnerability. MATRIX will identify the conditions under which the synoptic view provides significantly different and better results— or potentially worse results—than established methods for single-type hazard and risk analysis. Three test cases (Naples, Cologne and the French West Indies), and a “virtual city” will provide MATRIX with all characteristic multi-hazard and multi-risk scenarios. The MATRIX IT-architecture for performing, analysing and visualising relevant scenarios will generate tools to support cost-effective mitigation and adaptation in multi-risk environments.MATRIX will build extensively on the most recent research on single hazard and risk methodologies carried out (or ongoing) in many national and international research projects, particularly those supported by DG Research of the European Commission. The MATRIX consortium draws together a wide range of expertise related to many of the most important hazards for Europe (earthquakes, landslides, volcanic eruptions, tsunamis, wildfires, winter storms, and both fluvial and coastal floods), as well as expertise on risk governance and decision-making. With ten leading research institutions (nine European and one Canadian), we also include end-user partners: from industry, and from the European National Platforms for Disaster Reduction.

**Partners:**

| | | |
|---|---|---|
| 1 | Helmholtz-Zentrum Potsdam Deutsches GeoForschungsZentrum | DE |
| 2 | AMRA - ANALISI E MONITORAGGIO DEL R ISCHIO AMBIENTALE SCARL | IT |
| 3 | BUREAU DE RECHERCHES GEOLOGIQUES ET MINIERES | FR |
| 4 | STIFTELSEN NORGES GEOTEKNISKE INSTITUTT | NO |
| 5 | INTERNATIONALES INSTITUT FUER ANGEWANDTE SYSTEMANALYSE | AT |
| 6 | ASPINALL WILLIAM PHILLIP - ASPINALL & ASSOCIATES | UK |
| 7 | Karlsruher Institut fuer Technologie | DE |
| 8 | TECHNISCHE UNIVERSITEIT DELFT | NL |
| 9 | EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZURICH | CH |
| 10 | Instituto Superior de Agronomia | PT |
| 11 | Deutsches Komitee Katastrophenvorsorge e.V. | DE |
| 12 | UNIVERSITY OF BRITISH COLUMBIA | CA |

**Activity Code:** ENV.2010.1.3.2-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Knowledge-based approach to develop a cULTUre of Risk prevention

**Proposed EC Grant:** 3.225.616 €

**Abstract:**

The extreme consequences of recent catastrophic events have highlighted that risk prevention still needs to be improved to reduce human losses and economic damages. The KULTURisk project aims at developing a culture of risk prevention by means of a comprehensive demonstration of the benefits of prevention measures. The development of a culture of risk prevention requires the improvement of our: a) memory and knowledge of past disasters; b) communication and understanding capacity of current and future hazards; c) awareness of risk and d) preparedness for future events. In order to demonstrate the advantages of prevention options, an original methodology will be developed, applied and validated using specific European case studies, including transboundary areas. The benefits of state-of-the-art prevention measures, such as early warning systems, non-structural options (e.g. mapping and planning), risk transfer strategies (e.g. insurance policy), and structural initiatives, will be demonstrated. In particular, the importance of homogenising criteria to create hazard inventories and build memory, efficient risk communication and warning methods as well as active dialogue with and between public and private stakeholders, will be highlighted. Furthermore, the outcomes of the project will be used to efficiently educate the public and train professionals in risk prevention. KULTURisk will first focus on water-related hazards as the likelihood and adverse impacts of water-related catastrophes might increase in the near future because of land-use and/or climate changes. In particular, a variety of case studies characterised by diverse socio-economic contexts, different types of water-related hazards (floods, debris flows and landslides, storm surges) and space-time scales will be utilised. Finally, the applicability of the KULTURisk approach to different types of natural hazards (e.g. earthquakes, forest fires) will also be analysed.

**Partners:**

| | | |
|---|---|---|
| 1 | UNESCO-IHE INSTITUTE FOR WATER EDUCATION | NL |
| 2 | UNIVERSITA DEGLI STUDI DI BRESCIA | IT |
| 3 | EUROPEAN CENTRE FOR MEDIUM-RANGE WEATHER FORECASTS | UK |
| 4 | UNIVERZA V LJUBLJANI | SI |
| 5 | EIDGENOESSISCHE FORSCHUNGSANSTALT WSL | CH |
| 6 | CONSORZIO PER LA GESTIONE DEL CENTRO DI COORDINAMENTO DELLE ATTIVITA DI RICERCA INERENTI IL SISTEMA LAGUNARE DI VENEZIA | IT |
| 7 | KING'S COLLEGE LONDON | UK |
| 8 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 9 | AUTORITA DI BACINO DEI FIUMI ISONZO TAGLIAMENTO LIVENZA PIAVE BRENTA BACCHIGLIONE | IT |
| 10 | UNIVERSITY OF BRISTOL | UK |
| 11 | Willis Limited | UK |

**Activity Code:** ENV.2010.1.3.3-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Improved Drought Early Warning and FORecasting to strengthen preparedness and adaptation to droughts in Africa

**Proposed EC Grant:** 3.490.000 €

**Abstract:**

The principal aim of the DEWFORA proposal is to develop a framework for the provision of early warning and response to mitigate the impact of droughts in Africa. The proposal has been built to achive three key targets:1. Improved monitoring: by improving knowledge on drought forecasting, warning and mitigation, and advancing the understanding of climate related vulnerability to drought – both in the current and in the projected future climate.2. Prototype operational forecasting: by bringing advances made in the project to the pre-operational stage through development of prototype systems and piloting methods in operational drought monitoring and forecasting agencies.3. Knowledge dissemination: through a stakeholders platform that includes national and regional drought monitoring and forecasting agencies, as well as NGO's and IGO's, and through capacity building programmes to help embed the knowledge gained in the community of African practitioners and researchers.To achieve these targets, the DEWFORA consortium brings together leading research institutes and universities; institutes that excel in application of state-of-the-art science in the operational domain; operational agencies responsible for meteorological forecasting, drought monitoring and famine warning; and established knowledge networks in Africa. The consortium provides an excellent regional balance, and the skilled coordinator and several partners have worked together in (European) research projects, implementation projects and capacity building programmes, thus building efficiently on previous and ongoing projects in Europe and Africa.The main impact of DEWFORA will be to increase the effectiveness of drought forecasting, warning and response. DEWFORA will provide guidance on how and where drought preparedness and adaptation should be targeted to contribute to increased resilience and improved effectiveness of drought mitigation measures.

**Partners:**

| | | |
|---|---|---|
| 1 | STICHTING DELTARES | NL |
| 2 | UNESCO-IHE INSTITUTE FOR WATER EDUCATION | NL |
| 3 | EUROPEAN CENTRE FOR MEDIUM-RANGE WEATHER FORECASTS | UK |
| 4 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 5 | POTSDAM INSTITUT FUER KLIMAFOLGENFORSCHUNG | DE |
| 6 | Helmholtz-Zentrum Potsdam Deutsches GeoForschungsZentrum | DE |
| 7 | UNIVERSIDAD POLITECNICA DE MADRID | ES |
| 8 | Mediterranean Agronomic Institute of Zaragoza / International Centre for Advanced Mediterranean Agronomic Studies | ES |
| 9 | UNIVERSIDADE DO PORTO | PT |
| 10 | STICHTING WETLANDS INTERNATIONAL | NL |
| 11 | MINISTRY OF WATER RESOURCES AND IRRIGATION | EG |
| 12 | DINDER CENTER FOR ENVIRONMENTAL RESEARCH LIMITED | SD |
| 13 | IGAD CENTRE FOR CLIMATE PREDICTION AND APPLICATION | KE |
| 14 | UNIVERSIDADE EDUARDO MONDLANE | MZ |
| 15 | COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH | ZA |
| 16 | WR Nyabeze and Associates | ZA |
| 17 | INSTITUT AGRONOMIQUE ET VETERINAIRE HASSAN II | MA |
| 18 | WATERNET TRUST | BW |

**Activity Code:** ENV.2011.1.3.3-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Volcanic unrest in Europe and Latin America: Phenomenology, eruption precursors, hazard forecast, and risk mitigation

**Proposed EC Grant:** 3.499.993 €

**Abstract:**

Our knowledge of the causative links between subsurface processes, resulting unrest signals and imminent eruption is, today, wholly inadequate to deal effectively with crises of volcanic unrest. The VUELCO project consortium has come together for a multi-disciplinary attack on the origin, nature and significance of volcanic unrest from the scientific contributions generated by collaboration of ten partners in Europe and Latin America. Dissecting the science of monitoring data from unrest periods at six type volcanoes in Italy, Spain, the West Indies, Mexico and Ecuador the consortium will create global strategies for 1) enhanced monitoring capacity and value, 2) mechanistic data interpretation and 3) identification of reliable eruption precursors; all from the geophysical, geochemical and geodetic fingerprints of unrest episodes. Experiments will establish a mechanistic understanding of subsurface processes capable of inducing unrest and aid in identifying key volcano monitoring parameters indicative of the nature of unrest processes. Numerical models will help establish a link between the processes and volcano monitoring data to inform on the causes of unrest and its short-term evolution. Using uncertainty assessment and new short-term probabilistic hazard forecasting tools the scientific knowledge base will provide the crucial parameters for a comprehensive and best-practice approach to 1) risk mitigation, 2) communication, 3) decision-making and 4) crisis management during unrest periods. The VUELCO project consortium efforts will generate guidance in the definition and implementation of strategic options for effective risk mitigation, management and governance during unrest episodes. Such a mechanistic platform of understanding, impacting on the synergy of scientists, policy-makers, civil protection authorities, decision-makers, and the public, will place volcanic unrest management on a wholly new basis, with European expertise at its peak.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITY OF BRISTOL | UK |
| 2 | UNIVERSITY OF LEEDS | UK |
| 3 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 4 | ISTITUTO NAZIONALE DI GEOFISICA E VULCANOLOGIA | IT |
| 5 | PRESIDENZA DEL CONSIGLIO DEI MINISTRI - DIPARTIMENTO DELLA PROTEZIONE CIVILE | IT |
| 6 | LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN | DE |
| 7 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 8 | UNIVERSIDAD NACIONAL AUTONOMA DE MEXICO | MX |
| 9 | THE UNIVERSITY OF THE WEST INDIES U WI* | JM |
| 10 | ESCUELA POLITECNICA NACIONAL | EC |

**Activity Code:** ENV.2011.1.3.2-2 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Fostering European Drought Research and Science-Policy Interfacing

**Proposed EC Grant:** 3.439.950 €

**Abstract:**

The project will reduce future Europe's vulnerability and risk to drought by innovative in-depth studies that combine drought investigations in six case study areas in water-stressed regions (river basin and national scale) with drought analyses at the pan-European scale. Knowledge transfer across these scales is paramount because vulnerability is context-specific (e.g. physical, environmental, socio-economic, cultural, legal, institutional), which requires analyses on detailed scales, whereas international policies and drought-generating climate drivers and land surface processes are operating on large scales. The project will adopt Science-Policy Interfacing at the various scales, by establishing Case Study Dialogue Fora and a pan-Europe Dialogue Forum, which will ensure that the research will be well integrated into the policy-making from the start of the project onwards. The study will foster a better understanding of past droughts (e.g. underlying processes, occurrences, environmental and socio-economic impacts, past responses), which then will contribute to the assessment of drought hazards and potential vulnerabilities in the 21th C. An innovative methodology for early drought warning at the pan-European scale will be developed, which will improve on the forecasting and a suite of interlinked physical and impact indicators. This will help to increase drought preparedness, and to indentify and implement appropriate Disaster Risk Reduction measures (along the lines of the UN/ISDR HFA). The project will lead through the combined drought studies at different scales to the identification of drought-sensitive regions and sectors across Europe and a more thorough implementation of the EU Water Framework Directive, particularly by further developing of methodologies for Drought Management Plans at different scales (incl. EU level). The work will be linked with the European Drought Centre ensuring that the outcome will be consolidated beyond the project' lifetime.

**Partners:**

| | | |
|---|---|---|
| 1 | WAGENINGEN UNIVERSITEIT | NL |
| 2 | NATIONAL TECHNICAL UNIVERSITY OF ATHENS | EL |
| 3 | UNIVERSITETET I OSLO | NO |
| 4 | ALBERT-LUDWIGS-UNIVERSITAET FREIBURG | DE |
| 5 | UNIVERSIDAD POLITECNICA DE VALENCIA | ES |
| 6 | Instituto Superior de Agronomia | PT |
| 7 | EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZURICH | CH |
| 8 | UNIVERSIDAD COMPLUTENSE DE MADRID | ES |
| 9 | UNIVERSITA COMMERCIALE 'LUIGI BOCCONI'. | IT |
| 10 | UNIVERSITE DE CAEN BASSE NORMANDIE | FR |
| 11 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 12 | EIDGENOESSISCHE FORSCHUNGSANSTALT WSL | CH |

**Activity Code:** ENV.2011.1.3.1-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Strategies and tools for Real Time EArthquake RisK ReducTion

**Proposed EC Grant:** 6.972.190 €

**Abstract:**

Earthquakes are a serious threat for many European countries, particularly those around the Mediterranean Sea. In many cities exposed to high earthquake hazard, a substantial proportion of the population still lives in buildings that do not meet modern earthquake-resistant standards. Preventive actions, such as retrofitting of structures, are essential, but they are not sufficient and cannot be applied easily on a large scale. Real-time actions focussing on decreasing the physical vulnerability and exposure of populations are a viable way to reduce earthquake risk.The primary objective of REAKT is to improve the efficiency of real-time earthquake risk mitigation methods and their capability of protecting structures, infrastructures and populations. REAKT aims to develop methodologies that will enhance the quality of information provided by earthquake forecasting, early warning and real-time vulnerability systems, as well as establishing best practices for how to use all of this information in a unified manner. In order to be used effectively, such information needs to be combined into a fully probabilistic framework, including realistic estimates of the uncertainties involved, that is suitable for decision making in real time. The REAKT consortium draws together most of the main European institutes and research groups, in addition to major non-European institutes, that are working on different aspects of earthquake early warning and probabilistic models of operational forecasting. The project is divided into 7 scientific work packages that constitute a logical sequence from, at one end, the processes involved in earthquake generation and the physics of short-term seismic changes, to the other, the threatened people. through operational earthquake forecasting, early warning and rapid assessment of damage and vulnerability, decision making and capacity building, and the application of the developed methodologies to 12 strategic test cases.

**Partners:**

| | | |
|---|---|---|
| 1 | AMRA - ANALISI E MONITORAGGIO DEL R ISCHIO AMBIENTALE SCARL | IT |
| 2 | Helmholtz-Zentrum Potsdam Deutsches GeoForschungsZentrum | DE |
| 3 | EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZURICH | CH |
| 4 | BUREAU DE RECHERCHES GEOLOGIQUES ET MINIERES | FR |
| 5 | ISTITUTO NAZIONALE DI GEOFISICA E VULCANOLOGIA | IT |
| 6 | ARISTOTELIO PANEPISTIMIO THESSALONIKIS | EL |
| 7 | Karlsruher Institut fuer Technologie | DE |
| 8 | Euro-Mediterranean Seismological Centre | FR |
| 9 | CENTRO EUROPEO DI FORMAZIONE E RICERCA IN INGEGNERIA SISMICA | IT |
| 10 | VEDURSTOFA ISLANDS | IS |
| 11 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 12 | THE UNIVERSITY OF EDINBURGH | UK |
| 13 | INSTITUTO SUPERIOR TECNICO | PT |
| 14 | BOGAZICI UNIVERSITESI | TR |
| 15 | INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE PENTRU FIZICA PAMANTULUI | RO |
| 16 | UNIVERSITY OF ULSTER | UK |
| 17 | UNIVERSITY OF PATRAS | EL |
| 18 | COUNCIL OF CARIBBEAN ENGINEERING ORGANISATIONS (CCEO) LIMITED BY GUARANTEE | TT |
| 19 | UNIVERSITY OF SOUTHERN CALIFORNIA CORP | US |
| 20 | THE UNIVERSITY OF THE WEST INDIES U WI* | JM |
| 21 | NATIONAL TAIWAN UNIVERSITY | TW |
| 22 | Ministry of Land, Infrastructure, Transport and Tourism | JP |
| 23 | NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS | EL |

**Activity Code:** ENV.2011.1.3.4-1 **Funding Scheme:** CSA **Duration (Months):** 24

**Title:** Capacity Development for Hazard Risk Reduction andAdaptation

**Proposed EC Grant:** 843.932 €

**Abstract:**

The coordinating action, Capacity Development for Hazard Risk reduction and Adaptation,or CATALYST, brings together scientists, stakeholders and networks to identify and share the best of knowledge, know-how and practices related to natural hazard and disaster risk reduction (NH/DRR), including adaptation. Its ultimate objective will be the strengthening of capacity development in this area. Strengthening of capacity development will be achieved by facilitating knowledge exchange and improving the science-application interface; deepening and adding value to the body of integrated knowledge on NH/DRR; identifying key gaps in current NH/DRR knowledge and research; reinforcement of existing European and International network capacity; increasing the capacity of NGOs and SMEs to mainstream NH/DRR in their activities; the effective dissemination of the findings of the coordinating action; and the development of an enduring NH/DRR reference website and online discussion forum.A core activity of CATaLySTis the convening of stakeholders including researchers and practitioners in a think tank allowing virtual and face-to-face exchange on areas of concern such as methodological limitations and data gaps, as well as best practices. This coordinating action will also establish and maintain during the project's duration, an information archive (as part of the project website) that is easily accessible to the research community for finding out more about existing NH/DRR resources and research work. The archive will be transferred together with the website to an existing organisation or SME concerned with NH/DRR to ensure that it is maintained and enhanced.

**Partners:**

| | | |
|---|---|---|
| 1 | SEECONSULT GMBH | DE |
| 2 | FONDAZIONE ENI ENRICO MATTEI | IT |
| 3 | HELMHOLTZ-ZENTRUM FUER UMWELTFORSCHUNG GMBH - UFZ | DE |
| 4 | THE ACADEMY OF SCIENCES FOR THE DEVELOPING WORLD | IT |
| 5 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 6 | The Geological Survey of Denmark and Greenland | DK |
| 7 | UNITED NATIONS UNIVERSITY INSTITUTE FOR ENVIRONMENT AND HUMAN SECURITY | DE |

**Activity Code:** ENV.2011.1.3.2-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Building Resilience Amongst Communities in Europe

**Proposed EC Grant:** 3.243.423 €

**Abstract:**

In an interdisciplinary, socially inclusive and collaborative context, emBRACE aims to improve the framing of resilience in the context of disasters in Europe. It will develop a conceptual and methodological approach to clarify how the resilience capacity of a society confronted with natural hazards and disasters can be characterized, defined and measured. On the basis of a systematic evaluation of the widest literature base, the project will first elaborate an initial conceptual framework. Disaster footprints and a review of current data gaps and challenges for human impacts and development databases in providing resilience data on regional and national levels will help inform indicator development. These will then be tested and ground truthed by means of 6 well-chosen case studies across Europe exposed to different natural hazards, situated in different governance settings and socio-demographic-economic contexts.Resilience will be contextualised through the application and evaluation of newly developed indicators and models, and will contribute to reformulation and adaption of the conceptual framework. emBRACE will considerably advance the methodologies for evaluating, modeling and assessing resilience of different actors. emBRACE will be methodologically rich, drawing on partner expertise across the research methods spectrum. It will apply these methods across scales from local to European. Stakeholders and experts will be incorporated into knowledge-sharing groups. There will be ongoing engagement with these stakeholders alongside programmed consultations during the development of the framework and model, case study work, and the reshaping of concepts, guidelines and database requirements for disasters and societal resilience. A key difference in emBRACE is the seeking out of people and groups not normally included in such fora; not as subjects of research but as partners in research and experts in their own right.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITE CATHOLIQUE DE LOUVAIN | BE |
| 2 | UNIVERSITY OF NORTHUMBRIA AT NEWCASTLE. | UK |
| 3 | KING'S COLLEGE LONDON | UK |
| 4 | UNITED NATIONS UNIVERSITY INSTITUTE FOR ENVIRONMENT AND HUMAN SECURITY | DE |
| 5 | ACCADEMIA EUROPEA PER LA RICERCA APPLICATA ED IL PERFEZIONAMENTO PROFESSIONALE BOLZANO (ACCADEMIA EUROPEA BOLZANO) | IT |
| 6 | HELMHOLTZ-ZENTRUM FUER UMWELTFORSCHUNG GMBH - UFZ | DE |
| 7 | UNIVERSITY OF YORK | UK |
| 8 | SEI OXFORD OFFICE LIMITED*STOCKHOLMENVIRONMENT INSTITUTE OXFORD OFFICE SEI LTD | UK |
| 9 | EIDGENOESSISCHE FORSCHUNGSANSTALT WSL | CH |
| 10 | MIDDLE EAST TECHNICAL UNIVERSITY | TR |

**Activity Code:** ENV.2012.6.4-1 **Funding Scheme:** CP **Duration (Months):** 42

**Title:** STrengthening And Redesigning European FLOOD risk practices Towards appropriate and resilient flood risk governance arrangements

**Proposed EC Grant:** 5.284.529 €

**Abstract:**

Urban regions in the EU face increasing but uncertain flood risks due to urbanization and the effects of climate change. In European (a.o. the Flood Risk Directive) and in national and regional policies, attempts are made to diversify and align different Flood Risk Strategies (FRSs). In our proposal, five such strategies are distinguished: risk prevention; flood defense; mitigation; preparation; and recovery. We assume that vulnerable urban agglomerations will be more resilient if multiple FRSs are applied simultaneously, linked together and aligned. At the same time, the application of a diverse cluster of FRSs has to be appropriate, i.e. attuned to the physical and social context. The latter asks for innovative Flood Risk Governance Arrangements (FRGAs). In the proposed program, insights from governance and legal scholars will be integrated and combined, leading to policy design principles for FRGAs as well as concrete recommendations for policy and law at the level of the EU, its member states, regional authorities, and public-private partnerships.Across different EU countries and regions, we expect to identify different mixes of FRSs. We will analyze, explain and evaluate the emergence and dominance of the FRGAs through which these FRSs are institutionally embedded. For this, a comparative analysis of FRGAs in six EU member states will be carried out. This analysis will reveal good practices, provide understanding of the resilience of FRSs as well as their appropriateness in different physical, social and legal contexts. The design principles thus derived, will be brought together in a design-oriented framework for ex-ante evaluation of FRGAs. As part of the program, various target group specific knowledge dissemination activities will be carried out, aimed at regional stakeholders, high level policymakers and EU officers. To this end, Grontmij, a consultancy company, has been included in the consortium, apart from universities in the six EU member states.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITEIT UTRECHT | NL |
| 2 | STICHTING KATHOLIEKE UNIVERSITEIT | NL |
| 3 | GRONTMIJ NEDERLAND | NL |
| 4 | MIDDLESEX UNIVERSITY HIGHER EDUCATION CORPORATION | UK |
| 5 | UNIVERSITEIT ANTWERPEN | BE |
| 6 | KATHOLIEKE UNIVERSITEIT LEUVEN | BE |
| 7 | LULEA TEKNISKA UNIVERSITET | SE |
| 8 | Institute for Agricultural and Forest Environment, Polish Academy of Sciences | PL |
| 9 | UNIVERSITE FRANCOIS RABELAIS DE TOURS | FR |

**Activity Code:** ENV.2012.6.4-2 **Funding Scheme:** CP **Duration (Months):** 42

**Title:** A European volcanological supersite in Iceland: a monitoring system and network for the future

**Proposed EC Grant:** 5.994.441 €

**Abstract:**

The main objectives of FUTUREVOLC are to establish an integrated volcanological monitoring procedure through European collaboration, develop new methods to evaluate volcanic crises, increase scientific understanding of magmatic processes and improve delivery of relevant information to civil protection and authorities. To reach these objectives the project combines broad European expertise in seismology, volcano deformation, volcanic gas and geochemistry, infrasound, eruption monitoring, physical volcanology, satellite studies of plumes, meteorology, ash dispersal forecasting, and civil defence. This European consortium leads the way for multi-national volcanological collaboration with the aim of mitigating the effects of major eruptions that pose cross-border hazards. Iceland is selected as a laboratory supersite area for demonstration because of (i) the relatively high rate of large eruptions with potential for long ranging effects, and (ii) Iceland's capability to produce the near full spectrum of volcano processes at its many different volcano types. Based on present monitoring networks and ongoing research, the project will bridge gaps and combine efforts for a coherent close-to-real-time evaluation of the state of Icelandic volcanoes and their unrest. The project will provide timely information on magma movements from combined interpretation of earthquake sources relocated in three-dimensional velocity models, magma sources inferred from ground and space geodetic data, and measurements of volcanic volatiles. For better response during eruptions, the project will develop operational models of magma discharge rate, contributing directly to improved forecasts of ash dispersion. They will help to minimise economic disruption on a European scale during eruptions. By integrating a Volcanic Ash Advisory Centre and a civil protection unit into the project, European citizens will benefit directly from the scientific work of FUTUREVOLC.

**Partners:**

| | | |
|---|---|---|
| 1 | HASKOLI ISLANDS | IS |
| 2 | VEDURSTOFA ISLANDS | IS |
| 3 | UNIVERSITY COLLEGE DUBLIN, NATIONAL UNIVERSITY OF IRELAND, DUBLIN | IE |
| 4 | UNIVERSITA DEGLI STUDI DI FIRENZE | IT |
| 5 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 6 | TECHNISCHE UNIVERSITEIT DELFT | NL |
| 7 | UNIVERSITA DEGLI STUDI DELL'AQUILA | IT |
| 8 | CHALMERS TEKNISKA HOEGSKOLA AB | SE |
| 9 | JULIUS-MAXIMILIANS UNIVERSITAET WUERZBURG | DE |
| 10 | NORSK INSTITUTT FOR LUFTFORSKNING | NO |
| 11 | Ríkislögreglustjóri | IS |
| 12 | THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE | UK |
| 13 | Helmholtz-Zentrum Potsdam Deutsches GeoForschungsZentrum | DE |
| 14 | UPPSALA UNIVERSITET | SE |
| 15 | MET OFFICE | UK |
| 16 | UNIVERSITE DE GENEVE | CH |
| 17 | UNIVERSITY OF BRISTOL | UK |
| 18 | UNIVERSITA DEGLI STUDI DI PALERMO | IT |
| 19 | Nicarnica Aviation AS | NO |
| 20 | HIMET S.r.l. | IT |
| 21 | GURALP SYSTEMS LTD | UK |
| 22 | Miracle ehf | IS |
| 23 | item s.r.l. | IT |
| 24 | UNIVERSITE BLAISE PASCAL CLERMONT-FERRAND II | FR |
| 25 | DEUTSCHES ZENTRUM FUER LUFT - UND RAUMFAHRT EV | DE |
| 26 | Samsýn ehf | IS |

**Activity Code:** ENV.2012.6.4-2 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** New Directions in Seismic Hazard assessment through Focused Earth Observation in the Marmara Supersite

**Proposed EC Grant:** 5.998.021 €

**Abstract:**

The recent devastating earthquakes and associated tsunamis in Japan, Indonesia, and Haiti, which killed more than half a million people, highlighted how mankind is still far away from a satisfactory level of seismic risk mitigation. Among the regions around the Mediterranean Sea for which earthquakes represent a major threat to their social and economic development, the area around the Marmara Sea, one of the most densely populated parts of Europe, is subjected to a high level of seismic hazard. For this region the MARSITE project is proposed with the aim of assessing the “state of the art” of seismic risk evaluation and management at European level. This will be the starting point to move a “step forward” towards new concepts of risk mitigation and management by long-term monitoring activities carried out both on land and at sea.The MARSITE project aims to coordinate research groups with different scientific skills (from seismology to engineering to gas geochemistry) in a comprehensive monitoring activity developed both in the Marmara Sea and in the surrounding urban and country areas. The project plans to coordinate initiatives to collect multidisciplinary data, to be shared, interpreted and merged in consistent theoretical and practical models suitable for the implementation of good practices to move the necessary information to the end users.

**Partners:**

| | | |
|---|---|---|
| 1 | BOGAZICI UNIVERSITESI | TR |
| 2 | Helmholtz-Zentrum Potsdam Deutsches GeoForschungsZentrum | DE |
| 3 | TURKIYE BILIMSEL VE TEKNOLOJIK ARASTIRMA KURUMU | TR |
| 4 | INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER | FR |
| 5 | ISTITUTO NAZIONALE DI GEOFISICA E VULCANOLOGIA | IT |
| 6 | ISTANBUL UNIVERSITY | TR |
| 7 | Kocaeli Üniversitesi | TR |
| 8 | ISTANBUL TEKNIK UNIVERSITESI | TR |
| 9 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 10 | BUREAU DE RECHERCHES GEOLOGIQUES ET MINIERES | FR |
| 11 | CENTRO EUROPEO DI FORMAZIONE E RICERCA IN INGEGNERIA SISMICA | IT |
| 12 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 13 | INSTITUT NATIONAL DE L ENVIRONNEMENT ET DES RISQUES INERIS | FR |
| 14 | AMRA - ANALISI E MONITORAGGIO DEL R ISCHIO AMBIENTALE SCARL | IT |
| 15 | Euro-Mediterranean Seismological Centre | FR |
| 16 | EUROPEAN SPACE AGENCY | FR |
| 17 | UNIVERSITA DEGLI STUDI DI PAVIA | IT |
| 18 | INSTITUT FRANCAIS DES SCIENCES ET TECHNOLOGIES DES TRANSPORTS, DE L'AMENAGEMENT ET DES RESEAUX | FR |
| 19 | GURALP SYSTEMS LTD | UK |
| 20 | DAIMAR srl | IT |
| 21 | sarmap | CH |

**Activity Code:** ENV.2012.6.4-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Enhancing risk management partnerships for catastrophic natural disasters in Europe

**Proposed EC Grant:** 5.992.183 €

**Abstract:**

The main goal of the ENHANCE project is to improve society's resilience to catastrophic natural hazards by developing new scenarios and information on catastrophic risks in selected hazard cases, in close collaboration with stakeholders and by guiding the development of new multi-sector risk management partnerships (MSPs). Innovation in MSPs is essential, as (ineffective) cooperation between public, private and civil society institutions often leads to failures in risk management. The ENHANCE proposal is unique as it studies the potential for new MSPs for managing different catastrophic hazards, related to heat waves, forest fires, flood, drought, storm surge, and volcanic eruptions. Key to successful partnerships is a common understanding of risks and the implications of proposed risk reduction instruments. Therefore, ENHANCE facilitates a participatory process to develop MSPs in cases studies at different geographical- and spatial scales in Europe. ENHANCE develops a) harmonised dynamic scenarios of vulnerability, exposure, and hazard, using existing information and new probabilistic approaches; b) guidelines and governance features for enhancing MSP interaction; c) methods for linking MSPs to novel risk scenarios and assessments; d) a toolbox of economic instruments and non-structural mitigation measures aimed at assessing risk and increasing societal resilience; e) policy recommendations delivered through a dissemination platform. ENHANCE offers a team that consists of scientific research institutes, public policy organisations including UN-ISDR, private sector specialists and an NGO that ensure societal relevance and the feasibility of implementation of our deliverables. Within 10 case studies public and private partners will be approached to develop MSPs and to test our methods. Finally, the project will ensure our products will impact target groups through a dissemination strategy, developed in close collaboration with members of an external advisory board.

**Partners:**

| | | |
|---|---|---|
| 1 | VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG | NL |
| 2 | FONDAZIONE ENI ENRICO MATTEI | IT |
| 3 | HELMHOLTZ-ZENTRUM GEESTHACHT ZENTRUM FUR MATERIAL- UND KUSTENFORSCHUNG GMBH | DE |
| 4 | INTERNATIONALES INSTITUT FUER ANGEWANDTE SYSTEMANALYSE | AT |
| 5 | LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE | UK |
| 7 | UNIVERSITE CATHOLIQUE DE LOUVAIN | BE |
| 8 | European Business and Innovation Centre Network | BE |
| 9 | UNIVERSIDAD POLITECNICA DE VALENCIA | ES |
| 10 | THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF OXFORD | UK |
| 11 | HKV Lijn in water | NL |
| 12 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 13 | Instituto Superior de Agronomia | PT |
| 14 | ACADEMIA DE STUDII ECONOMICE DIN BUCURESTI | RO |
| 15 | HASKOLI ISLANDS | IS |
| 16 | UNIVERSITAET POTSDAM | DE |
| 17 | THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE | UK |
| 18 | Willis Limited | UK |
| 19 | EMPRESA MIXTA VALENCIANA DE AGUAS, S.A. | ES |
| 20 | OpenTrack Railway Technology GmbH | AT |
| 22 | AGENZIA REGIONALE PREVENZIONE E AMBIENTE DELL'EMILIA-ROMAGNA | IT |
| 23 | Wadden Sea Forum e.V. | DE |
| 24 | METACORTEX - CONSULTORIA E MODELACAO DE RECURSOS NATURAIS SA | PT |

**Activity Code:** ENV.2007.2.1.5.1. **Funding Scheme:** CP **Duration (Months):** 36

**Title:** sustainaBle uRban plannIng Decision support accountinG for urban mEtabolism

**Proposed EC Grant:** 3.100.000 €

**Abstract:**

Like any living system, urban communities consume material and energy inputs, process them into usable forms, and eliminate the wastes from the process. This can be seen as "metabolism" of industry, commerce, municipal operations, and households. Understanding the pattern of these energy and material flows through a community's economy provides a systemic reading of the present situation for goal and objective setting and development of indicators for sustainability. At present, planning policies often reflect the logic of the market. They would better reflect a vision of urban development, in which environmental and social considerations are fully embedded in spatial planning policies at all steps of the policy cycle from problem identification and policy design through to the implementation and ex-post evaluation stages. Therefore, the widespread inclusion of sustainability objectives in urban planning at all scales (from regional to site level) is necessary, providing the opportunity for the incorporation of bio-physical sciences knowledge into the planning process on a routine basis. To this end, the proposed project BRIDGE (sustainaBle uRban plannIng Decision support accountinG for urban mEtabolism) aims at bridging the gap between bio-physical sciences and urban planners and to illustrate the advantages of accounting for environmental issues on a routine basis in design decisions. BRIDGE will provide the means to quantitative estimate the various components of the urban metabolism (observation of physical flows and modelling), the means for quantitative estimate their impacts (socio-economic and environmental impact assessments and indicators), as well as the means for resource optimisation in urban fabric (support the decision making in urban planning). BRIDGE will focus on the interrelation between energy and material flows and urban structure.

**Partners:**

| | | |
|---|---|---|
| 1 | FOUNDATION FOR RESEARCH AND TECHNOLOGY HELLAS | EL |
| 2 | KING'S COLLEGE LONDON | UK |
| 3 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 4 | INSTYTUT EKOLOGII TERENOW UPRZEMYSLOWIONYCH | PL |
| 5 | UNIVERSIDAD POLITECNICA DE MADRID | ES |
| 6 | UNIVERSIDADE DE AVEIRO | PT |
| 7 | UNIVERSITAET BASEL | CH |
| 8 | THE PROVOST, FELLOWS, FOUNDATION SCHOLARS & THE OTHER MEMBERS OF BOARD OF THE COLLEGE OF THE HOLY & UNDIVIDED TRINITY OF QUEEN ELIZABETH NEAR DUBLIN | IE |
| 9 | HELSINGIN YLIOPISTO | FI |
| 10 | NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS | EL |
| 11 | CENTRO EURO-MEDITERRANEO PER I CAMBIAMENTI CLIMATICI SCARL | IT |
| 12 | METEO-FRANCE | FR |
| 13 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 14 | UNIVERSITY OF SOUTHAMPTON | UK |

**Activity Code:** ENV.2007.2.1.4.3. **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Sustainable Livelihoods and Biodiversity in Riparian Areas in Developing Countries

**Proposed EC Grant:** 2.418.160 €

**Abstract:**

LiveDiverse (LD) will develop new knowledge on the interactions between human livelihood and biodiversity in riparian and aquatic contexts in four developing countries (Vietnam, India, South Africa, Costa Rica). It has a strong emphasis on dissemination and the constructive engagement of a broad selection of social groups and their governmental and non-governmental representatives. The analysis of biodiversity values, sustainable use and livelihoods (biodiversity governance) within the project adopts vulnerability as a unifying concept, taking the point of departure in the concepts of biodiversity and livelihood vulnerability. Vulnerability will be considered from a combination of bio-physical, socio-economic and cultural/spiritual perspectives, where human ability to conserve and husband biodiversity while at the same time achieving sustainable livelihoods is of vital importance. The analyses of areas will analyse vulnerability in terms of biophysical, socio-economic- legal, and cultural/spiritual issues. Maps of these three perspectives will then be constructed in each case study and incorporated into a GIS system. These maps will identify biodiversity and livelihood 'hot-spots', that is, places where there is a high risk (according to natural science criteria), and a low capability (according to the socio-economic, law and policy criteria). Finally, biodiversity and livelihood scenarios will be developed. These scenarios will take into account the main perspectives; biological diversity risk, socio economic ability and cultural perceptions to cope with effects of this risk. Working in a 15-year perspective, the scenarios will examine future possible trends, threats and developments in order to formulate strategies and policy to meet the needs of both biodiversity and livelihoods.

**Partners:**

| | | |
|---|---|---|
| 1 | LINKOPINGS UNIVERSITET | SE |
| 2 | National Institute for Agricultural Planning and Projection | VN |
| 3 | SOCIETY FOR PROMOTING PARTICIPATIVE ECOSYSTEM MANAGEMENT | IN |
| 4 | COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH | ZA |
| 5 | FUNDACION PARA EL DESARROLLO ACADEMICO DE LA UNIVERSIDAD NACIONAL | CR |
| 6 | VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG | NL |
| 7 | UNIVERSITY OF DUNDEE | UK |
| 8 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |

**Activity Code:** ENV.2007.2.1.2.3. **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Mediterranean Intermittent River Management

**Proposed EC Grant:** 3.498.479 €

**Abstract:**

The implementation of the WFD in catchments with temporary rivers presents a significant challenge for watershed managers. The MIRAGE project will, for the first time, comprehensively investigate the applicability of specific management options under the characteristic flush and drought conditions of temporary streams. Through investigations in seven basins, MIRAGE will provide a framework for managing the many Mediterranean water bodies dominated by temporary waters. MIRAGE will deploy a multi-scale approach to improve understanding of temporary river responses to hydrologic, biogeochemical and sediment transport events. The principal research and project objectives of MIRAGE are to (1) provide an applicable and transferable set of reference conditions for temporary streams, specifically linking terrestrial and aquatic ecology; (2) determine effects of dry periods on accumulation and transformation of nutrients, sediments and hazardous substances on land and in river channels, at selected sites with test catchments. (3) specify and test measures to support achieving good ecological and water quality status including the integration of up- and downstream management. This will be done initially for the two mirror basins Candelaro (Italy) and Evrotas (Greece) in close cooperation with local water management organisations; (4) support the implementation of the WFD and the development of strategies for integrated water resources management for Mediterranean river basins, generalising from the Mirror Basins on the basis of modern ecohydrology concepts, in the context of characterising runoff regimes and flood responses on a regional basis. Five other Mediterranean catchments, including one in Morocco, will be used as the primary focus for this work; The transfer of experience and the establishment of common guidelines is then seen as a significant support for WFD implementation across the region.

**Partners:**

| | | |
|---|---|---|
| 1 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 2 | TECHNICAL UNIVERSITY OF CRETE | EL |
| 3 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 4 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 5 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 6 | UNIVERSITAT DE BARCELONA | ES |
| 7 | UNIVERSIDAD DE MURCIA | ES |
| 8 | UNIVERSITE MONTPELLIER 2 | FR |
| 9 | UNIVERSITY OF LEEDS | UK |
| 10 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 11 | FORSCHUNGSVERBUND BERLIN E.V. | DE |
| 12 | IMAR- INSTITUTO DO MAR | PT |
| 13 | HELLENIC CENTRE FOR MARINE RESEARCH | EL |
| 14 | UNIVERSITE SIDI MOHAMMED BEN ABDELLAH | MA |
| 15 | AUTORITA DI BACINO DELLA PUGLIA | IT |
| 16 | NOMARCHIAKI AFTODIOIKISI LAKONIAS | EL |
| 17 | GOTTFRIED WILHELM LEIBNIZ UNIVERSITAET HANNOVER | DE |

**Activity Code:** ENV.2007.2.1.4.1. **Funding Scheme:** CP **Duration (Months):** 42

**Title:** Conflicting demands of land use, soil biodiversity and the sustainable delivery of ecosystem goods and services in Europe

**Proposed EC Grant:** 3.475.774 €

**Abstract:**

European soil biodiversity is pivotal for delivering food, fiber and biofuels and carbon storage. However, the demand is greater than the amount of soil available, as production of biofuels competes with areas for food production and nature. Moreover, intensified land use reduces soil biodiversity and the resulting ecosystem services. SOILSERVICE will value soil biodiversity through the impact on ecosystem services and propose how these values can be granted through payments. SOILSERVICE will combine interdisciplinary empirical studies and soil biodiversity surveys to construct soil food web models and determine effects of changing soil biodiversity on stability and resilience of carbon, nitrogen and phosphorus cycling, as well as assess consequences for outbreaks of pests or invasive species. SOILSERVICE will link ecological and economic models to develop a system for valuing soil biodiversity in relation to ecosystem services. Objectives: • Develop methods to value soil ecosystem services during different pressure of land use and changes in soil biodiversity. • Field and modelling studies will determine to what spatial and temporal scales soil biodiversity and soil ecosystem services are vulnerable to disturbance. • Detecting processes that indicate when ecosystems are approaching the limits of their natural functioning or productive capacity. • Establishing methods to determine and predict sustainability of ecosystem services at different types of land use • Building scenarios to identify economical and social drivers of how land use such as biofuel production and land abandonment can influence soil biodiversity and ecosystem services over European scale. • Interacting with EU policies and strategies with results on which services are at threat and mitigating changes in soil biodiversity to achieve a sustainable use of soils. Our results contribute to a European knowledge-based competitive economy and to a future EU directive on soils.

**Partners:**

| | | |
|---|---|---|
| 1 | LUNDS UNIVERSITET | SE |
| 3 | KONINKLIJKE NEDERLANDSE AKADEMIE VAN WETENSCHAPPEN - KNAW | NL |
| 4 | JUSTUS-LIEBIG-UNIVERSITAET GIESSEN | DE |
| 5 | WAGENINGEN UNIVERSITEIT | NL |
| 6 | HELSINGIN YLIOPISTO | FI |
| 7 | KOBENHAVNS UNIVERSITET | DK |
| 8 | LANCASTER UNIVERSITY | UK |
| 9 | THE UNIVERSITY OF READING | UK |
| 10 | ARISTOTELIO PANEPISTIMIO THESSALONIKIS | EL |
| 11 | Biologicke centrum AV CR, v. v. i. | CZ |
| 12 | SVERIGES LANTBRUKSUNIVERSITET | SE |

**Activity Code:** ENV.2007.2.1.5.1. **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Sustainable Urban Metabolism for Europe

**Proposed EC Grant:** 2.867.860 €

**Abstract:**

Societies in their urban (and also non-urban) segments, are extracting materials and energy from their natural environment, processing these flows, eventually accumulating portions of them as stocks and, in the end, deleting them into the environment as wastes, emissions or deliberate discharges. Urban settlements – cities – are a specific type of stocks in the metabolism of societies, and the way these cities are being built and operated has a substantial influence on the quantities and qualities of material and energy flows needed to sustain their existence. In SUME, the urban metabolism shall be understood as a metaphor for our societies' way of dealing with its natural environment. With global climate change, limited resources and sources of energy, the question of how a healthy level of metabolic exchange with the environment can be achieved is gaining a dramatic new actuality. It is the question of how existing urban areas shall be transformed and new cities or expansions should be planned – to be researched in SUME with a truly comprehensive approach. The concept of urban metabolism, as understood and applied in SUME, will be including all relevant flows (material, energy, waste etc.), and – as link to future planning – consider the influence of the various urban spatial forms and ways of urban restructuring on the levels and qualities of the flows. In order to search for a reduced extraction of resources and energies, new criteria for planning and governing of urban development will be needed. The urban metabolism approach will be tested as a guideline for such knowledge and methodological improvement. As a comprehensive approach, the concept of metabolism also is scrutinizing the effects of investment, asking if an intensified use of flows for the renewal of urban structures will pay off in the future by lowering the levels of material/energy flows over time, thus attempting to make urban metabolisms more sustainable.

**Partners:**

| | | |
|---|---|---|
| 1 | ÖSTERREICHISCHES INSTITUT FUR RAUMPLANUNG | AT |
| 2 | UNIVERSIDADE DO PORTO | PT |
| 3 | NORDREGIO | SE |
| 4 | FOUNDATION FOR RESEARCH AND TECHNOLOGY HELLAS | EL |
| 5 | UNIVERSITY OF NEWCASTLE UPON TYNE | UK |
| 6 | TECHNISCHE UNIVERSITEIT DELFT | NL |
| 7 | UNIVERSITAET KLAGENFURT | AT |
| 8 | INSTITUTE OF AUTOMATION CHINESE ACADEMY OF SCIENCES | CN |
| 9 | SZKOLA GLOWNA HANDLOWA W WARSZAWIE | PL |
| 10 | POTSDAM INSTITUT FUER KLIMAFOLGENFORSCHUNG | DE |

**Activity Code:** ENV.2007.2.1.4.3. **Funding Scheme:** CP **Duration (Months):** 42

**Title:** Hunting for Sustainability

**Proposed EC Grant:** 2.929.300 €

**Abstract:**

Biodiversity conservation increasingly takes place outside protected areas in multiple-use landscapes. Success in achieving biodiversity objectives is closely linked to the extent to which conservation can be integrated with the cultural, social and economic objectives and aspirations of people. Beliefs, perceptions, attitudes and preferences about biodiversity are central to the decisions made by individuals and groups about natural resource management. In this project we will use hunting as a “lens” through which to examine the wider issue of how people interact with biodiversity. Hunting provides a valuable case study in the use of biodiversity because it involves tens of millions of people globally, it is conducted across a wide range of land tenure and use systems, and it is an important source of revenue and protein, particularly in developing countries. Hunting is embedded in social structures and cultural patterns and has a key role in conflicts over natural resource management around the world. Our multidisciplinary team will assess the social, cultural, economic and ecological functions and impacts of hunting across a range of contexts in Europe and Africa. Our study systems fall across economic gradients from the richest to the poorest countries and encompass environments from the Arctic to the Equator. We seek to understand what influences attitudes to hunting, how these attitudes influence and determine individual and societal behaviour in relation to hunting, and finally, how hunting behaviour influences biodiversity. Consequently, we will integrate social, economic and ecological scientific disciplines and engage with a diverse selection of stakeholders to develop novel approaches to the mitigation of natural resource conflicts involving hunting. Finally, our results will be interpreted in respect to current and future EU policy on hunting and biodiversity conservation and contribute to the global debate about the sustainable use of biodiversity.

**Partners:**

| | | |
|---|---|---|
| 1 | THE MACAULAY LAND USE RESEARCH INSTITUTE | UK |
| 2 | ZOOLOGISCHE GESELLSCHAFT FRANKFURT | DE |
| 3 | Tanzania Wildlife Research Institute | TZ |
| 5 | UNIVERSITAT AUTONOMA DE BARCELONA | ES |
| 6 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 7 | UNIVERZA V LJUBLJANI | SI |
| 8 | UNIVERSITY OF ZAGREB-Faculty of Veterinary Medicine | HR |
| 9 | STIFTELSEN NORSK INSTITUTT FOR NATURFORSKNING | NO |
| 10 | UMEA UNIVERSITET | SE |
| 11 | IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE | UK |
| 12 | THE UNIVERSITY OF STIRLING | UK |
| 13 | THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN | UK |

**Activity Code:** ENV.2007.2.1.2.2. **Funding Scheme:** CP **Duration (Months):** 38

**Title:** Enhancing the role of wetlands in integrated water resources management for twinned river basins in EU, Africa and South-America in support of EU Water Initiatives

**Proposed EC Grant:** 2.284.012 €

**Abstract:**

The overall objective of the WETwin project is to enhance the role of wetlands in basin-scale integrated water resources management, with the aim of improving the community service functions while conserving good ecological status. Strategies will be worked out for: • utilizing the drinking water supply and sanitation potentials of wetlands for the benefit of people living in the basin, while maintaining (and improving as much as possible) the ecosystem functions • adapting wetland management to changing environmental conditions • integrating wetlands into river basin management • improving stakeholder participation and capacity building with the aim of supporting sustainable wetland management. The project will work on 'twinned' case study wetlands from Africa, South America and Europe. Management solutions will be worked out for these wetlands with the aim of supporting the achievement of the above objectives. Involvement of local stakeholders into the planning process will play a crucial role. Knowledge and experiences gained from these case studies will be summarized in general guidelines in order to support achieving project objectives on global scale. The project also aims at supporting the global exchange of expertise on wetland management. Stakeholder participation, capacity building and expertise exchange will be supported by a series of stakeholder and 'twinning' workshops.

**Partners:**

| | | |
|---|---|---|
| 1 | VITUKI KORNYEZETVEDELMI ES VIZGAZDALKODASI KUTATO INTEZET NONPROFIT KOZHASZNU KORLATOLT FELELOSSEGU TARSASAG | HU |
| 2 | Soresma NV | BE |
| 3 | POTSDAM INSTITUT FUER KLIMAFOLGENFORSCHUNG | DE |
| 4 | WASSERKLUSTER LUNZ BIOLOGISCHE STATION GMBH | AT |
| 5 | UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION -UNESCO | FR |
| 6 | STICHTING WETLANDS INTERNATIONAL | NL |
| 7 | NATIONAL WATER AND SEWERAGE CORPORATION | UG |
| 8 | INTERNATIONAL WATER MANAGEMENT INSTITUTE IWMI | LK |
| 9 | CENTRO DE TRANSFERENCIA DE TECNOLOGIAS ESCUELA SUPERIOR POLITECNICA DEL LITORAL | EC |

**Activity Code:** ENV.2007.2.1.4.2. **Funding Scheme:** CP **Duration (Months):** 60

**Title:** Palm harvest impacts in tropical forests

**Proposed EC Grant:** 3.145.880 €

**Abstract:**

Tropical forests harbour thousands of useful plants which are harvested and used in subsistence economies or traded in local, regional or international markets. The effect on the ecosystem is little known, and the forests' resilience is badly understod. Palms are the most useful group of plants in tropical American forests and we will study the effect of extraction and trade of palms on forest in the western Amazon, the Andes and the Pacific lowlands. We will determine the size of the resource by making palm community studies in the different forest formations and determine the number of species and individuals of all palm species. The genetic structure of useful palm species will be studied to determine how much harvesting of the species contributes to genetic erosion of its populations, and whether extraction can be made without harm. We then determine how much palms are used for subsistence purposes by carrying out quantitative, ethnobotanical research in different forest types and then we study trade patterns for palm products from local markets to markets which involve export to other countries and continents. Palm populations are managed in various ways from sustainable ones to destructive harvesting; we will study different ways in which palms are managed and propose sustainable methods to local farmers, local governments, NGOs and other interested parties. Finally we will study national level mechanism that governs extraction, trade and commercialization of palm products, to identify positive and negative policies in relation to resilience of ecosystems and use this to propose sustainable policies to the governments. The results will be diseminated in a variety of ways, depending on need and stake holders, from popular leaflets and videos for farmers, reports for policy makers to scientific publication for the research community. The team behind the proposal represents 10 universities and research institutions in Europe and northwestern South America.

**Partners:**

| | | |
|---|---|---|
| 1 | AARHUS UNIVERSITET | DK |
| 1 | AARHUS UNIVERSITET | DK |
| 2 | INSTITUT DE RECHERCHE POUR LE DEVELOPPEMENT | FR |
| 4 | FREIE UNIVERSITAET BERLIN | DE |
| 5 | ROYAL BOTANIC GARDENS KEW | UK |
| 6 | UNIVERSIDAD MAYOR DE SAN ANDRES | BO |
| 7 | UNIVERSIDAD NACIONAL MAYOR DE SAN MARCOS | PE |
| 8 | PONTIFICIA UNIVERSIDAD CATOLICA DEL ECUADOR | EC |
| 9 | UNIVERSIDAD NACIONAL DE COLOMBIA | CO |
| 10 | DANISH CENTRE FOR INTERNATIONAL STUDIES AND HUMAN RIGHTS | DK |
| 11 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 12 | UNIVERSIDAD AUTONOMA DE MADRID | ES |

**Activity Code:** ENV.2007.2.1.4.3. **Funding Scheme:** CP **Duration (Months):** 60

**Title:** Highland aquatic resources conservation and sustainable development

**Proposed EC Grant:** 1.455.676 €

**Abstract:**

Project partner will complete a detailed multidisciplinary situation analysis of highland aquatic resources, focused on values, livelihoods, conservation issues and wise-use options at five sites in Asia (Guangdong, China; Uttrakhand and West Bengal, India and northern and central Vietnam). Factors assessed will include biodiversity and ecosystem services, including provisioning, regulating, supporting and cultural services. Livelihood strategies of households dependent on ecosystem services derived from highland aquatic resources, in particular poor, food-insecure and vulnerable people, will be assessed within a sustainable livelihoods framework and opportunities to enhance such livelihoods assessed. Institutional features, including local, national and international policy and legislation, trajectories of change, stakeholder values associated with highland aquatic resources and areas of conflict will be assessed. Stakeholder participation will be critical to ensure new knowledge is accessible for collective decision-making and development of policies for the equitable use and conservation; methods and indicators for participatory monitoring and evaluation of ecosystem services and biodiversity will be developed. Action plans will then be formulated with stakeholders to: monitor the health of highland aquatic resources; develop and promote wise-use, and where necessary livelihoods diversification, to enhance poor livelihoods and conservation; integrate sustainable and wise-use, livelihoods diversification and conservation with watershed management priorities throughout the region. Action plans will be implemented by stakeholders at four sites displaying high biodiversity in Asia and the ecosystem, livelihoods and institutional impacts assessed through participatory monitoring and evaluation. Best practices aimed at conserving biodiversity and sustaining ecosystem services will be communicated to potential users to promote uptake and enhanced policy formulation.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITY OF ESSEX | UK |
| 2 | JALPAIGURI CENTRE FOR THE DEVELOPMENT OF HUMAN INITIATIVES | IN |
| 3 | Institute of Environmental Studies and Wetland Management | IN |
| 4 | VIEN NGHIEN CUU NUOI TRONG THUY SAN1 | VN |
| 5 | CENTER FOR ENVIRONMENTAL MANAGEMENTAND PARTICIPATORY DEVELOPMENT SOCIETY | IN |
| 6 | UNION INTERNATIONALE POUR LA CONSERVATION DE LA NATURE ET DE SES RESSOURCES | CH |
| 7 | ROSKILDE UNIVERSITETSCENTER. | DK |
| 8 | FISHBASE INFORMATION & RESEARCH GROUP INC | PH |
| 9 | SOUTH CHINA AGRICULTURAL UNIVERSITY | CN |
| 10 | THE UNIVERSITY OF STIRLING | UK |

**Activity Code:** ENV.2007.2.1.2.4. **Funding Scheme:** CSA **Duration (Months):** 42

**Title:** Vital and viable services for natural resource management in Latin America

**Proposed EC Grant:** 850.000 €

**Abstract:**

VIVACE is based on two conceptual pillars: on the one side innovative technical concepts for vital and viable services, and on the other, integrated analytical approaches and decision support tools. These two pillars are based on the emerging concepts for natural resource management emphasising reuse and recycling. They will be centred on peri-urban water management, but will include organic solid waste management, and agricultural water management. The “restricted biosphere” where VIVACE will test their tools is represented by rapidly developing urban or small town areas in Latin America, together with their rural/natural surroundings. The systems boundaries will be set on a case specific basis in such a way that the mutual impacts of water extraction and wastewater/waste disposal can be assessed. In each case study, VIVACE will analyse the impact of existing resource management practices (within the considered sectors) on the economic development in the region. This will allow the evaluation of the potential of proposed innovative concepts for safeguarding and or fostering economic development in a restricted biosphere. Integrated analytical approaches for decision support and strategic planning will then be developed and tested, with particular focus on tools for integrated and participatory assessment of these aspects. In this perspective, the two primary objectives of VIVACE will be: 1. To explore the existing potential and constraints of integrated resource planning, thereby contributing to the implementation of the Framework Programmes and the preparation of future Community research and technological development policy. 2. To interact with a wide range of societal actors (SMEs, civil society organisations and their networks, small research teams and research centres) in the activities of the thematic areas of the Cooperation programme.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITAET FUER BODENKULTUR WIEN | AT |
| 2 | STICHTING LETTINGA ASSOCIATES | NL |
| 3 | POLITECNICO DI BARI | IT |
| 4 | Instituto Internacional de medio Ambiente y Desarrollo- America Latina | AR |
| 5 | Instituzo national del agua | AR |
| 6 | INSTITUTO MEXICANO DE TECNOLOGIA DEL AGUA | MX |
| 7 | Zentrum fur Umweltmanagement und Entscheidungstheorie | AT |

**Activity Code:** ENV.2008.2.1.2.3. **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Water bodies in Europe: Integrative Systems to assess Ecological status and Recovery

**Proposed EC Grant:** 6.984.093 €

**Abstract:**

WISER will support the implementation of the Water Framework Directive (WFD) by developing tools for the integrated assessment of the ecological status of European surface waters (with a focus on lakes and coastal/transitional waters), and by evaluating recovery processes in rivers, lakes and coastal/transitional waters under global change constraints. The project will (1) analyse existing data from more than 90 databases compiled in previous and ongoing projects, covering all water categories, Biological Quality Elements (BQEs) and stressor types and (2) perform targeted field-sampling exercises including all relevant BQEs in lakes and in coastal/transitional waters. New assessment systems will be developed and existing systems will be evaluated for lakes and coastal/transitional waters, with special focus on how uncertainty affects classification strength, to complete a set of assessment methodologies for these water categories. Biological recovery processes, in all water categories and in different climatic conditions, will be analysed, with focus on mitigation of hydromorphological and eutrophication pressures. Large-scale data will be used to identify linkages between pressure variables and BQE responses. Specific case studies, using a variety of modelling techniques, will address selected pressure-response relationships and the efficacy of mitigation measures. The responses of different BQEs and different water categories to human-induced degradation and mitigation will be compared, with special focus on response signatures of BQEs within and among water categories. Guidance for the next steps of the intercalibration exercise will be given by comparing different intercalibration approaches. Stakeholders will be included from the outset, by building small teams of stakeholders and project partners responsible for a group of deliverables, to ensure the applicability and swift implementation of results.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITAET DUISBURG-ESSEN | DE |
| 2 | NORSK INSTITUTT FOR VANNFORSKNING | NO |
| 3 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 4 | FUNDACION AZTI/AZTI FUNDAZIOA | ES |
| 5 | UNIVERSITY OF HULL | UK |
| 6 | AARHUS UNIVERSITET | DK |
| 6 | AARHUS UNIVERSITET | DK |
| 7 | INSTITUT NATIONAL DE RECHERCHE EN SCIENCES ET TECHNOLOGIES POUR L'ENVIRONNEMENT ET L'AGRICULTURE | FR |
| 8 | SVERIGES LANTBRUKSUNIVERSITET | SE |
| 9 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 10 | INSTYTUT OCHRONY SRODOWISKA | PL |
| 11 | FORSCHUNGSVERBUND BERLIN E.V. | DE |
| 12 | SUOMEN YMPARISTOKESKUS | FI |
| 13 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 14 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 15 | UNIVERSITAET FUER BODENKULTUR WIEN | AT |
| 16 | EESTI MAAULIKOOL | EE |
| 17 | UNIVERSITY COLLEGE LONDON | UK |
| 18 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 19 | STICHTING DELTARES | NL |
| 20 | IMAR- INSTITUTO DO MAR | PT |
| 21 | INSTITUTE OF OCEANOLOGY - BULGARIAN ACADEMY OF SCIENCES | BG |
| 22 | THE PROVOST, FELLOWS, FOUNDATION SCHOLARS & THE OTHER MEMBERS OF BOARD OF THE COLLEGE OF THE HOLY & UNDIVIDED TRINITY OF QUEEN ELIZABETH NEAR DUBLIN | IE |
| 23 | UNIVERSITA DEL SALENTO | IT |
| 24 | BOURNEMOUTH UNIVERSITY | UK |
| 25 | UNIVERSITA DEGLI STUDI DI ROMA LA SAPIENZA | IT |

**Activity Code:** ENV.2008.2.1.2.1. **Funding Scheme:** CP **Duration (Months):** 60

**Title:** Groundwater and dependent Ecosystems: NEw Scientific basIS on climate change and land-use impacts for the update of the EU Groundwater Directive

**Proposed EC Grant:** 6.997.200 €

**Abstract:**

Groundwater resources are facing increasing pressure from consumptive uses (irrigation, water supply, industry) and contamination by diffuse loading (e.g. agriculture) and point sources (e.g. industry). This cause major threat and risks to our most valuable water resource and on ecosystems dependent on groundwater. New information is need on how to better protect groundwaters and groundwater dependent ecosystems (GDE) from intensive land-use and climate change. The impacts of land-use changes and climate changes are difficult to separate as they partly result in similar changes in the ecosystems affected. The effects are highly interwoven and complex. The EU groundwater directive (GWD) and the water framework directive (WFD) provide means to protect groundwater (GW) aquifers from pollution and deterioration. At present, the maximum limits for groundwater pollutant concentrations have been set for nitrate and various pesticides. Also, water of sufficient quality and quantity should be provided to ecosystems dependent on groundwater. The European aquifers differ by their geology, climate, and threats to aquifers. This must be considered when general guidelines for management of these systems are developed. The concept of the present proposal is to base the research on different relevant aquifer sites in various European countries to test scientific issues and find new results to important problems. Seven WP are foreseen: WP1 Case studies on impacts and threats to GWs and GDEs WP2 Groundwater dynamics, re-charge and water balance WP3 Leaching to groundwater aquifers from different land-uses WP4 Groundwater dependent ecosystems: groundwater-surface water interaction WP5 Modelling processes in groundwater systems WP6 Concepts, scenarios and risk assessment WP7 Co-ordination

**Partners:**

| | | |
|---|---|---|
| 1 | NORWEGIAN INSTITUTE FOR AGRICULTURAL AND ENVIRONMENTAL RESEARCH - BIOFORSK | NO |
| 2 | OULUN YLIOPISTO | FI |
| 3 | JOANNEUM RESEARCH FORSCHUNGSGESELLSCHAFT MBH | AT |
| 4 | EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZURICH | CH |
| 5 | LULEA TEKNISKA UNIVERSITET | SE |
| 6 | UNIVERSITATEA DIN BUCURESTI | RO |
| 7 | GIS-GEOINDUSTRY, s.r.o. | CZ |
| 8 | INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE | FR |
| 9 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 10 | HELMHOLTZ ZENTRUM MUENCHEN DEUTSCHES FORSCHUNGSZENTRUM FUER GESUNDHEIT UND UMWELT GMBH | DE |
| 11 | EIDGENOESSISCHE ANSTALT FUR WASSERVERSORGUNG ABWASSERREINIGUNG UND GEWAESSERSCHUTZ | CH |
| 12 | AKADEMIA GORNICZO-HUTNICZA IM. STANISLAWA STASZICA W KRAKOWIE | PL |
| 13 | UNIVERSITA CATTOLICA DEL SACRO CUORE | IT |
| 15 | IGEM Danismanlik Organizasyon Arastirma Ltd. Sti. | TR |
| 16 | UNIVERSIDAD POLITECNICA DE VALENCIA | ES |
| 17 | DEMOCRITUS UNIVERSITY OF THRACE | EL |
| 18 | POLITECHNIKA KRAKOWSKA | PL |
| 19 | UNIVERSITE DE NEUCHATEL | CH |
| 20 | UNIVERSITA DEGLI STUDI DI FERRARA | IT |
| 21 | ATHENS UNIVERSITY OF ECONOMICS AND BUSINESS - RESEARCH CENTER | EL |
| 22 | UNIVERSITY OF DUNDEE | UK |
| 23 | University of Zagreb, Faculty of Mining, Geology and Petroleum Engineering | HR |
| 24 | HELMHOLTZ-ZENTRUM FUER UMWELTFORSCHUNG GMBH - UFZ | DE |
| 25 | SVERIGES METEOROLOGISKA OCH HYDROLOGISKA INSTITUT | SE |
| 26 | THE UNIVERSITY OF MANCHESTER | UK |

**Activity Code:** ENV.2008.2.1.6.1. **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Models for Adaptive Forest Management

**Proposed EC Grant:** 6.961.073 €

**Abstract:**

The project MOdels for AdapTIVE forest Management (MOTIVE) will evaluate the consequences of the intensified competition for forest resources given climate and land use change. The project focuses on a wide range of European forest types under different intensities of forest management. In particular, MOTIVE examines impacts with respect to the disturbance regimes determining forest dynamics. MOTIVE seeks to develop and evaluate strategies that can adapt forest management practices to balance multiple objectives under changing environmental conditions. The evaluation of different adaptive management systems will take place within a scenario analysis and a regional landscape framework. A wide range of possible scenarios will be taken into account on different time scales. The main forest types in Europe for the most important bioclimatic regions will be covered and the most important goods and services delivered by Eurpean forests will be assessed using the most up to date models. The ultimate objective of the MOTIVE project is to provide insights, data and tools to improve policymaking and adaptive forest resource management in the face of rapidly changing climatic and land-use conditions. In order to reach its objectives, MOTIVE is organized into six scientific work packages in addition to a management-oriented work package : Baseline trends and possible futures for the EU. Development of improved models for Adaptive Forest Management. Testing and evaluating management options and risks. Evaluating and selecting good adaptive forest management strategies. Improved decision support in adaptive forest management. Stakeholder/Decision maker interaction and Dissemination. One of the main deliverables of MOTIVE will be an Adaptive Forest Management toolbox. The toolbox will provide up-to-date methods for planning and decision making in AFM to the decision maker (forest resource manager, policy maker) for actual use in strategic and tactical forest management planning

**Partners:**

| | | |
|---|---|---|
| 1 | FORSTLICHE VERSUCHS- UND FORSCHUNGSANSTALT BADEN-WUERTTEMBERG | DE |
| 2 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 3 | EIDGENOESSISCHE FORSCHUNGSANSTALT WSL | CH |
| 4 | EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZURICH | CH |
| 5 | KOBENHAVNS UNIVERSITET | DK |
| 6 | UNIVERSITAET FUER BODENKULTUR WIEN | AT |
| 7 | EUROPEAN FOREST INSTITUTE | FI |
| 8 | ALBERT-LUDWIGS-UNIVERSITAET FREIBURG | DE |
| 9 | Instituto Superior de Agronomia | PT |
| 11 | INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE | FR |
| 13 | Itä-Suomen yliopisto | FI |
| 14 | UNIVERSITY STEFAN CEL MARE SUCEAVA | RO |
| 15 | SVERIGES LANTBRUKSUNIVERSITET | SE |
| 16 | FORESTRY COMMISSION RESEARCH AGENCY | UK |
| 17 | POTSDAM INSTITUT FUER KLIMAFOLGENFORSCHUNG | DE |
| 18 | CENTRO DE INVESTIGACION ECOLOGICA YAPLICACIONES FORESTALES | ES |
| 19 | IFER - Ustav pro vyzkum lesnich ekosystemu, s.r.o. | CZ |
| 20 | University of Forestry | BG |
| 21 | Foreco Technologies S.L | ES |
| 22 | Pensoft Publishers Ltd | BG |

**Activity Code:** ENV.2008.2.1.2.2. **Funding Scheme:** CSA **Duration (Months):** 28

**Title:** Coordinating Twinning partnerships towards more adaptive Governance in river basins

**Proposed EC Grant:** 999.022 €

**Abstract:**

Over the past years, the EU has funded several projects that undertook research on specific integrated water resources management (IWRM) issues in case studies carried out on twinned river basins from Europe and from developing countries. The aim of Twin2Go now is to review, assess, synthesize and consolidate the outcomes of these projects in order to make them transferable and applicable to other basins, and to disseminate the project results effectively to relevant authorities, stakeholders and end-users. This will contribute to the overall goal to underpin the implementation of IWRM in line with the targets of the EU Water Initiative. In order to achieve this aim, Twin2Go will elaborate a methodology that allows comparative analysis and synthesis of the outcomes of the diverse projects. The consolidated outcomes will feed into best practice guidelines for the adoption and implementation of sustainable water resources management plans. To ensure up-take of the research results in water resources management practice and political decision making, all synthesis activities will involve stakeholders from the projects and basins and synthesis results will be effectively disseminated to all relevant levels of target groups including high level decision makers in water policy. In its effort, Twin2Go will focus its activities on the thematic priority 'adaptive water governance in the context of climate change' and cluster past and ongoing twinning projects along their target regions (Latin America, Africa, NIS, South and South East Asia). Through its co-ordinating activities, Twin2Go will bring together participants and lead partners from past and ongoing projects as well as international water networks. This will allow increasing the output and benefit of ongoing research by consolidating results, exploiting synergies and thus build up the critical mass that will promote uptake of research results and reaching audiences at a higher level of decision making.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITAET OSNABRUECK | DE |
| 2 | ADELPHI RESEARCH GGMBH | DE |
| 3 | VITUKI KORNYEZETVEDELMI ES VIZGAZDALKODASI KUTATO INTEZET NONPROFIT KOZHASZNU KORLATOLT FELELOSSEGU TARSASAG | HU |
| 4 | Soresma NV | BE |
| 5 | DHI | DK |
| 6 | FRIEDRICH-SCHILLER-UNIVERSITAET JENA | DE |
| 7 | Autonomous non-commercial organisation EcoPolicy Research and Consulting | RU |
| 8 | CHIANG MAI UNIVERSITY | TH |

**Activity Code:** ENV.2008.2.1.3.1. **Funding Scheme:** CSA **Duration (Months):** 36

**Title:** Prevention and Restoration Actions to Combat Desertification. An Integrated Assessment.

**Proposed EC Grant:** 976.964 €

**Abstract:**

The general objective of PRACTICE is to link S & T advances and traditional knowledge on prevention and restoration practices to combat desertification with sound implementation, learning and adaptive management, knowledge sharing, and dissemination of best practices. Specific objectives are: 1. To create an international platform of long-term monitoring sites for assessing and investigating practices to combat desertification. 2. To develop integrated evaluation tools to assess the cost-effectiveness of practices to combat desertification, taking into account changes in both biophysical and socio-economic properties, by synergistically exploiting the recent advances on assessment and evaluation methodologies and approaches. 3. To assess prevention and restoration practices to combat desertification for croplands, rangelands and woodlands, considering the impacts on socio-economic status, soil functions, biodiversity, and ecosystem services. 4. To identify and document best practices to combat desertification considering multiple purposes at different spatial (local to global) scales, and to establish cost-effective thresholds for the various management alternatives. 5. To develop education material and translational science strategies, and implement innovative participatory approaches to link science to society, to share and transfer evaluation methods and best practices, addressing and involving stakeholders at all levels, from farmers to local organisations, to national and international bodies.

**Partners:**

| | | |
|---|---|---|
| 1 | FUNDACION CENTRO DE ESTUDIOS AMBIENTALES DEL MEDITERRANEO | ES |
| 2 | UNIVERSIDAD DE ALICANTE | ES |
| 3 | UNIVERSITA DEGLI STUDI DI SASSARI | IT |
| 4 | UNIVERSITAET TRIER | DE |
| 5 | CENTRO EURO-MEDITERRANEO PER I CAMBIAMENTI CLIMATICI SCARL | IT |
| 6 | ARISTOTELIO PANEPISTIMIO THESSALONIKIS | EL |
| 7 | THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN | UK |
| 8 | FUNDACION UNIVERSIDAD EMPRESA DE LA REGION DE MURCIA | ES |
| 9 | UNIVERSITAET HAMBURG | DE |
| 10 | Liga para a Protecção da Natureza | PT |
| 11 | BEN-GURION UNIVERSITY OF THE NEGEV | IL |
| 12 | NOORDWES-UNIVERSITEIT | ZA |
| 13 | Northeast Normal University | CN |
| 14 | Instituto de Ecología y Biodiversidad | CL |
| 15 | Universidad Autonoma de Nuevo Leon | MX |

**Activity Code:** ENV.2008.2.1.4.4. **Funding Scheme:** CP **Duration (Months):** 63

**Title:** Securing the Conservation of biodiversity across Administrative Levels and spatial, temporal, and Ecological Scales

**Proposed EC Grant:** 6.995.640 €

**Abstract:**

Our capacity to effectively sustain biodiversity across spatial and temporal scales is an essential component of European environmental sustainability. Anthropogenic and environmental pressures on biodiversity act differently at different scales. Consequently, effective conservation responses to these threats must explicitly consider the scale at which effects occur, and therefore it is crucial that administrative levels and planning scales match the relevant biological scales. The SCALES project will provide the scientific and policy research needed to guide scale-dependent management actions. It will assess and model the scaling properties of natural and anthropogenic processes and the resulting scale-dependencies of the impacts of these pressures on various levels of biodiversity from genes to ecosystem functions. To facilitate these assessment methods for upscaling and downscaling biodiversity data will be reviewed and improved. SCALES will further evaluate the effectiveness of management and policy responses to biodiversity loss in terms of their scale-relevance and will develop new tools for matching their scales to relevant biological scales. Finally, a resulting methodological and policy framework for enhancing the effectiveness of European biodiversity conservation across scales will be developed and tested. This framework focuses on networks of protected areas and regional connectivity. This framework will be disseminated to a wide range of relevant users via a web based support tool kit (SCALE-TOOL) and by means of further dissemination channels, such as conferences, publications, and the mass media.

**Partners:**

| | | |
|---|---|---|
| 1 | HELMHOLTZ-ZENTRUM FUER UMWELTFORSCHUNG GMBH - UFZ | DE |
| 2 | University of the Aegean-Research Unit | EL |
| 3 | THE UNIVERSITY OF READING | UK |
| 4 | UNIVERZITA KARLOVA V PRAZE | CZ |
| 5 | ARISTOTELIO PANEPISTIMIO THESSALONIKIS | EL |
| 6 | UNIVERSITY OF LEEDS | UK |
| 7 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 8 | UNIWERSYTET JAGIELLONSKI | PL |
| 9 | LUNDS UNIVERSITET | SE |
| 10 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 11 | SUOMEN YMPARISTOKESKUS | FI |
| 12 | Median SCP | ES |
| 13 | Pensoft Publishers Ltd | BG |
| 14 | UNIVERSITAET BAYREUTH | DE |
| 15 | HELSINGIN YLIOPISTO | FI |
| 16 | TARTU ULIKOOL | EE |
| 17 | MUSEUM NATIONAL D'HISTOIRE NATURELLE | FR |
| 18 | UNIVERSITAET BERN | CH |
| 19 | FUNDACAO DA FACULDADE DE CIENCIAS E TECNOLOGIA DA UNIVERSIDADE NOVA DE LISBOA. | PT |
| 20 | THE UNIVERSITY OF QUEENSLAND | AU |
| 22 | CENTER ZA KARTOGRAFIJO FAVNE IN FLORE ZAVOD | SI |
| 23 | CENTRE TECNOLOGIC FORESTAL DE CATALUNYA | ES |
| 24 | INSTITUTE FOR EUROPEAN ENVIRONMENTAL POLICY, LONDON | UK |
| 25 | SVERIGES LANTBRUKSUNIVERSITET | SE |
| 26 | Gamtos tyrimų centras | LT |
| 27 | DEBRECENI EGYETEM | HU |
| 28 | STIFTELSEN NORSK INSTITUTT FOR NATURFORSKNING | NO |
| 29 | JULIUS-MAXIMILIANS UNIVERSITAET WUERZBURG | DE |
| 30 | UNIVERSITY OF KENT | UK |
| 31 | ANOIKTO PANEPISTIMIO KYPROU (OPEN UNIVERSITY OF CYPRUS) | CY |
| 32 | NATIONAL TAIWAN UNIVERSITY | TW |

**Activity Code:** ENV.2008.2.1.4.1. **Funding Scheme:** CP **Duration (Months):** 54

**Title:** Biodiversity of Freshwater Ecosystems: Status, Trends, Pressures, and Conservation Priorities

**Proposed EC Grant:** 6.465.406 €

**Abstract:**

Scientists and water managers have collected a vast amount of data on freshwater organisms, and yet it is rarely possible to describe the geographic range of an organism. Why is this? It is because the data are dispersed in many locally-managed databases, many of which are not publically available. The bits of the puzzle are scattered, and it is difficult even to find them. What story might they tell if they were combined and easily accessible to scientists, policy makers and planners? Such an integrated and accessible dataset could be used not only to help to protect and take better advantage of the services provided by aquatic ecosystems, but also to make it possible to establish effective regional plans for conservation. BioFresh, a major new FP7 project, will design and provide a single point of access to the extensive information on freshwater organisms that is currently stored in the databases. The BioFresh information portal for freshwater biodiversity will allow scientists and planners to complement, integrate, and analyse quantitative data to discover, evaluate and examine patterns that will shed new light on how freshwater biodiversity responds to global, European, and local environmental pressures. The spatially-explicit data will help to reveal the status and trends of freshwater biodiversity, and the services that it provides. Scientists in the BioFresh consortium will take advantage of the information in the databases that the project links, by using the data to examine how various stressors interact to impact freshwater biodiversity. This work will help to shed light on how future climate and socioeconomic pressures will give rise to global, continental and local responses in freshwater biodiversity. Until now, it has not always been easy to incorporate understanding of freshwater biodiversity explicitly into environmental agreements (EU WFD, for example) or in related policy instruments (for example the Habitats Directive). BioFresh aims to change that, by providing both the access to valuable data and an appropriate and coherent scientific foundation. The products and findings of the project will be used on the one hand to make people more aware of the importance and beauty of freshwater biodiversity, and on the other to help policy makers take decisions based on the best available evidence.

**Partners:**

| | | |
|---|---|---|
| 1 | FORSCHUNGSVERBUND BERLIN E.V. | DE |
| 2 | INSTITUT ROYAL DES SCIENCES NATURELLES DE BELGIQUE | BE |
| 3 | UNIVERSITAET FUER BODENKULTUR WIEN | AT |
| 4 | INTERNATIONAL CENTER FOR LIVING AQUATIC RESOURCES | MY |
| 5 | INSTITUT DE RECHERCHE POUR LE DEVELOPPEMENT | FR |
| 6 | UNIVERSITAET DUISBURG-ESSEN | DE |
| 7 | UNION INTERNATIONALE POUR LA CONSERVATION DE LA NATURE ET DE SES RESSOURCES | CH |
| 8 | THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF OXFORD | UK |
| 9 | UNIVERSITAT DE BARCELONA | ES |
| 10 | HELMHOLTZ-ZENTRUM FUER UMWELTFORSCHUNG GMBH - UFZ | DE |
| 11 | UNIVERSITY COLLEGE LONDON | UK |
| 12 | EIDGENOESSISCHE ANSTALT FUR WASSERVERSORGUNG ABWASSERREINIGUNG UND GEWAESSERSCHUTZ | CH |
| 13 | UNIVERSITE CLAUDE BERNARD LYON 1 | FR |
| 14 | UNIVERSITE PAUL SABATIER TOULOUSE III | FR |
| 15 | ECOLOGIC INSTITUT gemeinnützige GmbH | DE |
| 16 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 17 | DEBRECENI EGYETEM | HU |
| 18 | NATURHISTORISKA RIKSMUSEET | SE |
| 19 | CENTER ZA KARTOGRAFIJO FAVNE IN FLORE ZAVOD | SI |
| 20 | FISHBASE INFORMATION & RESEARCH GROUP INC | PH |

**Activity Code:** ENV.2009.2.1.6.1 **Funding Scheme:** CSA **Duration (Months):** 27

**Title:** FIRE-SMART. FOREST AND LAND MANAGEMENT OPTIONS TO PREVENT UNWANTED FOREST FIRES

**Proposed EC Grant:** 920.000 €

**Abstract:**

Forest fire prevention involves a complex implementation. Because of the broad spectrum of activities included, prevention can be designed and performed at different scales, involving a great variety of institutions. Still, hardly ever legislation regulates the inclusion of fire prevention activities as part of forest management plans. Nevertheless, prevention is actually performed, although the lack of planning and coordination reduces the efficiency of prevention measures. Furthermore, it is suspected that often those practices lack solid foundations, and that are not site and species or stand type specific. FireSmart objective is to make a significant contribution to the prevention of unwanted forest fires. To this purpose the Consortium will retrieve, from institutions operating at several scales, the fire prevention theories and practices currently in use in the Mediterranean Europe. This information will be analysed meticulously in order to evaluate the strengths and weaknesses involved in fire prevention taking into account socio-economic, institutional and legislative aspects. The analysis will lead to the assessment of the existing different options to overcome the actual difficulties and to the subsequent elaboration recommendations and practical guidelines for stakeholders involved in the entire sustainable management chain of silviculture. Finally, using findings obtained in along the project, the Consortium will elaborate the strategic roadmap that will point the path to follow in the future. The present project makes particular emphasis in the dissemination which will be organised around a project Web Page, two workshops and a final Seminar. The Consortium forsees the need to maintain the Web page alive after the project and proposes a feasible solution for the future of this Web page, which will play a crucial role for the connection and exchange of information between stakeholders.

**Partners:**

| | | |
|---|---|---|
| 1 | GMV AEROSPACE AND DEFENCE SA | ES |
| 2 | INSTITUT NATIONAL DE RECHERCHE EN SCIENCES ET TECHNOLOGIES POUR L'ENVIRONNEMENT ET L'AGRICULTURE | FR |
| 3 | Ambiente Italia s.r.l. | IT |
| 4 | CONFEDERATION EUROPEENNE DES PROPRIETAIRES FORESTIERS ASBL | LU |
| 5 | ENTRENAMIENTO E INFORMACION FORESTAL S.L | ES |
| 6 | FORESTIS - ASSOCIACAO FLORESTAL DE PORTUGAL | PT |
| 7 | INSTITUTO NACIONAL DE INVESTIGACION Y TECNOLOGIA AGRARIA Y ALIMENTARIA | ES |
| 8 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |

**Activity Code:** ENV.2009.2.1.3.2 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Land and Ecosystem Degradation and Desertification: Assessing the Fit of Responses

**Proposed EC Grant:** 3.062.041 €

**Abstract:**

LEDDRA aims to advance the comprehensive study of the socio-environmental fit of responses to land and ecosystem degradation and desertification (LEDD) in various contexts. It adopts the ecosystem approach and an integrated methodology with continuous feedbacks between theory, methods and applications. It focuses on response assemblages (combinations of response types and prevailing environmental, socio-economic and institutional conditions that contribute to or detract from sustainable land management and societal welfare), the associated costs and benefits to diverse stakeholders, barriers to and opportunities for adoption, and knowledge transfer processes. Optimal response assemblages comprise coordinated, mutually supportive and complementary measures that preserve the ecological and the community resilience of affected areas. LEDDRA develops the theory of responses to LEDD, in general, and in cropland, grazing land and forests/shrubland, in particular, and the study of knowledge transfer for diverse stakeholder types. It negotiates the links between land degradation, ecosystem services decline and biodiversity change, the links between biophysical and human determinants, welfare impacts, and responses to drought (drought preparedness). It improves existing and develops new integrated methodologies for assessing the impacts and fit of various types of responses to LEDD and the socio-ecological vulnerability of affected regions, and for identifying response assemblages in different European and other cultural-institutional contexts drawing on applications in selected sites in EU and ICPC countries. It analyzes the policy context to offer recommendations for policy and land management actions at the international, EU and national levels. To better organize, show case, disseminate and add value to project results, a web-based information system will be developed to make findings accessible to a wide range of stakeholders with different levels of expertise.

**Partners:**

| | | |
|---|---|---|
| 1 | University of the Aegean-Research Unit | EL |
| 2 | AGRICULTURAL UNIVERSITY OF ATHENS | EL |
| 3 | STICHTING 3D ENVIRONMENTAL CHANGE | NL |
| 4 | UNIVERSITY OF PLYMOUTH | UK |
| 5 | FONDAZIONE PER LO SVILUPPO SOSTENIBILE DEL MEDITERRANEO | IT |
| 6 | UNIVERSITA DEGLI STUDI DELLA BASILICATA | IT |
| 7 | ECOLOGIC INSTITUT gemeinnützige GmbH | DE |
| 8 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 9 | Changjiang River Scientific Research Institute | CN |
| 10 | INSTITUT AGRONOMIQUE ET VETERINAIRE HASSAN II | MA |
| 11 | UNIVERSITAT DE VALENCIA | ES |

**Activity Code:** ENV.2009.2.1.3.2 **Funding Scheme:** CP **Duration (Months):** 60

**Title:** Understanding and combating desertification to mitigate its impact on ecosystem services

**Proposed EC Grant:** 3.499.379 €

**Abstract:**

UNDESERT aims at combatting desertification and land degradation in order to mitigate their impacts on ecosystem services, and following on human livelihoods. The West African region is central for understanding desertification and degradation processes, which are already severe and widespread as a consequence of climate change and human impact. An improved understanding of the effects of desertification and degradation processes is obtained on a local to regional scale by integrating remote sensing information with sound field data on biodiversity and soil as well as socioeconomic and climate data. On this basis decision support models and tools will be developed and introduced to natural resource managers. UNDESERT also includes two very practical aspects, 1) restoration through tree plantations, which will be certified for CO2 marketing as the first restoration site in West Africa, 2) ecosystem management based on scientific data and best practices developed in close collaboration between scientists and local communities. As a demand driven project, UNDESERT activities will be implemented by employing 17 young PhD students, who will receive training to enhance future capacities to manage risks and uncertainties in the frame of future demographic and climatic changes. The scientific results will be used to combat desertification and degradation directly and will be transferred to international programs in order to contribute to the implementation of relevant international strategies, initiatives and commitments of the EU and African countries.

**Partners:**

| | | |
|---|---|---|
| 1 | AARHUS UNIVERSITET | DK |
| 1 | AARHUS UNIVERSITET | DK |
| 2 | University Abdou Moumouni | NE |
| 3 | UNIVERSITE CHEIKH ANTA DIOP DE DAKAR | SN |
| 4 | JOHANN WOLFGANG GOETHE UNIVERSITAET FRANKFURT AM MAIN | DE |
| 5 | SENCKENBERG GESELLSCHAFT FUR NATURFORSCHUNG | DE |
| 6 | UNIVERSITE DE OUAGADOUGOU | BF |
| 7 | UNIVERSITE POLYTECHNIQUE DE BOBO-DIOULASSO | BF |
| 8 | UNIVERSITE D ABOMEY CALAVI UAC | BJ |
| 10 | BIOCLIMATE RESEARCH AND DEVELOPMENT LIMITED BY GUARANTEE | UK |

**Activity Code:** ENV.2009.2.1.4.1 **Funding Scheme:** CP **Duration (Months):** 60

**Title:** Status and Trends of European Pollinators

**Proposed EC Grant:** 3.499.995 €

**Abstract:**

Pollinators form a key component of European biodiversity, and provide vital ecosystem services to crops and wild plants. There is growing evidence of declines in both wild and domesticated pollinators, and parallel declines in plants relying upon them. STEP will document the nature and extent of these declines, examine functional traits associated with particular risk, develop a Red List of some European pollinator groups, in particular bees and lay the groundwork for future pollinator monitoring programmes. We will also assess the relative importance of potential drivers of such change, including climate change, habitat loss and fragmentation, agrichemicals, pathogens, alien species, light pollution, and their interactions. We will measure the ecological and economic impacts of declining pollinator services and floral resources, including effects on wild plant populations, crop production and human nutrition. STEP will review existing and potential mitigation options, providing novel tests of their effectiveness across Europe. Our work will build upon existing datasets and models, complemented by spatially-replicated campaigns of field research to fill gaps in current knowledge. We will integrate our findings in a policy-relevant framework, creating Evidence-based Decision Support tools. We will also establish communication links to a wide range of stakeholders across Europe and beyond, including policy makers, beekeepers, farmers, academics and the general public. Taken together, our research programme will make great steps towards improving our understanding of the nature, causes, consequences and potential mitigation of declines in pollinator services at local, national, continental and global scales.

**Partners:**

| | | |
|---|---|---|
| 1 | THE UNIVERSITY OF READING | UK |
| 2 | HELMHOLTZ-ZENTRUM FUER UMWELTFORSCHUNG GMBH - UFZ | DE |
| 3 | SVERIGES LANTBRUKSUNIVERSITET | SE |
| 4 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 5 | AARHUS UNIVERSITET | DK |
| 5 | AARHUS UNIVERSITET | DK |
| 6 | UNIVERSITY OF LEEDS | UK |
| 7 | UNIVERSITAET BAYREUTH | DE |
| 8 | INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE | FR |
| 9 | EIDGENOESSISCHES VOLKSWIRTSCHAFTSDEPARTEMENT | CH |
| 10 | SUOMEN YMPARISTOKESKUS | FI |
| 11 | LUNDS UNIVERSITET | SE |
| 12 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 13 | TARTU ULIKOOL | EE |
| 14 | Pensoft Publishers Ltd | BG |
| 15 | UNIVERSITAET BERN | CH |
| 16 | University of Novi Sad Faculty of Sciences | RS |
| 17 | UNIVERSITE DE MONS | BE |
| 18 | UNIWERSYTET JAGIELLONSKI | PL |
| 19 | UNIVERSITA DI PISA | IT |
| 20 | University of the Aegean-Research Unit | EL |
| 21 | JULIUS-MAXIMILIANS UNIVERSITAET WUERZBURG | DE |

**Activity Code:** ENV.2009.2.1.6.2 **Funding Scheme:** CSA **Duration (Months):** 28

**Title:** Forest ecosystem genomics research: supporting Transatlantic Cooperation

**Proposed EC Grant:** 991.206 €

**Abstract:**

The main aim of FoResTTraC is to prepare future coordinated research plans, via a strategic research roadmap, between Europe and North America regarding adaptation of forest trees to climate changes, linking different disciplines: ecology, genetics, genomics and evolution. FoResTTraC brings together a critical mass of research expertise in these disciplines on both sides of the Atlantic with 6 leading European partners, 3 American and 2 Canadian partners. For the time being, large scale genomics projects have been conducted in “parallel” between North America and Europe, lacking in cooperative exchanges and interactions. The leading institutions coordinating these projects are partners of FoResTTraC to ensure that the current state–of–art research is represented in the project. FoResTTraC will deliver a mapping of current research capacity and state of the art research in forest ecosystem genomics, a validated research roadmap regarding adaptation to climate change, a set of joint science plans, a collection of genomic resources preparing future whole genome sequencing of ecologically and economically important tree species. All project outcomes will be validated during the project by a wide group of stakeholders from Europe and North America and will be disseminated widely via the project website and key dissemination.

**Partners:**

| | | |
|---|---|---|
| 1 | INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE | FR |
| 2 | AIT Austrian Institute of Technology GmbH | AT |
| 4 | INTERNATIONAL PLANT GENETIC RESOURCES INSTITUTE*IPGRI | IT |
| 5 | INRA TRANSFERT S.A. | FR |
| 7 | INSTITUTO NACIONAL DE INVESTIGACION Y TECNOLOGIA AGRARIA Y ALIMENTARIA | ES |
| 9 | North Carolina State University | US |
| 10 | Arizona Board of Regents for and on behalf of Northern Arizona University | US |
| 13 | OULUN YLIOPISTO | FI |
| 15 | UNIVERSITY OF BRITISH COLUMBIA | CA |
| 16 | THE REGENTS OF THE UNIVERSITY OF CALIFORNIA - UC DAVIS | US |
| 17 | UNIVERSITE LAVAL | CA |

**Activity Code:** ENV.2009.2.1.3.1 **Funding Scheme:** CP **Duration (Months):** 60

**Title:** Soil Transformations in European Catchments

**Proposed EC Grant:** 6.974.573 €

**Abstract:**

SoilTrEC proposes to develop an integrated model of soil processes that describes key soil functions. These functions are defined in the EC Soil Thematic Strategy as essential ecosystem services for the well-being and economic success of the EU. The key science advances are to develop, from first-principles, computational models that integrate soil erosion, solute transport, carbon dynamics and food web dynamics within an open-source modelling framework. This framework will provide the platform, together with existing GIS capacity, for a prototype simulator at EU-scale to assess soil threats and evaluate approaches to mitigation. This physical-based modelling will be integrated with new advances in decision support developed from life cycle and economic assessment methodologies for natural resources. A key conceptual advance of this project is to quantify soil stocks, their formation, loss and functions within the context of the earth's Critical Zone. This encompasses the terrestrial environment from the top of the biosphere's tree canopy to the bedrock delineating the lower bounds of freshwater aquifers. SoilTrEC will link 4 EU field sites that describe key stages within the life cycle of soil formation, its productive use and degradation. Existing data sets will be augmented with targeted process studies in order to provide the data sets to validate the integrated model of soil processes. These process studies will be integrated with results from additional EU, USA and Chinese field sites to compare soil processes and rates as they vary with lithology, climate and land use. These sites and their teams will be integrated through shared results and an international research training programme into a global network of Critical Zone Observatories. This programme of research will engage very actively with stakeholders involved in the practical management of land, and will draw strongly on the advice and guidance of international leaders in soil sustainability.

**Partners:**

| | | |
|---|---|---|
| 1 | THE UNIVERSITY OF SHEFFIELD | UK |
| 2 | Institute of Soil Science Nikola Poushkarov | BG |
| 3 | TECHNICAL UNIVERSITY OF CRETE | EL |
| 4 | STICHTING DELTARES | NL |
| 5 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 6 | HASKOLI ISLANDS | IS |
| 7 | WAGENINGEN UNIVERSITEIT | NL |
| 8 | UNIVERSITAET FUER BODENKULTUR WIEN | AT |
| 9 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 10 | EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZURICH | CH |
| 11 | CESKA GEOLOGICKA SLUZBA | CZ |
| 12 | Institute of Agricultural Resources and Regional Planning CAAS | CN |
| 14 | The Pennsylvania State University | US |
| 15 | SVERIGES LANTBRUKSUNIVERSITET | SE |
| 16 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |

**Activity Code:** ENV.2009.2.1.2.1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Adaptive Strategies to Mitigate the Impacts of Climate Change on European Freshwater Ecosystems

**Proposed EC Grant:** 6.997.747 €

**Abstract:**

Understanding how freshwater ecosystems will respond to future climate change is essential for the development of policies and implementation strategies needed to protect aquatic and riparian ecosystems. The future status of freshwater ecosystems is however, also dependent on changes in land-use, pollution loading and water demand. In addition the measures that need to be taken to restore freshwater ecosystems to good ecological health or to sustain priority species as required by EU Directives need to be designed either to adapt to future climate change or to mitigate the effects of climate change in the context of changing land-use. Generating the scientific understanding that enables such measures to be implemented successfully is the principal focus of REFRESH. It is concerned with the development of a system that will enable water managers to design cost-effective restoration programmes for freshwater ecosystems at the local and catchment scales that account for the expected future impacts of climate change and land-use change in the context of the WFD and Habitats Directive. At its centre is a process-based evaluation of the specific adaptive measures that might be taken to minimise the consequences of climate change on freshwater quantity, quality and biodiversity. The focus is on three principal climate-related and interacting pressures, increasing temperature, changes in water levels and flow regimes and excess nutrients, primarily with respect to lowland rivers, lakes and wetlands because these often pose the most difficult problems in meeting both the requirements of the WFD and Habitats Directive. REFRESH will advance our fundamental and applied science in 5 key areas: i) understanding how the functioning of freshwater ecosystems is affected by climate change; ii) new indicators of functional response and tools for assessing vulnerability; iii) modelling ecological processes; iv) integrated modelling; and v) adaptive management.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITY COLLEGE LONDON | UK |
| 2 | AARHUS UNIVERSITET | DK |
| 2 | AARHUS UNIVERSITET | DK |
| 3 | THE UNIVERSITY OF READING | UK |
| 4 | SUOMEN YMPARISTOKESKUS | FI |
| 5 | UNIVERSITAET DUISBURG-ESSEN | DE |
| 6 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 7 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 8 | SVERIGES LANTBRUKSUNIVERSITET | SE |
| 9 | THE MACAULAY LAND USE RESEARCH INSTITUTE | UK |
| 10 | UNIVERSITEIT UTRECHT | NL |
| 11 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 12 | MIDDLE EAST TECHNICAL UNIVERSITY | TR |
| 13 | FORSCHUNGSVERBUND BERLIN E.V. | DE |
| 14 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 15 | STICHTING DELTARES | NL |
| 16 | UNIVERSITAET FUER BODENKULTUR WIEN | AT |
| 17 | Biologicke centrum AV CR, v. v. i. | CZ |
| 18 | EESTI MAAULIKOOL | EE |
| 19 | UNIVERSITAT DE BARCELONA | ES |
| 20 | UNIVERSITY OF PATRAS | EL |
| 21 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 22 | NORWEGIAN INSTITUTE FOR AGRICULTURAL AND ENVIRONMENTAL RESEARCH - BIOFORSK | NO |
| 23 | NORSK INSTITUTT FOR VANNFORSKNING | NO |
| 24 | Trent University | CA |
| 25 | Griffith University | AU |

**Activity Code:** ENV.2009.2.1.5.1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** SOLUTIONS for ENVIRONMENTAL CONTRASTS in COASTAL AREAS

**Proposed EC Grant:** 6.159.118 €

**Abstract:**

Urban settlements, following the economic crisis of the 70s, entered in a process of regional and urban restructuring to gain a new image at the international level. As a result of the renewed economic success new flows of permanent, semi-permanent, temporary and daily “human mobility” followed: (i) for consumption (leisure and tourism), (ii) for production (economic migration). The world competition among metropolitan areas highlighted the essential importance of natural and cultural resources. The proposal considers the effects of human mobility on urban settlement growth and restructuring in coastal areas where (i) environment is more fragile and space limited, (ii) every phenomenon is more concentrated and (iii) effects on natural and cultural environment are more acute. Problems are multiplied since the climate change affecting environmental parameters - as sea levels - augments risks of flooding, propagation of pollutants, dislocation of a great number of settlers. Controlling and reducing unwanted consequences is contributing to growing conflicts among stakeholders. An integrated ecosystem approach incorporating social, economic and natural disciplines is essential in understanding and dealing with the complex and dynamic problems facing the coastal city environments. The proposal intends to: (i) identify conflicts, (ii) analyze their quantitative and qualitative effects on the environment, (iii) create models to synthesize the complexity of the different social, economic and environmental systems, (iv) compare the priority of each typology through taxonomy. Outcomes include (i) elaboration of an analysis methodology, (ii) creating tools for appropriate policies, (iii) scenario building, (iv) dissemination–exploitation of results for users’ needs. The project will analyse 8 metropolitan areas of global importance and 8 of local importance in European and Asian countries (Belgium, Portugal, Italy, Sweden, United Kingdom, Israel, India, and Vietnam)

**Partners:**

| | | |
|---|---|---|
| 1 | CONSORZIO SAPIENZA INNOVAZIONE | IT |
| 2 | UNIVERSITA DEGLI STUDI DI ROMA LA SAPIENZA | IT |
| 3 | VRIJE UNIVERSITEIT BRUSSEL | BE |
| 4 | Faculdade de letras da Universidade de Lisboa | PT |
| 5 | LONDON METROPOLITAN UNIVERSITY | UK |
| 6 | THE HEBREW UNIVERSITY OF JERUSALEM. | IL |
| 7 | GOETEBORGS UNIVERSITET | SE |
| 8 | University of Pune | IN |
| 9 | Institute of Marine Environments and Resources | VN |
| 10 | Instituto de Geografia e Ordenamento do Territorio da Universidade de Lisboa | PT |
| 11 | UNIVERSITY OF SURREY | UK |

**Activity Code:** ENV.2010.2.1.4-4 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Ecological Function and Biodiversity Indicators in European Soils

**Proposed EC Grant:** 6.999.930 €

**Abstract:**

The strategic goal of EcoFINDERS is to provide the EC with tools to design and implement soil strategies aimed at ensuring sustainable use of soils, including: i) Characterisation of European soil biodiversity; ii) Determination of relations between soil biodiversity, soil functions and ecosystem services; iii) Design of policy-relevant and cost-effective indicators for monitoring soil biodiversity. The project will: i) Develop and standardise tools and procedures to measure microbial and faunal diversity; ii) Describe the diversity of soil organisms (microbes and fauna), iii) Decipher the interactions among soil organisms and with plants through foodwebs and iv) Determine the role played by soil organisms in soils ecosystem services (nutrient cycling, carbon storage, water retention, soil structure regulation, resistance to pests and diseases, and regulation of above-ground diversity); iii) Establish cost-effective bioindicators for measuring sustainability of the microbial and faunal diversity and their associated functions (using a combination of metrics and meta-analysis); iv) Evaluate the economic value of ecosystem services, the added value of these bioindicators; v) Develop and implement effective communication strategies to engage the European public around issues associated with the sustainability of soil biodiversity. The overall concept of the project is to develop and integrate the following activities: i) Decipher the links between soil biodiversity, activities, functioning and ecosystem services; ii) Combine three types of approach: observation, experimentation, and computation; iii) Assess the impact of environmental conditions; iv) Integrate information on microbes, fauna and plant communities and analyse how these compartments interact. The general hypotheses are: changes in soil biodiversity indicate the direction and rate of changes in soil functions and associated ecosystem services; application of cost-effective bioindicators brings an economic added value to sustainable soil management.

**Partners:**

| | | |
|---|---|---|
| 1 | INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE | FR |
| 2 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 3 | AARHUS UNIVERSITET | DK |
| 3 | AARHUS UNIVERSITET | DK |
| 4 | ECT OEKOTOXIKOLOGIE GMBH | DE |
| 5 | UNIVERSITAET ZU KOELN | DE |
| 6 | INRA TRANSFERT S.A. | FR |
| 7 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 8 | LUNDS UNIVERSITET | SE |
| 9 | KONINKLIJKE NEDERLANDSE AKADEMIE VAN WETENSCHAPPEN - KNAW | NL |
| 10 | RIJKSINSTITUUT VOOR VOLKSGEZONDHEIDEN MILIEU*NATIONAL INSTITUTEFOR PUBLIC HEALTH AND THE ENVIRONMENTEN | NL |
| 11 | SVERIGES LANTBRUKSUNIVERSITET | SE |
| 12 | TEAGASC - AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY | IE |
| 13 | IMAR- INSTITUTO DO MAR | PT |
| 14 | UNIVERSITA DEGLI STUDI DI TORINO | IT |
| 15 | UNIVERSITY COLLEGE DUBLIN, NATIONAL UNIVERSITY OF IRELAND, DUBLIN | IE |
| 16 | THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN | UK |
| 17 | THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE | UK |
| 18 | LANCASTER UNIVERSITY | UK |
| 19 | WAGENINGEN UNIVERSITEIT | NL |
| 20 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 21 | PROGNOSTICKY USTAV SLOVENSKEJ AKADEMIE VIED | SK |
| 22 | China Agricultural University | CN |
| 23 | UNIVERZA V LJUBLJANI | SI |

**Activity Code:** ENV.2010.2.1.1-2 **Funding Scheme:** CP **Duration (Months):** 54

**Title:** Visions Of LANd use Transitions in Europe

**Proposed EC Grant:** 6.997.102 €

**Abstract:**

VOLANTE aims to develop a new European land management paradigm, providing an integrated conceptual and operational platform which allows policy makers to develop pro-active and context-sensitive solutions to the challenges for the future, rather than to react on largely autonomous external land systems developments.Objective of VOLANTE is to provide European policy and land management with critical pathways defining the band width of possible land management policies for future European land use. Policy options will therefore be identified in time and space and their consequences in terms of states of the land system (provisioning of ecosystem goods and services) will be evaluated, leading to a ROADMAP FOR FUTURE LAND RESOURCES MANAGEMENT IN EUROPE.To realise this, VOLANTE is designed in three Modules to gain better understanding of the PROCESSES underpinning land use change in Europe, to exploit ASSESSMENT tools that are capable of identifying critical pathways for land management in a variety of environmental and management regimes across Europe, and to provide insight into the role of land management decisions on future sustainability: VISIONS.VOLANTE brings together researchers with experience and expertise on land use change at various spatial and temporal scales enabling a focus on vision development. Module Processes identifies land use change and the processes causing these, testing unproven hypotheses by extensively using the experience gained in earlier projects and studying crucial missing links. Problem orientation is the basis for the Module Assessment, which will narrow down the infinite spectrum of policy decisions possible. Module Visions establishes interaction with decision makers at regional and European level, to enhance an evidence based and problem oriented science-policy interface. A special, professional and consistent effort will be made to gather the views of a broad set of stakeholders and to include them in all steps of the process.

**Partners:**

| | | |
|---|---|---|
| 1 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 2 | THE UNIVERSITY OF EDINBURGH | UK |
| 3 | UNIVERSITAET KLAGENFURT | AT |
| 4 | VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG | NL |
| 5 | POTSDAM INSTITUT FUER KLIMAFOLGENFORSCHUNG | DE |
| 6 | KOBENHAVNS UNIVERSITET | DK |
| 7 | EUROPEAN FOREST INSTITUTE | FI |
| 8 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 9 | University of the Aegean-Research Unit | EL |
| 10 | UNIVERSITATEA DIN BUCURESTI | RO |
| 11 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 12 | HUMBOLDT-UNIVERSITAT ZU BERLIN | DE |
| 13 | AARHUS UNIVERSITET | DK |
| 13 | AARHUS UNIVERSITET | DK |
| 14 | PROSPEX BVBA | BE |

**Activity Code:** ENV.2010.2.1.5-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** CLimate change and Urban Vulnerability in Africa

**Proposed EC Grant:** 3.494.581 €

**Abstract:**

The social and economic impact of natural disasters in emerging economies and developing countries is growing. Many African countries have fragile economies unable to absorb the shocks caused by natural disasters enhanced by the increasing vulnerability of rapidly expanding urban areas. Climate change is likely to rapidly exacerbate this situation. The overall objective of CLUVA is to develop methods and knowledge to be applied to African cities to manage climate risks, to reduce vulnerabilities and to improve coping capacity and resilience towards climate changes. CLUVA will explore these issues in selected African cities (Addis Ababa, Dar es Salaam, Douala, Ougadougou, St.Louis). The project aims at improving the capacity of scientific institutions, local councils and civil society to cope with climate change. CLUVA will assess the environmental, social and economic impacts and the risks of climate change induced hazards expected to affect urban areas (floods, sea-level rise, storm surges, droughts, heat waves, desertification, storms and fires) at various time frames. The project will develop innovative climate change risk adaptation strategies based on strong interdisciplinary components. CLUVA will be conducted by a balanced partnership of European and African partners. The 7 European partners will bring together some of EU's leading experts in climate, quantitative hazard and risk assessment, risk management, urban planners and social scientists. The 6 African partners from South Africa and from the Universities of the selected cities cover a similar range of expertises, making possible an effective integrated research effort. The project is structured in 6 WorkPackages dealing with climate change and impact models (WP1), multiple vulnerability (WP2), urban planning and governance as key issues to increase the resilience (WP3), capacity building and dissemination (WP4), coordination of the activities in the selected cities (WP5) and project management (WP6).

**Partners:**

| | | |
|---|---|---|
| 1 | AMRA - ANALISI E MONITORAGGIO DEL R ISCHIO AMBIENTALE SCARL | IT |
| 2 | KOBENHAVNS UNIVERSITET | DK |
| 3 | THE UNIVERSITY OF MANCHESTER | UK |
| 4 | TECHNISCHE UNIVERSITAET MUENCHEN | DE |
| 5 | COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH | ZA |
| 6 | CENTRO EURO-MEDITERRANEO PER I CAMBIAMENTI CLIMATICI SCARL | IT |
| 7 | HELMHOLTZ-ZENTRUM FUER UMWELTFORSCHUNG GMBH - UFZ | DE |
| 8 | NORSK INSTITUTT FOR BY- OG REGIONFORSKNING | NO |
| 9 | UNIVERSITE GASTON BERGER DE SAINT LOUIS | SN |
| 10 | UNIVERSITE DE YAOUNDE I | CM |
| 11 | UNIVERSITE DE OUAGADOUGOU | BF |
| 12 | ARDHI UNIVERSITY | TZ |
| 13 | ADDIS ABABA UNIVERSITY | ET |

**Activity Code:** ENV.2010.2.1.4-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Functional significance of forest biodiversity in Europe

**Proposed EC Grant:** 6.989.407 €

**Abstract:**

FunDivEUROPE (FUNctional significance of forest bioDIVersity in EUROPE) proposes to quantify the effects of forest biodiversity on ecosystem function and services in major European forest types in the main bioclimatic regions of Europe. FunDivEUROPE will be based on four scientific platforms and seven cross-cutting Work Packages.The project will combine a global network of tree diversity experiments (Experimental Platform) with a newly designed network of observational plots in six focal regions within Europe (Exploratory Platform). Additionally, the project will integrate an in-depth analysis of inventory-based datasets of existing forest monitoring networks to extend the scope to larger spatial and temporal scales (Inventory Platform). FunDivEUROPE will thus combine the strengths of various scientific approaches to explore and quantify the significance of forest biodiversity for a very large range of ecosystem processes and ecosystem services. Using modeling and state-of-the-art techniques for quantitative synthesis, the project will integrate information gained from the different platforms to assess the performance of pure and mixed species stands under changing climate. In addition to the three research platforms, FunDivEUROPE will set up a Knowledge Transfer Platform in order to foster communication, aggregation and synthesis of individual findings in the Work Packages and communication with stakeholders, policy makers and the wider public. The information gained should thus enable forest owners, forest managers and forest policy makers to adapt policies and management for sustainable use of forest ecosystems in a changing environment, capitalizing on the potential effects of biodiversity for ecosystem functioning. The experiences gained within FunDivEUROPE will finally allow contributing to the development of the European Long-Term Ecosystem Research Network, complementing existing forest observation and monitoring networks.

**Partners:**

| | | |
|---|---|---|
| 1 | ALBERT-LUDWIGS-UNIVERSITAET FREIBURG | DE |
| 2 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 3 | UNIVERSITAET FUER BODENKULTUR WIEN | AT |
| 4 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 5 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 6 | FORSTLICHE VERSUCHS- UND FORSCHUNGSANSTALT BADEN-WUERTTEMBERG | DE |
| 7 | INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE | FR |
| 8 | KATHOLIEKE UNIVERSITEIT LEUVEN | BE |
| 9 | METSANTUTKIMUSLAITOS | FI |
| 10 | MARTIN-LUTHER-UNIVERSITAET HALLE-WITTENBERG | DE |
| 11 | NATIONAL AGRICULTURAL RESEARCH FOUNDATION. | EL |
| 12 | SVERIGES LANTBRUKSUNIVERSITET | SE |
| 13 | ROYAL HOLLOWAY AND BEDFORD NEW COLLEGE | UK |
| 14 | UNIVERSIDAD DE ALCALA | ES |
| 15 | UNIVERSITAET BERN | CH |
| 16 | THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE | UK |
| 17 | KOBENHAVNS UNIVERSITET | DK |
| 18 | UNIVERSITA DEGLI STUDI DI FIRENZE | IT |
| 19 | HELMHOLTZ-ZENTRUM FUER UMWELTFORSCHUNG GMBH - UFZ | DE |
| 20 | UNIVERSITEIT GENT | BE |
| 21 | UNIVERSITAET LEIPZIG | DE |
| 22 | UNIVERSITY STEFAN CEL MARE SUCEAVA | RO |
| 23 | UNIWERSYTET WARSZAWSKI | PL |
| 24 | UNIVERSITAET ZUERICH | CH |

**Activity Code:** ENV.2010.2.1.2-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Evaluating Economic Policy Instruments for Sustainable Water Management in Europe

**Proposed EC Grant:** 3.472.438 €

**Abstract:**

Economic policy instruments (EPI) have received widespread attention over the last three decades, and have increasingly been implemented to achieve environmental policy objectives. However, whereas EPI have been successfully applied in some policy domains (such as climate, energy and air quality), their application to tackle water management issues (drought/water scarcity, floods, water quality control) are beset by many practical difficulties. EPI-Water sets to assess the effectiveness and the efficiency of Economic Policy Instruments in achieving water policy goals, and to identify the preconditions under which they complement or perform better than alternative (e.g. regulatory or voluntary) policy instruments.Using a common multi-dimensional assessment framework, the project will compare the performance of single economic instruments or their apposite combinations with the performance otherwise achievable with regulatory (command & control) interventions (such as water restriction/rationing, licensing or permitting), persuasive instruments or voluntary commitments.Furthermore the project will identify remaining research and methodological issues that need to be addressed, in particular with regards to the further development and use of national accounting, for supporting the design, implementation and evaluation of EPI in the field of water management.

**Partners:**

| | | |
|---|---|---|
| 1 | FONDAZIONE ENI ENRICO MATTEI | IT |
| 2 | ACTEON SARL | FR |
| 3 | ECOLOGIC INSTITUT gemeinnützige GmbH | DE |
| 4 | ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA | IT |
| 5 | WAGENINGEN UNIVERSITEIT | NL |
| 6 | NATIONAL TECHNICAL UNIVERSITY OF ATHENS | EL |
| 7 | FUNDACION IMDEA AGUA | ES |
| 8 | UNIVERSITAT DE VALENCIA | ES |
| 9 | MIDDLESEX UNIVERSITY HIGHER EDUCATION CORPORATION | UK |
| 10 | AARHUS UNIVERSITET | DK |
| 10 | AARHUS UNIVERSITET | DK |
| 11 | BUDAPESTI CORVINUS EGYETEM | HU |

**Activity Code:** ENV.2010.2.1.4-3 **Funding Scheme:** CSA **Duration (Months):** 42

**Title:** Developing a Knowledge Network for EUropean expertise on biodiversity and ecosystem services to inform policy making economic sectors

**Proposed EC Grant:** 998.719 €

**Abstract:**

Knowledge about biodiversity and ecosystem services is well advanced in the European scientific community, as demonstrated by many excellent projects and their scientific impact. However, on the global as well as the European scale, there is a failure to communicate the knowledge gained into the policy-making process and society as a whole. Such communication efforts, must ensure that all relevant knowledge is accessible and that all existing biodiversity research communities and other knowledge holders are involved in a network structure that is linked to decision making bodies.The overall objective of the project is thus to develop a recommended design for a scientific biodiversity Network of Knowledge (NoK) to inform policy-makers and other societal actors. This network shall be open, transparent, flexible, equally accessible to all, independent, be scientifically- and evidence-based and have a robust structure. It will develop links to relevant clients to support the science-society interface in Europe and beyond.To achieve this, the project brings together expertise from all major biodiversity research fields (in the consortium and beyond). Beginning with mapping the biodiversity knowledge landscape in Europe (WP1), the project will develop a prototype NoK, involving a wide number of institutions and networks in biodiversity research and policy (WP2). This prototype will then be used as a vehicle to carry out case studies in relevant policy fields (agriculture, biodiversity conservation, marine issues) in order to test and trial its functioning and effectiveness (WP3). The experience gained will be evaluated by an additional expert group within the project (WP4) in order to provide input for developing a recommended design for a potential future Network of Knowledge (WP5). WP6 takes care of project management, and will ensure international cooperation and the proper communication with potential clients of the network and the research community.

**Partners:**

| | | |
|---|---|---|
| 1 | HELMHOLTZ-ZENTRUM FUER UMWELTFORSCHUNG GMBH - UFZ | DE |
| 2 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 3 | INSTITUT ROYAL DES SCIENCES NATURELLES DE BELGIQUE | BE |
| 4 | CLIMAR - Centro Interdisciplinar de Investigação Marinha e Ambiental | PT |
| 5 | STICHTING KONINKLIJK NEDERLANDS INSTITUUT VOOR ZEEONDERZOEK (NIOZ) | NL |
| 6 | FONDATION FRANCAISE POUR LA RECHERCHE SUR LA BIODIVERSITE | FR |
| 7 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 8 | UNIVERSITAET WIEN | AT |
| 9 | STIFTELSEN NORSK INSTITUTT FOR NATURFORSKNING | NO |
| 10 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 11 | MTA OKOLOGIAI ES BOTANIKAI KUTATOINTEZETE | HU |
| 12 | STICHTING EUROPEES CENTRUM VOOR NATUURBESCHERMING | NL |
| 13 | BANGOR UNIVERSITY | UK |
| 14 | EIGEN VERMOGEN VAN HET INSTITUUT VOOR NATUUR- EN BOSONDERZOEK | BE |
| 15 | UMWELTBUNDESAMT GMBH | AT |
| 16 | SUOMEN YMPARISTOKESKUS | FI |
| 17 | BOTANICAL, ENVIRONMENTAL & CONSERVATION CONSULTANTS LIMITED | IE |
| 18 | VLAAMS INSTITUUT VOOR DE ZEE VZW | BE |

**Activity Code:** ENV.2010.2.1.1-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Africa at a meso-scale: Adaptive and integrated tools and strategies for natural resources management

**Proposed EC Grant:** 3.344.998 €

**Abstract:**

Threats to the environment and natural resources, coupled with poor management, have serious implications for both poverty reduction and sustainable economic development. Degrading natural resources in Africa therefore result in an inreased vulnerability of the poor as a result of ecosystem stress, competition for space, soaring food and energy prices, climate change and demographic growth. Nowadays, it is widely accepted that reversing these trends asks for integrated management frameworks. Despite the availability of many tools, expertise, strategies, local practices and indigenous knowledge, the concept of INRM has hardly been brought into practice and the building blocks of INRM (see description acronym) in many cases still need to be integrated. AFROMAISON will make use of what is available regarding INRM and will contribute to a better integration of the components of INRM. In view of the decentralization policy in Africa, we aim to focus on the operational requirements of INRM for sub-national (or meso-scale) authorities and communities.The main outputs of AFROMAISON are a toolbox, short-term to long-term strategies, quick wins (much gains with little effort) and operational strategies for adaptation to global change. In order to enhance the potential impact, we will put strong efforts in integrated capacity building and a solid dissemination strategy. In order to do so, we will integrate tools, frameworks, strategies and processes for landscape functioning, livelihood & socio-economic development (incl. vulnerability to global change), local knowledge, institutional strenghtening and improved interaction between sectors, scales and communities. For the development of concrete operational strategies for adaptation to global change, AFROMAISON will focus on the three groups of tools: strategies for restoration and adaptation (including sustainable landscape intensification), economic tools and incentives for INRM and tools for spatial planning.

**Partners:**

| | | |
|---|---|---|
| 1 | Soresma NV | BE |
| 2 | INTERNATIONAL CENTRE FOR RESEARCH IN AGROFORESTRY | KE |
| 3 | INSTITUTE OF NATURAL RESOURCES ASSOCIATION | ZA |
| 4 | OBSERVATOIRE DU SAHARA ET DU SAHEL | TN |
| 5 | UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION -UNESCO | FR |
| 6 | POTSDAM INSTITUT FUER KLIMAFOLGENFORSCHUNG | DE |
| 7 | STICHTING WETLANDS INTERNATIONAL | NL |
| 8 | INTERNATIONAL WATER MANAGEMENT INSTITUTE IWMI | LK |
| 9 | UNIVERSITE DE GENEVE | CH |
| 10 | FONDATION 2IE ASSOCIATION | BF |
| 11 | CENTRE DE COOPERATION INTERNATIONAL EN RECHERCHE AGRONOMIQUE POUR LE DEVELOPPEMENT | FR |
| 12 | UNIVERSITY OF KWAZULU-NATAL | ZA |
| 13 | Altenburg & Wymenga ecologisch onderzoek B.V. | NL |
| 14 | MOUNTAINS OF THE MOON UNIVERSITY LBG | UG |
| 15 | UNIVERSITEIT ANTWERPEN | BE |

**Activity Code:** ENV.2010.2.1.4-2 **Funding Scheme:** CSA **Duration (Months):** 48

**Title:** Cooperation and shared strategies for biodiversity research programmes in Europe

**Proposed EC Grant:** 1.999.600 €

**Abstract:**

The loss of biodiversity and the degradation of ecosystems are major scientific and societal challenges. Addressing them and providing scientific support to policy requires a coherent research framework, with coordinated strategies and programmes at the regional and international levels, which are the relevant scales for many biodiversity issues.By networking 21 funding agencies from 15 countries, BiodivERsA2 aims to strengthen the ERA on biodiversity. Building on the experience of the ERA-Net BiodivERsA, but with a wider, more balanced network, BiodivERsA2 will promote a strategy for biodiversity research, in partnership with other players in the field, and will organize joint funding to better integrate biodiversity science.The objectives are to:-develop an efficient agenda-setting mechanism for joint activities (including joint calls),taking into account existing research strategies and agendas at international levels along with national and institutional priorities-instate a recurrent and visible funding opportunity for transnational biodiversity research projects-play an active role in the processes and interfaces to inform policy and users-prepare the establishment of a sustainable, independent funding platform for biodiversity researchThe project has 6 workpackages. WP1 will promote networking and sharing of best practice, ensuring the rapid integration of new members and the adoption of a framework for joint calls. WP2 will analyse the landscape and cooperate with stakeholders identifying research needs, with science-policy interfaces and with relevant infrastructure programmes. Using outputs of WP1&2, WP3 will produce a roadmap for joint funding and implement 3 calls within the project timespan. These activities will ultimately create the conditions for the network to become a sustainable funding platform for European biodiversity research, which will be fostered by WP4. WP5 will develop and implement a communication strategy and enhance project web-products. WP6 deals with coordination and management.

**Partners:**

| | | |
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| 1 | FONDATION FRANCAISE POUR LA RECHERCHE SUR LA BIODIVERSITE | FR |
| 2 | FONDS ZUR FÖRDERUNG DER WISSENSCHAFTLICHEN FORSCHUNG | AT |
| 3 | SERVICE PUBLIC FEDERAL DE PROGRAMMATION POLITIQUE SCIENTIFIQUE | BE |
| 4 | NATIONAL SCIENCE FUND | BG |
| 5 | SIHTASUTUS EESTI TEADUSAGENTUUR | EE |
| 6 | AGENCE NATIONALE DE LA RECHERCHE | FR |
| 7 | MINISTERE DE L'ECOLOGIE, DU DEVELOPPEMENT DURABLE DES TRANSPORTS ET DU LOGEMENT | FR |
| 8 | DEUTSCHES ZENTRUM FUER LUFT - UND RAUMFAHRT EV | DE |
| 9 | DEUTSCHE FORSCHUNGSGEMEINSCHAFT | DE |
| 10 | Lietuvos mokslo taryba | LT |
| 11 | NEDERLANDSE ORGANISATIE VOOR WETENSCHAPPELIJK ONDERZOEK | NL |
| 12 | NORGES FORSKNINGSRAD | NO |
| 13 | FUNDACAO PARA A CIENCIA E A TECNOLOGIA | PT |
| 14 | MINISTERIO DE CIENCIA E INNOVACION | ES |
| 15 | FORSKNINGSRÅDET FÖR MILJÖ, AREELLA NÄRINGAR OCH SAMHÄLLSBYGGANDE | SE |
| 16 | NATURVARDSVERKET | SE |
| 17 | MINISTRY OF FOOD AGRICULTURE AND LIVESTOCK | TR |
| 18 | THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS | UK |
| 19 | JNCC SUPPORT CO LBG | UK |
| 20 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 21 | VIDEKFEJLESZTESI MINISZTERIUM | HU |

**Activity Code:** ENV.2011.2.1.4-3 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** MOTivational strength of ecosystem services and alternative ways to express the value of BIOdiversity

**Proposed EC Grant:** 3.152.839 €

**Abstract:**

People in Europe acknowledge that nature is important to them and to society at large. Economists have shown that indeed, biodiversity has total economic values running into the trillions of euros worldwide and hundreds of millions even for 'minor' ecosystem services on local scales. In spite of these immense values, politicians and the general public in Europe do not appear to really act for nature. In the ballot box, people think about their job security, their mortgage or foreign immigrants – not about the loss of nature. Politicians feel tempted to focus on these same narrow issues. As a result, European biodiversity continues to decline.Can economic methods to assess the value of biodiversity be improved such that they reach out to what really motivates action? Can alternative approaches be developed that lie closer to what connects people to nature and can appeal to their actions in stead of only to their feelings?The BIOMOT project, funded by the FP 7 programme of the European Union, will address these challenges. Involving eight research institutes in seven European countries and uniting a unique group of economists, governance experts, psychologists and philosophers, BIOMOT will undertake empirical research in the seven European countries, focusing on (a) the motivational capacity of economic valuation methods, (b) the types of motivation for nature that underlie successful policy actions for biodiversity at various scales and (c) the motivations that drive citizens, business and public leaders to take action for nature. On that basis, BIOMOT will develop a general theory of motivation for biodiversity and think through its implications for biodiversity policies, for business and civil society actors and for public communication.

**Partners:**

| | | |
|---|---|---|
| 1 | STICHTING KATHOLIEKE UNIVERSITEIT | NL |
| 2 | THE UNIVERSITY OF MANCHESTER | UK |
| 3 | UNIVERSITE CATHOLIQUE DE LOUVAIN | BE |
| 4 | ERNST-MORITZ-ARNDT-UNIVERSITÄT GREIFSWALD | DE |
| 5 | Itä-Suomen yliopisto | FI |
| 6 | ZNANSTVENORAZISKOVALNI CENTER SLOVENSKE AKADEMIJE ZNANOSTI IN UMETNOSTI | SI |
| 7 | UNIVERSITA DEGLI STUDI DI ROMA LA SAPIENZA | IT |
| 8 | UNIVERSITEIT LEIDEN | NL |

**Activity Code:** ENV.2011.2.1.2-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** REstoring rivers FOR effective catchment Management

**Proposed EC Grant:** 6.997.603 €

**Abstract:**

REFORM is targeted towards development of guidance and tools to make river restoration and mitigation measures more cost-effective and to support the 2nd and future River Basin Management Plans (RMBPs) for the WFD. Aims of REFORM are (1) to provide a framework for improving the success of hydromorphological restoration measures and (2) to assess more effectively the state of rivers, floodplains and connected groundwater systems. The restoration framework addresses the relevance of dynamic processes at various spatial and temporal scales, the need for setting end-points, analysis of risks and benefits, integration with other societal demands (e.g. flood protection and water supply), and resilience to climate change.The consortium comprises scientists and practitioners covering a wide range of disciplines (hydrology, hydraulics and geomorphology, ecology, socio-economics). The workplan is organized in three modules: (1) natural processes, (2) degradation, (3) restoration. Data from monitoring programmes and restoration projects will be pooled and linked with landscape-scale hydromorphological and physiographic data and catchment models. Targeted field and experimental studies using common protocols will fill data gaps on the role of scale in restoration success. A wide range of statistical modeling approaches will improve indicators for hydromorphological change and factors determining restoration success. All work packages are multidisciplinary and will feed into products for application in river basin management, e.g. guidelines for successful restoration and a web-based tool for exchanging experiences with river restoration measures facilitated and enhanced through consultation with stakeholders.In addition to its impact on the RBMPs, REFORM will provide guidance to other EU directives (groundwater, floods, energy from renewable resources, habitats) to integrate their objectives into conservation and restoration of rivers as sustainable ecosystems

**Partners:**

| | | |
|---|---|---|
| 1 | STICHTING DELTARES | NL |
| 2 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 3 | AARHUS UNIVERSITET | DK |
| 3 | AARHUS UNIVERSITET | DK |
| 4 | UNIVERSITAET FUER BODENKULTUR WIEN | AT |
| 5 | INSTITUT NATIONAL DE RECHERCHE EN SCIENCES ET TECHNOLOGIES POUR L'ENVIRONNEMENT ET L'AGRICULTURE | FR |
| 6 | INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE DELTA DUNARII | RO |
| 7 | EIDGENOESSISCHE ANSTALT FUR WASSERVERSORGUNG ABWASSERREINIGUNG UND GEWAESSERSCHUTZ | CH |
| 8 | ECOLOGIC INSTITUT gemeinnützige GmbH | DE |
| 9 | FORSCHUNGSVERBUND BERLIN E.V. | DE |
| 10 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 11 | MASARYKOVA UNIVERZITA | CZ |
| 12 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 13 | QUEEN MARY AND WESTFIELD COLLEGE, UNIVERSITY OF LONDON | UK |
| 14 | SVERIGES LANTBRUKSUNIVERSITET | SE |
| 15 | SUOMEN YMPARISTOKESKUS | FI |
| 16 | UNIVERSITAET DUISBURG-ESSEN | DE |
| 17 | UNIVERSITY OF HULL | UK |
| 18 | UNIVERSITA DEGLI STUDI DI FIRENZE | IT |
| 19 | UNIVERSIDAD POLITECNICA DE MADRID | ES |
| 20 | VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG | NL |
| 21 | SZKOLA GLOWNA GOSPODARSTWA WIEJSKIEGO | PL |
| 22 | CENTRO DE ESTUDIOS Y EXPERIMENTACION DE OBRAS PUBLICAS - CEDEX | ES |
| 23 | DIENST LANDELIJK GEBIED | NL |
| 24 | ENVIRONMENT AGENCY OF ENGLAND AND WALES | UK |
| 25 | Istituto Superiore per la Protezione e la Ricerca Ambientale | IT |

**Activity Code:** ENV.2011.2.1.5-2 **Funding Scheme:** CSA **Duration (Months):** 36

**Title:** Furthering Strategic Urban Research

**Proposed EC Grant:** 1.000.000 €

**Abstract:**

European cities face many significant challenges, including the current economic crisis, urban sprawl, and the longer-term implications of climate change and resource scarcity. To face up to and overcome these challenges, it has become urgent for all concerned stakeholders to collaborate.URBAN-NEXUS, a coordination action, will develop and use structured dialogues to encourage communication, exchange knowledge and experiences, and build partnerships to promote joint research. The dialogues will involve a wide range of public, private, and civil society organisations from across the EU27; that are involved with urban research.URBAN-NEXUS has 3 main objectives:•Firstly, it aims to identify innovative ways for urban policy makers and researchers to collaborate to solve the complex and interrelated problems that confront sustainable urban development.•Secondly, it will increase awareness among relevant stakeholders in 5 thematic areas, and allow them to exchange knowledge, collaborate and cooperate.•Thirdly, it will make possible partnerships between relevant stakeholders, in particular researchers and those who apply knowledge, for long-term strategic cooperation across scales and disciplines.The 5 themes that frame the URBAN-NEXUS project are:•adapting to climate change;•increasing health and quality of life;•using land sustainably;•integrating urban management;•integrating information and monitoring.The URBAN-NEXUS consortium, which is led by the Nicis Institute, brings together leading knowledge institutes, research organisations, government agencies and large European-wide networks representing urban interests. Most of the partners participated in URBAN-NET, the European Research Area (ERA) network on urban sustainability formed in 2006. This ERA-Net aimed to strengthen the pan-European approach to urban research, forge links between the Member States' urban research, and develop a common framework for policy orientated research and understanding. URBAN-NEXUS builds directly upon the success and efforts of URBAN-NET and will further develop its results and strengthen its partnerships, thereby making a valuable contribution to urban strategic research.

**Partners:**

| | | |
|---|---|---|
| 1 | STICHTING NETHERLANDS INSTITUTE FOR CITY INNOVATION STUDIES | NL |
| 2 | Scotland & Northern Ireland Forum For Environmental Research | UK |
| 3 | UNIVERSITAT AUTONOMA DE BARCELONA | ES |
| 4 | FORSKNINGSRÅDET FÖR MILJÖ, AREELLA NÄRINGAR OCH SAMHÄLLSBYGGANDE | SE |
| 5 | UNIVERSITY OF THE WEST OF ENGLAND, BRISTOL | UK |
| 6 | AGENCY FOR SUSTAINABLE DEVELOPMENT AND EUROINTEGRATION - ECOREGIONS | BG |
| 7 | CHALMERS TEKNISKA HOEGSKOLA AB | SE |
| 8 | EUROCITIES ASBL | BE |
| 9 | ICLEI EUROPEAN SECRETARIAT GMBH (ICLEI EUROPASEKRETARIAT GMBH)* | DE |
| 10 | REGIONAL ENVIRONMENTAL CENTER FOR CENTRAL AND EASTERN EUROPE -REC | HU |
| 11 | ADVANCITY ASSOCIATION | FR |
| 12 | Stiftung Bauhaus Dessau | DE |
| 13 | Systèmes d'Information à Référence Spatiale (SIRS) SAS | FR |

**Activity Code:** ENV.2011.2.1.4-3 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** BESAFE Biodiversity and Ecosystem Services: Arguments for our future Environment

**Proposed EC Grant:** 3.009.973 €

**Abstract:**

In order to protect biodiversity, policy makers increasingly require demonstration of its value. BESAFE will usecase studies to investigate how much importance people attribute to alternative arguments for the protectionof biodiversity and in particular how this relates to ecosystem services. It will focus on the arguments used bypolicy makers at different governance levels and in different ecological, socio-economic, spatial and temporalcontexts. BESAFE will examine the interactions of environmental protection policies between governance scales.This will lead to an assessment of the transferability of arguments across scales. The Project will consider thecontribution that valuing ecosystem services can make in demonstrating the value of biodiversity. The resultswill be used to produce a framework that will give guidance on the effectiveness of alternative arguments andprotection strategies in various contexts. The framework will be made accessible through a web-based publicaccess database with associated toolkit. To ensure practical usability, the toolkit and database interface will bedeveloped in cooperation with stakeholders.

**Partners:**

| | | |
|---|---|---|
| 1 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 2 | THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF OXFORD | UK |
| 3 | HELMHOLTZ-ZENTRUM FUER UMWELTFORSCHUNG GMBH - UFZ | DE |
| 4 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 5 | SVERIGES LANTBRUKSUNIVERSITET | SE |
| 6 | AARHUS UNIVERSITET | DK |
| 6 | AARHUS UNIVERSITET | DK |
| 7 | ECONOMICS FOR THE ENVIRONMENT CONSULTANCY LIMITED | UK |
| 8 | SUOMEN YMPARISTOKESKUS | FI |
| 9 | SZENT ISTVAN EGYETEM | HU |
| 10 | PARIS-LODRON-UNIVERSITÄT SALZBURG | AT |
| 11 | Pensoft Publishers Ltd | BG |
| 12 | VLAAMS GEWEST | BE |
| 13 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 14 | STIFTELSEN NORSK INSTITUTT FOR NATURFORSKNING | NO |
| 15 | UNIVERSITATEA DIN BUCURESTI | RO |

**Activity Code:** ENV.2011.2.1.1-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Architecture and roadmap to manage multiple pressures on lagoons

**Proposed EC Grant:** 3.495.533 €

**Abstract:**

The ARCH research project “Architecture and roadmap to manage multiple pressures on lagoons” aims to develop participative methodologies in collaboration with policy makers, local authorities and stakeholders to manage the multiple problems affecting lagoons (estuarine coastal areas). These areas represent ecosystems that are very vulnerable for climate change, increasing urbanisation and industrialisation. A central feature of ARCH is to provide realistic solutions to manage these pressures and establish a better connection (the arch) between science and policy. This is accomplished by facilitating the transition (i) from segregated disciplinary scientific results to well integrated and usable scientific knowledge, (ii) from “government” and sectoral policies towards “governance” and sustainable management; and (iii) from an unaware and uninformed “lagoon community” towards an involved and well-informed community. ARCH will work with 10 case study lagoons and estuaries having a geographical distribution covering all major seas surrounding Europe. A participatory workshop methodology will be used at the lagoon sites to develop a decision framework to choose strategies, interventions and measures to manage the existing and future problems in the lagoon. This is accomplished using an integrated planning approach, considering ecosystem services to assess the social, economic and ecological state of the lagoon and linking this to spatial planning methodology. The final products of ARCH are roadmaps for implementation of realistic solutions at the lagoon scale, a management guide for coastal managers and policy makers in Europe and the European Lagoon Management Handbook. The project will actively disseminate products and experiences via newsletters, multiplier seminars, a website and specific web-tool for discussion, and a final conference. The legacy beyond the lifetime of the project is ensured by the connection to international networks, like the UNESCO HELP-program.

**Partners:**

| | | |
|---|---|---|
| 1 | STIFTELSEN NORGES GEOTEKNISKE INSTITUTT | NO |
| 2 | NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO | NL |
| 3 | HOCHSCHULE FUER ANGEWANDTE WISSENSCHAFTEN | DE |
| 4 | IVL SVENSKA MILJOEINSTITUTET AB | SE |
| 5 | INSTITUTO NACIONAL DE RECURSOS BIOLOGICOS I.P. INRB | PT |
| 6 | INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE PENTRU GEOLOGIE SI GEOECOLOGIE MARINA-GEOECOMAR | RO |
| 7 | INSTYTUT MORSKI W GDANSKU | PL |
| 8 | UNIVERSITY OF NEWCASTLE UPON TYNE | UK |
| 9 | HELLENIC CENTRE FOR MARINE RESEARCH | EL |
| 10 | UNIVERSITY OF EAST ANGLIA | UK |
| 11 | CHRISTIAN-ALBRECHTS-UNIVERSITAET ZU KIEL | DE |

**Activity Code:** ENV.2011.2.1.5-1 **Funding Scheme:** CP **Duration (Months):** 60

**Title:** Transitioning towards Urban Resilience and Sustainability

**Proposed EC Grant:** 6.813.819 €

**Abstract:**

The “TURaS” project aims to bring together urban communities, researchers, local authorities and SMEs to research, develop, demonstrate and disseminate transition strategies and scenarios to enable European cities and their rural interfaces to build vitally-needed resilience in the face of significant sustainability challenges. To ensure maximum impact, the TURaS project has developed an innovative twinning approach bringing together decision makers in local authorities with SMEs and academics to ensure meaningful results and real change are implemented over the duration of the project. 11 local authorities or local development agencies are involved as partners in the project and they will orient research and development from the outset towards the priority sustainability and resilience challenges facing their cities. 9 leading academic research institutions and 6 SMEs will work with these cities helping them to reduce their urban ecological footprint through proposing new visions, feasiblity strategies, spatial scenarios and guidance tools to help cities address these challenges. The specific challenges addressed in TURaS include: climate change adaptation and mitigation; natural resource shortage and unprecedented urban growth.Over the five year duration of the project, the feasibility of these new approaches will be tested in selected case study neighbourhoods and new measures to enable adaptive governance, collaborative decision-making, and behavioural change towards resilient and sustainable European cities will be tested. The impact of these new approaches will be measured and results compared between participating cities before a final set of strategies and tools will be developed for demonstration, dissemination and exploitation in other European cities. SMEs are highly involved in all work packages of the project and specific measures have been put in place to ensure the optimal economic impact of the project is achieved.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITY COLLEGE DUBLIN, NATIONAL UNIVERSITY OF IRELAND, DUBLIN | IE |
| 2 | UNIVERSITY OF EAST LONDON | UK |
| 3 | VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG | NL |
| 4 | INSTITUT ZA ARHITEKTURU I URBANIZAM SRBIJE | RS |
| 5 | AALBORG UNIVERSITET | DK |
| 6 | UNIVERSITAET STUTTGART | DE |
| 7 | VARNA FREE UNIVERSITY | BG |
| 8 | UNIVERZA V LJUBLJANI | SI |
| 9 | UNIVERSITA DEGLI STUDI DI ROMA LA SAPIENZA | IT |
| 10 | INSTITUT BRUXELLOIS POUR LA GESTIONDE L ENVIRONNEMENT | BE |
| 11 | DUBLIN CITY COUNCIL | IE |
| 12 | LONDON BOROUGH OF BARKING AND DAGENHAM | UK |
| 13 | BARKING RIVERSIDE LTD | UK |
| 14 | COMUNE DI ROMA | IT |
| 15 | NDE CONSULTANTS LTD | UK |
| 16 | SEVILLA GLOBAL S.A. | ES |
| 17 | GEMEENTE ROTTERDAM | NL |
| 18 | Verband Region Stuttgart | DE |
| 19 | REGIONALNA RAZVOJNA AGENCIJA - LJUBLJANSKE URBANE REGIJE ZAVOD | SI |
| 20 | MUNICIPALITY OF SOFIA | BG |
| 21 | DERMOT FOLEY LANDSCAPE ARCHITECTS LIMITED | IE |
| 22 | BIOAZUL | ES |
| 23 | INSTITUTE FOR SUSTAINABILITY | UK |
| 24 | BIC LAZIO SPA | IT |
| 25 | European Business and Innovation Centre Network | BE |
| 26 | CLIMATE ALLIANCE - KLIMA-BUENDNIS - ALIANZA DEL CLIMA e.V. | DE |
| 27 | PRACSIS SPRL | BE |
| 28 | HELIX PFLANZEN GMBH | DE |

**Activity Code:** ENV.2011.2.1.6-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Future-oriented integrated management of European forest landscapes

**Proposed EC Grant:** 6.998.601 €

**Abstract:**

The vital environmental and socio-economic role of European forests is well documented and acknowledged in policy documents of both the European Union and its member states. However, there are critical incoherencies within and between trans-national, national and local forest-related land use policies, the central issue being mismatches between the policies and their implementation at the landscape level. Hence, there is a need to improve existing policy and management approaches capable of delivering a better balance between multiple and conflicting demands for forest goods and services. Diminishing mismatches and providing a new policy and management approach that is sensitive to ecological, socioeconomic and political issues of are the main objectives of INTEGRAL.The objectives are achieved by following a research approach with 3 phases: diagnostic analysis of the status-quo (phase 1), participatory development and evaluation of scenarios (phase 2), and problem-solving oriented back-casting for policy development and evaluation (phase 3). The research design will be applied in a total of 20 landscapes in 10 European countries that differ in key characteristics, such as ownership, the importance of forestry and forest-based industries and the priorities of allocation and management of new and existing forest lands. The involvement of national and local stakeholder groups all the way through the project plays a decisive role in the project.The most important long term impact of INTEGRAL consists of the knowledge and competence base for integrating international, national and local levels in participatory decision and planning processes. This includes the development of manuals for how to conduct such processes, methods for utilizing quantitative decision support tools in the participatory process, and the establishment of a body of knowledge among those participating in the extensive case studies. Thus, the consistency of implemented forest policies can be enhanced.

**Partners:**

| | | |
|---|---|---|
| 1 | SVERIGES LANTBRUKSUNIVERSITET | SE |
| 2 | ALBERT-LUDWIGS-UNIVERSITAET FREIBURG | DE |
| 3 | UNIVERSITA DEGLI STUDI DI PADOVA | IT |
| 4 | WAGENINGEN UNIVERSITEIT | NL |
| 5 | University of Forestry | BG |
| 6 | Fachhochschule Salzburg GmbH | AT |
| 7 | THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF OXFORD | UK |
| 8 | Instituto Superior de Agronomia | PT |
| 9 | UNIVERSITA DEGLI STUDI DEL MOLISE | IT |
| 10 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 11 | TECHNICKA UNIVERZITA VO ZVOLENE | SK |
| 12 | ALEKSANDRO STULGINSKIO UNIVERSITETAS | LT |
| 13 | TECHNISCHE UNIVERSITAET MUENCHEN | DE |
| 14 | FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V | DE |
| 15 | INSTITUT DES SCIENCES ET INDUSTRIES DU VIVANT ET DE L'ENVIRONNEMENT - AGRO PARIS TECH | FR |
| 16 | UNIVERSITY COLLEGE DUBLIN, NATIONAL UNIVERSITY OF IRELAND, DUBLIN | IE |
| 17 | UNIVERSIDADE CATOLICA PORTUGUESA | PT |
| 18 | CONFEDERATION EUROPEENNE DES PROPRIETAIRES FORESTIERS ASBL | LU |
| 19 | STICHTING FERN | NL |
| 20 | European State Forest Association | BE |

**Activity Code:** ENV.2011.2.1.4-2 **Funding Scheme:** CP **Duration (Months):** 66

**Title:** CAtastrophic Shifts in drylands: how CAn we prevent ecosystem DEgradation?

**Proposed EC Grant:** 5.889.999 €

**Abstract:**

The aim of CASCADE is to obtain a better understanding of sudden ecosystem shifts that may lead to major losses in biodiversity and ecosystem services, and to define measures that can be used to prevent such shifts. The focus of CASCADE is explicitly on drylands as being one of the most fragile and threatened ecosystems in Europe. CASCADE will investigate the historical evolution of dryland ecosystems in six Mediterranean study sites, and improve understanding of the biogeochemical mechanisms underlying sudden and catastrophic shifts through a combination of experimentation and modeling. Experiments in laboratory and field will be used to assess the biogeochemical processes that are thought to underlie regime shifts in drylands, to study the interplay between competition and facilitation, and to assess the effects of biotic and abiotic processes on vegetation structure and composition. Field surveys will identify changes in ecosystem structure and functions that indicate approaching or crossing of tipping points, link these findings to experimental results, and assess potentials for restoration. Models will be developed to describe regime shifts in the studied drylands in terms of changes in vegetation composition, abundance and spatial patterning. Based on both experimentation and modelling, CASCADE will develop management schemes for sustainable resource use and conservation of ecosystem services. By combining physical with socio-economic modeling, measures will be defined that work from an ecological as well as a socio-economic perspective. The results of CASCADE will be made accessible to natural resource and biodiversity managers, policy makers, and other audiences, using a variety of dissemination methods such as reports, booklets, newsletters, meetings, videos, and TV. All project results and recommendations will be stored and made accessible to the public by developing a web-based harmonized CASCADE information system (CASCADIS).

**Partners:**

| | | |
|---|---|---|
| 1 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 2 | TECHNICAL UNIVERSITY OF CRETE | EL |
| 3 | UNIVERSITA DEGLI STUDI DELLA BASILICATA | IT |
| 4 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 5 | UNIVERSIDAD DE ALICANTE | ES |
| 6 | UNIVERSIDADE DE AVEIRO | PT |
| 7 | FONDAZIONE PER LO SVILUPPO SOSTENIBILE DEL MEDITERRANEO | IT |
| 8 | UNIVERSITY OF LEEDS | UK |
| 9 | UNIVERSITAET BERN | CH |
| 10 | UNIVERSITEIT UTRECHT | NL |
| 11 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 12 | CYPRUS UNIVERSITY OF TECHNOLOGY | CY |
| 13 | WAGENINGEN UNIVERSITEIT | NL |
| 14 | FUNDACION CENTRO DE ESTUDIOS AMBIENTALES DEL MEDITERRANEO | ES |

**Activity Code:** ENV.2011.2.1.4-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Role Of Biodiversity In climate change mitigatioN

**Proposed EC Grant:** 6.985.678 €

**Abstract:**

To realise the full potential of tropical forests in climate change mitigation (CCM) & the provision of other ecosystem services in the face of ongoing global change we must improve our understanding of the relationships between biodiversity (BD) and the socio-ecological processes through which we respond & adapt to change.ROBIN will provide information for policy & resource use options under scenarios of socio-economic & climate change to: quantify interactions between terrestrial BD, land use & CCM potential in tropical Latin America; develop scenarios for CCM options by evaluating their effectiveness, unintended effects on other ecosystem services (e.g. disease mitigation) and their socio-ecological consequences. We will achieve this by combining new techniques (including remote sensing) for BD assessments in complex multi-functional landscapes, data-based analyses, integrated modelling & participatory-driven approaches at local & regional scales. Case studies along a gradient of sites in Mesoamerica and Amazonia will be used to develop understanding of the relationships between BD & CCM options & feed policy development. These studies will improve understanding of the options favourable to stakeholders & barriers & drivers affecting adoption of resource management strategies.Key deliverables will be: improved understanding of the role of BD in climate change; participatory-driven strategies & tools for CCM; assessments of the risks & uncertainties associated with CCM options. The main impact of the work will be improved outcomes from CCM & BD protection measures by providing natural resource managers in Latin America with guidance on how BD & ecosystems can be used in CCM without creating new problems. We will provide improved indicators for BD relevant to the Convention on Biological Diversity & the design & implementation of REDD+/++ schemes, to ensure increased storage of carbon in forests & multi-functional landscapes & decreased rates of BD loss.

**Partners:**

| | | |
|---|---|---|
| 1 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 2 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 3 | MINISTERIO DEL MEDIO AMBIENTE Y RECURSOS NATURALES | MX |
| 4 | EMPRESA BRASILEIRA DE PESQUISA AGROPECUARIA | BR |
| 5 | INSTITUTO BOLIVIANO DE INVESTIGACION FORESTAL ASOCIACION | BO |
| 6 | UNIVERSITAET KLAGENFURT | AT |
| 7 | Instituto de Ecología, A.C. | MX |
| 8 | POTSDAM INSTITUT FUER KLIMAFOLGENFORSCHUNG | DE |
| 9 | UNIVERSIDAD NACIONAL AUTONOMA DE MEXICO | MX |
| 10 | WAGENINGEN UNIVERSITEIT | NL |
| 11 | UNIVERSIDAD POLITECNICA DE MADRID | ES |
| 12 | GUYANA FORESTRY COMMISSION | GY |

**Activity Code:** ENV.2011.2.1.1-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Integrated water resources and coastal zone management in European lagoons in the context of climate change

**Proposed EC Grant:** 2.545.660 €

**Abstract:**

Issue: The environmental issue of concern of the LAGOONS project is the anthropogenic deterioration and climate change impacts - especially the effects of extreme weather events- on surface water and lagoons ecosystems.Objectives: The main objective of the LAGOONS project is to contribute to a science-based seamless strategy - in an integrated and coordinated fashion - of the management of lagoons seen under the land-sea and science-policy-stakeholder interface; i.e., the project seek to underpin the integration of the EU Water Framework Directive, Habitat Directive, the EU's ICZM Recommendation, and the EU Marine Strategy Directive.Methodology: Four case study lagoons have been selected to represent a set of "hotspot" coastal lagoons with a wide and balanced geographical distribution and different characteristics. The lagoons included are: Vistula Lagoon in Baltic Sea (transboundary Poland/Russia); Tylygulskyi Lagoon in Black Sea (Ukraine); Ria de Aveiro Lagoon in Atlantic Ocean (Portugal), and Mar Menor in the Mediterranean Sea (Spain). By means of elaborating integrated strategies for sustainable development of the case study lagoons in the climate change context, the LAGOONS project will contribute to the goals of the Call showing that it is possible to enhance connectivity between research and policy-making in a lagoons context using a proactive approach to water issues, which assures more efficient use of existing research results.Impact: In management terms, LAGOONS will contribute to the decision-support methodologies for a coordinated approach to the Water Framework Directive and the Marine Strategy Directive. In addition, LAGOONS will propose actions to tackle bottlenecks in the context of climate change, i.e., LAGOONS will propose actions foreseen in the goals of the Europe 2020 strategy - A strategy for smart, sustainable and inclusive growth.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSIDADE DE AVEIRO | PT |
| 2 | NORWEGIAN INSTITUTE FOR AGRICULTURAL AND ENVIRONMENTAL RESEARCH - BIOFORSK | NO |
| 3 | INSTYTUT BUDOWNICTWA WODNEGO POLSKIEJ AKADEMII NAUK | PL |
| 4 | P.P. SHIRSHOV INSTITUTE OF OCEANOLOGY OF RUSSIAN ACADEMY OF SCIENCES | RU |
| 5 | Morski Instytut Rybacki w Gdyni | PL |
| 6 | UNIVERSITY OF DUNDEE | UK |
| 7 | Odessa State Environmental University | UA |
| 8 | POTSDAM INSTITUT FUER KLIMAFOLGENFORSCHUNG | DE |
| 9 | UNIVERSIDAD DE MURCIA | ES |

**Activity Code:** ENV.2012.6.2-1 **Funding Scheme:** CP **Duration (Months):** 60

**Title:** Operational Potential of Ecosystem Research Applications

**Proposed EC Grant:** 8.999.175 €

**Abstract:**

Human use and exploitation of the biosphere is increasing at such a pace and scale that the sustainability of major ecosystems is threatened, and may not be able to continue to function in ways that are vital to the existence of humanity. Re-framing environmental resource use has led to the emergence of the concepts of ecosystem services (ES) and natural capital (NC). This discourse indicates not only a change in our understanding of planetary functions at the ecosystem scale, but also a fundamental shift in how we perceive the relationship between people and the ecosystems on which they depend. OPERAs (OPERATIONAL POTENTIAL OF ECOSYSTEMS RESEARCH APPLICATIONS) aims to improve understanding of how ES/NC contribute to human well-being in different social-ecological systems in inland and coastal zones, in rural and urban areas, related to different ecosystems including forests and fresh water resources. The OPERAs research will establish whether, how and under what conditions the ES/NC concepts can move beyond the academic domain towards practical implementation in support of sustainable ecosystem management. OPERAs will use a meta-analysis (systematic review) of existing ES/NC practice to identify knowledge gaps and requirements for new policy options and instruments. New insights, and improved or novel tools and instruments, will be tested in practice in exemplar case studies in a range of socio-ecological systems across locales, sectors, scales and time. Throughout this iterative process, available resources and tools will be brought together in a 'Resource Hub', a web-based portal that will be co-developed by scientists and practitioners representing different interests and perspectives on the development, communication and implementation of the ES/NC concepts. The Resource Hub will provide the main interface between OPERAs and a 'Community of Excellence' (CoE) for continued practice that will benefit from OPERAs outcomes.

**Partners:**

| | | |
|---|---|---|
| 1 | THE UNIVERSITY OF EDINBURGH | UK |
| 2 | VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG | NL |
| 3 | Karlsruher Institut fuer Technologie | DE |
| 4 | HELMHOLTZ-ZENTRUM FUER UMWELTFORSCHUNG GMBH - UFZ | DE |
| 5 | LUNDS UNIVERSITET | SE |
| 6 | EUROPEAN FOREST INSTITUTE | FI |
| 7 | PROSPEX BVBA | BE |
| 8 | WCMC LBG | UK |
| 9 | FUNDATIA PENTRU TEHNOLOGIA INFORMATIEI APLICATE IN MEDIU,AGRICULTURA SI SCHIMBARI GLOBALE | RO |
| 10 | INSTITUTE FOR EUROPEAN ENVIRONMENTAL POLICY, LONDON | UK |
| 11 | UNIVERSITY COLLEGE DUBLIN, NATIONAL UNIVERSITY OF IRELAND, DUBLIN | IE |
| 12 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 13 | POTSDAM INSTITUT FUER KLIMAFOLGENFORSCHUNG | DE |
| 14 | EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZURICH | CH |
| 15 | WWF–World Wide Fund for Nature Danube–Carpathian Programme Bulgaria | BG |
| 16 | WWF Programul Dunare Carpati Romania | RO |
| 17 | Jose Lascurain | ES |
| 18 | FUNDACAO DA FACULDADE DE CIENCIAS DA UNIVERSIDADE DE LISBOA | PT |
| 19 | Eco-metrica Limited | UK |
| 20 | BIOTOPE | FR |
| 21 | IODINE SPRL | BE |
| 22 | denkstatt Bulgaria OOD | BG |
| 23 | Center for International Forestry Research | ID |
| 24 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 25 | UNIVERSITY OF EAST ANGLIA | UK |

**Activity Code:** ENV.2012.6.2-1 **Funding Scheme:** CP **Duration (Months):** 54

**Title:** OPERATIONALISATION OF NATURAL CAPITAL AND ECOSYSTEM SERVICES: FROM CONCEPTS TO REAL-WORLD APPLICATIONS

**Proposed EC Grant:** 8.999.193 €

**Abstract:**

Despite improved understanding of the links between ecosystem health, provision of ecosystem services and human well-being, further conceptual and empirical work is needed to make the ideas of ecosystem services (ESS) and natural capital (NC) operational. OpenNESS will therefore develop innovative and practical ways of applying them in land, water and urban management: it will identify how, where and when the concepts can most effectively be applied to solve problems. To do this, it will work with public and private decision makers and stakeholders to better understand the range of policy and management problems faced in different case study contexts (ranging across locales, sectors, scales and time). OpenNESS will consolidate, refine and develop a range of spatially-explicit methods to identify, quantify and value ecosystem services, and will develop hybrid assessment methods. It will also explore the effectiveness of financial and governance mechanisms, such as payments for ecosystem services, habitat banking, biodiversity offsetting and land and ecosystem accounting. These types of interventions have potential for sustaining ESS and NC, and for the design of new economic and social investment opportunities. Finally, OpenNESS will assess how current regulatory frameworks and other institutional factors at EU and national levels enable or constrain consideration of ESS and NC, and identify the implications for issues related to well-being, governance and competitiveness. OpenNESS will analyse the knowledge that is needed to define ESS and NC in the legal, administrative and political contexts that are relevant to the EU. The work will deliver a menu of multi-scale solutions to be used in real life situations by stakeholders, practitioners, and decision makers in public and business organizations, by providing new frameworks, data-sets, methods and tools that are fit-for-purpose and sensitive to the plurality of decision-making contexts.

**Partners:**

| | | |
|---|---|---|
| 1 | SUOMEN YMPARISTOKESKUS | FI |
| 2 | HELMHOLTZ-ZENTRUM FUER UMWELTFORSCHUNG GMBH - UFZ | DE |
| 3 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 4 | MINISTERIE VAN INFRASTRUCTUUR EN MILIEU | NL |
| 5 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 6 | THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF OXFORD | UK |
| 7 | THE UNIVERSITY OF NOTTINGHAM | UK |
| 8 | STIFTELSEN NORSK INSTITUTT FOR NATURFORSKNING | NO |
| 9 | VLAAMS GEWEST | BE |
| 10 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 11 | HELSINGIN YLIOPISTO | FI |
| 13 | INSTITUT NATIONAL DE RECHERCHE EN SCIENCES ET TECHNOLOGIES POUR L'ENVIRONNEMENT ET L'AGRICULTURE | FR |
| 14 | MAGYAR TUDOMÁNYOS AKADÉMIA ÖKOLÓGIAI KUTATÓKÖZPONT | HU |
| 16 | INSTITUTUL DE CERCETARI SI AMENAJARI SILVICE | RO |
| 17 | INSTITUTE OF LANDSCAPE ECOLOGY OF THE SLOVAK ACADEMY OF SCIENCES | SK |
| 18 | FUNDACAO DA FACULDADE DE CIENCIAS E TECNOLOGIA DA UNIVERSIDADE NOVA DE LISBOA. | PT |
| 19 | FUNDACION TECNALIA RESEARCH & INNOVATION | ES |
| 20 | UNIVERSIDAD AUTONOMA DE MADRID | ES |
| 21 | UNIVERSITAT AUTONOMA DE BARCELONA | ES |
| 22 | AARHUS UNIVERSITET | DK |
| 22 | AARHUS UNIVERSITET | DK |
| 23 | ESSRG Kft. | HU |
| 24 | The Environment Bank Limited | UK |
| 25 | HUGIN EXPERT A/S | DK |
| 27 | RNDr. Peter Mederly - REGIOPLAN | SK |
| 28 | IRIDRA SRL | IT |
| 32 | Kinross Estate Company | UK |

**Activity Code:** ENV.2012.6.2-2 **Funding Scheme:** CP **Duration (Months):** 54

**Title:** EU BON: Building the European Biodiversity Observation Network

**Proposed EC Grant:** 8.999.806 €

**Abstract:**

Sustainable governance of our biological resources requires reliable scientific knowledge that meets the needs of society. Current biodiversity observation systems and environmental datasets are unbalanced in coverage and not integrated, limiting integrative analyses and implementation of environmental policies.EU BON presents an innovative approach towards integration of biodiversity information systems from on-ground to remote sensing data, for addressing policy and information needs in a timely and customized manner. EU BON will provide integration between social networks of science and policy and technological networks of interoperating IT infrastructures, resulting in a new open-access platform for sharing biodiversity data and tools, and greatly advance biodiversity knowledge in Europe. EU BON's 29 partners from 18 countries are members of networks of biodiversity data-holders, monitoring organisations, and leading scientific institutions. EU BON will build on existing components, in particular GBIF, LifeWatch infrastructures, and national biodiversity data centres. EU BON will 1) enable greater interoperability of data layers and systems through adoption of new standards; 2) advance data integration by new (modelling) technologies; 3) increase data mobilisation via scientific communities, citizen scientists, and potential data users; 4) develop strategies for future harmonizing and mainstreaming of biodiversity recording and monitoring; 5) improve analytical tools and services interpreting biodiversity data; 6) support the science-policy interface by timely information and scenario development; 7) link integrated, customized information to relevant stakeholders, and 8) strengthen overall European capacities and infrastructures for environmental information management. EU BON's deliverables include a comprehensive "European Biodiversity Portal" for all stakeholder communities, and strategies for a global implementation of GEO BON and supporting IPBES.

**Partners:**

| | | |
|---|---|---|
| 1 | MUSEUM FUR NATURKUNDE - LEIBNIZ-INSTITUT FUR EVOLUTIONS- UND BIODIVERSITATSFORSCHUNG AN DER HUMBOLDT-UNIVERSITAT ZU BERLIN | DE |
| 2 | TARTU ULIKOOL | EE |
| 3 | Itä-Suomen yliopisto | FI |
| 4 | Global Biodiversity Information Facility | DK |
| 5 | UNIVERSITY OF LEEDS | UK |
| 6 | HELMHOLTZ-ZENTRUM FUER UMWELTFORSCHUNG GMBH - UFZ | DE |
| 7 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 8 | THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE | UK |
| 9 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 10 | Pensoft Publishers Ltd | BG |
| 11 | SENCKENBERG GESELLSCHAFT FUR NATURFORSCHUNG | DE |
| 12 | VIZZUALITY SL | ES |
| 13 | FISHBASE INFORMATION & RESEARCH GROUP INC | PH |
| 14 | HELLENIC CENTRE FOR MARINE RESEARCH | EL |
| 15 | NATURAL HISTORY MUSEUM | UK |
| 16 | FREIE UNIVERSITAET BERLIN | DE |
| 17 | KOBENHAVNS UNIVERSITET | DK |
| 18 | MUSEE ROYAL DE L'AFRIQUE CENTRALE | BE |
| 19 | Plazi | CH |
| 20 | GLUECAD LTD | IL |
| 21 | INSTITUTE FOR EUROPEAN ENVIRONMENTAL POLICY, LONDON | UK |
| 22 | Instituto Nacional de Pesquisas da Amazônia | BR |
| 23 | NATURHISTORISKA RIKSMUSEET | SE |
| 24 | BOTANICKY USTAV SLOVENSKEJ AKADEMIE VIED | SK |
| 25 | CENTRE TECNOLOGIC FORESTAL DE CATALUNYA | ES |
| 26 | NORGES TEKNISK-NATURVITENSKAPELIGE UNIVERSITET NTNU | NO |
| 27 | FONDAZIONE EDMUND MACH | IT |
| 28 | TERRADATA | IT |
| 29 | ACCADEMIA EUROPEA PER LA RICERCA APPLICATA ED IL PERFEZIONAMENTO PROFESSIONALE BOLZANO (ACCADEMIA EUROPEA BOLZANO) | IT |

**Activity Code:** ENV.2007.2.2.1.8. **Funding Scheme:** CSA **Duration (Months):** 30

**Title:** CASPIAN ENVIRONMENTAL AND INDUSTRIAL DATA & INFORMATION SERVICE

**Proposed EC Grant:** 800.697 €

**Abstract:**

CASPINFO aims at strengthening the regional capacity and performance of marine environmental data & information management, and adoption of international meta-data standards and data-management practices, involving stakeholders from management, research, and industry. The objectives are: • To initiate and maintain a Caspian Sea network of leading environmental and socio-economic research institutes, governmental departments, oil & gas industries, and international bodies, jointly working on the definition, development and operation of the CASPINFO service. • Development and establishment of an Internet based CASPINFO Data & Information Service to facilitate the access to socio-economic and legal information, metadata and distributed datasets, managed by the regional partners, and to support marine environmental management. • To explore and to develop a sustainable operation model for the CASPINFO service, thereby taking into account that the partners are coming from different backgrounds (public and private sectors) and possibly will deal with a mix of public and commercial data & information. Improved access to high quality, up-to-date environmental, economic, social and industrial (meta-) data and information, is a key issue. The CASPINFO data & information service will serve as a repository for relevant, available marine environmental and industrial (meta-) data and serve as an important instrument for marine environmental scientists, oil & gas industry and other marine industries, governmental decision makers and managers and the general public. Interoperability and harmonisation with other European systems are key conditions. CASPINFO will zoom in on the environment, but moreover on supporting assessments of impacts and effectiveness of measures concerning oil & gas industry activities, which are of great economic importance to the region. CASPINFO will also be promoted to other marine industries, that might benefit from the service.

**Partners:**

| | | |
|---|---|---|
| 1 | MARIENE INFORMATIE SERVICE MARIS BV | NL |
| 2 | Sumgayit Center for Environmental Rehabilitation | AZ |
| 3 | INSTITUTE OF GEOGRAPHY NAMED H A ALIYEV NATIONAL ACADEMY OF SCIENCES OF AZERBAIJAN | AZ |
| 4 | INSTITUTE OF GEOGRAPHY | KZ |
| 5 | UNITED NATIONS DEVELOPMENT PROGRAMME | US |
| 6 | GOSUDARSTVENNOE UCHREZHDENIE GOSUDARSTVENNIY OKEANOGRAFICHESKIY INSTITUT-STATE OCEANOGRAPHIC INSTITUTE SO | RU |
| 7 | INSTITUT PROBLEM EKOLOGII I EVOLYUCII IM A N SEVERTSOV ROSSIISKAYA AKADEMIYA NAUK*SIEE-RAS A.N.SEVERTSOVINSTITUTE OF ECOLOGY AND EVOLUTION | RU |
| 8 | P.P. SHIRSHOV INSTITUTE OF OCEANOLOGY OF RUSSIAN ACADEMY OF SCIENCES | RU |
| 9 | FEDERAL STATE BUGETARY INSTITUTION CASPIAN MARINE SCIENTIFIC AND RESEARCH CENTRE | RU |
| 10 | INSTITUT GEOEKOLOGII ROSSIYSKOY AKADEMII NAUK | RU |
| 12 | THE COMMISSION ON THE PROTECTION OFTHE BLACK SEA AGAINST POLLUTION | TR |
| 13 | HELLENIC CENTRE FOR MARINE RESEARCH | EL |
| 14 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 15 | STATE OIL COMPANY OF THE AZERBAIJAN REPUBLIC INVESTMENT DIVISION | AZ |
| 17 | DAGESTANSKIY GOSUDARSTVENNIY UNIVERSITET | RU |
| 18 | M V LOMONOSOV MOSCOW STATE UNIVERSITY | RU |
| 19 | UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION -UNESCO | FR |

**Activity Code:** ENV.2007.2.2.1.6. **Funding Scheme:** CSA **Duration (Months):** 42

**Title:** Coordination Action for Research Activities on Life in Extreme Environments

**Proposed EC Grant:** 1.199.524 €

**Abstract:**

Life in Extreme Environments (LEXEN) is an emerging area of research in which Europe has considerable expertise but a relatively fragmented research infrastructure. The science of such environments has enormous relevance for our knowledge of the diversity and environmental limits of microbial, plant and animal life and the novel strategies employed for survival and growth. Such studies are essential in understanding how life established on the early Earth and in assessing the possibilities for life on other planetary bodies. These environments are also a rich source of novel exploitable compounds. The Work Programme identifies a need for better coordination of LEXEN research and CAREX aims to address this need by developing a clearly identifiable, dynamic and durable community. Establishing this community will encourage greater inter-disciplinarity and increasing knowledge of extreme environments. It will provide a target for young career scientists and allow a more focussed dialogue with other science areas, with funding agencies, with industrial groups and with international organisations outside Europe. CAREX deliverables will include a strategic roadmap for European LEXEN research (including enabling technologies), diverse opportunities for knowledge transfer, standardisation of methodologies, encouragement and support for early career scientists and a network of links to relevant organisations. These deliverables together with improved community networking, supported by newsletters, promotional leaflets, a series science publications and an interactive web portal, will help consolidate the community and its identity. Outcomes will be facilitated through science/technology workshops, diverse forums, field/laboratory protocol intercomparisons, a summer school and individual grants to facilitate knowledge transfer. CAREX has evolved with the key players from the highly successful ESF “Investigating Life in Extreme Environments” initiative .

**Partners:**

| | | |
|---|---|---|
| 1 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 2 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 3 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 4 | DEUTSCHES ZENTRUM FUER LUFT - UND RAUMFAHRT EV | DE |
| 5 | FONDATION EUROPEENNE DE LA SCIENCE | FR |
| 6 | INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER | FR |
| 7 | BOTANICKY USTAV AVCR | CZ |
| 8 | INSTITUTO NACIONAL DE TECNICA AEROESPACIAL | ES |
| 9 | MATIS OHF | IS |

**Activity Code:** ENV.2007.2.2.1.4. **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Marine Ecosystem Evolution in a Changing Environment

**Proposed EC Grant:** 6.499.745 €

**Abstract:**

MEECE is a scientific research project which aims to use a combination of data synthesis, numerical simulation and targeted experimentation to further our knowledge of how marine ecosystems will respond to combinations of multiple climate change and anthropogenic drivers. With an emphasis on the European Marine Strategy (EMS), MEECE will improve the decision support tools to provide a structured link between management questions and the knowledge base that can help to address those questions. A strong knowledge transfer element will provide an effective means of communication between end-users and scientists.

**Partners:**

| | | |
|---|---|---|
| 1 | PLYMOUTH MARINE LABORATORY | UK |
| 2 | UNIVERSITETET I BERGEN | NO |
| 3 | UNIVERSITAET HAMBURG | DE |
| 4 | FUNDACION AZTI/AZTI FUNDAZIOA | ES |
| 5 | ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA | IT |
| 6 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 7 | THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS | UK |
| 8 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 9 | INSTITUT DE RECHERCHE POUR LE DEVELOPPEMENT | FR |
| 10 | DANMARKS TEKNISKE UNIVERSITET | DK |
| 11 | HAVFORSKNINGSINSTITUTTET | NO |
| 12 | MIDDLE EAST TECHNICAL UNIVERSITY | TR |
| 13 | HELLENIC CENTRE FOR MARINE RESEARCH | EL |
| 14 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 15 | SIR ALISTER HARDY FOUNDATION FOR OCEAN SCIENCE | UK |
| 16 | UNIVERSITA DEGLI STUDI DEL PIEMONTE ORIENTALE AMEDEO AVOGADRO | IT |
| 17 | KLAIPEDOS UNIVERSITETAS | LT |
| 18 | BOLDING & BURCHARD APS | DK |
| 19 | INSTITUTO ESPANOL DE OCEANOGRAFIA | ES |
| 20 | COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES | FR |
| 21 | SYDDANSK UNIVERSITET | DK |
| 22 | UNIVERSITY OF CAPE TOWN | ZA |

**Activity Code:** ENV.2007.2.2.1.2. **Funding Scheme:** CP **Duration (Months):** 54

**Title:** European Eels in the Atlantic: Assessment of Their Decline

**Proposed EC Grant:** 2.634.712 €

**Abstract:**

Eels play an important socioeconomic and ecological role in many European countries. Recruitment failure has contributed to a halving of catches from 40,000t in the last three decades to less than 20,000t today. The EU's Eel Recovery Plan aims to maximize silver eel production and escapement to the sea to maintain the stock's reproductive potential. However, very little is known about the contribution of eels of different European river systems to successful recruitment because almost nothing is known about the life of silver eels once they escape to the sea. We propose a research initiative to investigate the ecology and environmental dependencies of European eels during their spawning migration. Archival tags that detach from their eel hosts and communicate stored data via satellite will be used to determine migration routes, migration success and habitat preferences of different stock components. The information will be integrated with studies on eels in riverine and estuarine habitats, and leading edge biochemical techniques, to determine the most important eel habitats to conserve to enhance and conserve eel stocks in the UK and across Europe

**Partners:**

| | | |
|---|---|---|
| 1 | THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS | UK |
| 2 | DANMARKS TEKNISKE UNIVERSITET | DK |
| 3 | STIFTELSEN NORSK INSTITUTT FOR NATURFORSKNING | NO |
| 4 | CENTRAL FISHERIES BOARD | IE |
| 5 | MARINE INSTITUTE | IE |
| 6 | INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER | FR |
| 7 | INSTITUT NATIONAL DE RECHERCHE EN SCIENCES ET TECHNOLOGIES POUR L'ENVIRONNEMENT ET L'AGRICULTURE | FR |
| 8 | SVERIGES LANTBRUKSUNIVERSITET | SE |
| 9 | MUSEUM NATIONAL D'HISTOIRE NATURELLE | FR |
| 10 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 12 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 13 | FISKERIVERKET | SE |

**Activity Code:** ENV.2007.2.2.1.2. **Funding Scheme:** CP **Duration (Months):** 43

**Title:** Advancing understanding of Atlantic Salmon at Sea: Merging Genetics and Ecology to resolve Stock-specific Migration and Distribution patterns

**Proposed EC Grant:** 3.499.762 €

**Abstract:**

Over the past two decades, an increasing proportion of North Atlantic salmon are dying at sea during their oceanic feeding migration. The specific reasons for the decline in this important species are as yet unknown, however, climate change is likely to be an important factor. In some rivers in the southern part of the salmons range, wild salmon now face extinction. This is in spite of unprecedented management measures to halt this decline. Arguably the greatest challenge in salmon conservation is to gain insight into the spatial and ecological use of the marine environment by different regional and river stocks, which are known to show variation in marine growth, condition, and survival. Salmon populations may migrate to different marine zones, whose environmental conditions may vary. To date it has been impossible to sample and identify the origin of sufficient numbers of wild salmon at sea to enable this vital question to be addressed. SALSEA-Merge will provide the basis for advancing our understanding of oceanic-scale, ecological and ecosystem processes. Such knowledge is fundamental to the future sustainable management of this key marine species. Through a partnership of 9 European nations the programme will deliver innovation in the areas of: genetic stock identification techniques, new genetic marker development, fine scale estimates of growth on a weekly and monthly basis, the use of novel high seas pelagic trawling technology and individual stock linked estimates of food and feeding patterns. In addition, the use of the three-dimensional Regional Ocean Modelling System, merging hydrography, oceanographic, genetic and ecological data, will deliver novel stock specific migration and distribution models. This widely supported project, provides the basis for a comprehensive investigation into the problems facing salmon at sea. It will also act as an important model for understanding the factors affecting survival of many other important marine species.

**Partners:**

| | | |
|---|---|---|
| 1 | HAVFORSKNINGSINSTITUTTET | NO |
| 2 | MARINE INSTITUTE | IE |
| 3 | THE SCOTTISH MINISTERS ACTING THROUGH MARINE SCOTLAND | UK |
| 4 | STIFTELSEN NORSK INSTITUTT FOR NATURFORSKNING | NO |
| 5 | THE UNIVERSITY OF EXETER | UK |
| 6 | UNIVERSITY COLLEGE CORK, NATIONAL UNIVERSITY OF IRELAND, CORK | IE |
| 7 | QUEEN'S UNIVERSITY BELFAST | UK |
| 8 | SWANSEA UNIVERSITY | UK |
| 9 | DANMARKS TEKNISKE UNIVERSITET | DK |
| 10 | VEIDIMALASTOFNUN INSTITUTE OF FRESHWATER FISHERIES IFL | IS |
| 11 | TURUN YLIOPISTO | FI |
| 12 | UNIVERSIDAD DE OVIEDO | ES |
| 13 | GENINDEXE | FR |
| 14 | RIISTA- JA KALATALOUDEN TUTKIMUSLAITOS | FI |
| 15 | HAVSTOVAN | FO |
| 16 | ATLANTIC SALMON TRUST | UK |
| 17 | INTERNATIONAL ATLANTIC SALMON RESEARCH BOARD | UK |
| 18 | Fondation d'entreprise TOTAL | FR |
| 19 | CONSERVATOIRE NATIONAL DU SAUMON SAUVAGE | FR |
| 20 | LOUGHS AGENCY (FCILC) | UK |

**Activity Code:** ENV.2007.2.2.1.3. **Funding Scheme:** CP **Duration (Months):** 54

**Title:** Assessment of the interaction between corals, fish and fisheries, in order to develop monitoring and predictive modelling tools for ecosystem based management in the deep waters of Europe and beyond

**Proposed EC Grant:** 6.499.906 €

**Abstract:**

In 2006, the UN General Assembly Resolution (61/105) called upon fisheries management organisations worldwide to: i) assess the impact of bottom fishing on vulnerable marine ecosystems, ii) identify/map vulnerable ecosystems through improved scientific research/data collection, and iii) close such areas to bottom fishing unless conservation and management measures were established to prevent their degradation. In European deep waters, in addition, there is now a need to establish monitoring tools to evaluate the effectiveness of closed areas for the conservation of biodiversity and fish and their impact on fisheries. Currently the tools necessary to achieve these management goals are wholly lacking. CoralFISH aims to support the implementation of an ecosystem-based management approach in the deep-sea by studying the interaction between cold-water coral habitat, fish and fisheries. CoralFISH brings together a unique consortium of deep-sea fisheries biologists, ecosystem researchers/modellers, economists and a fishing industry SME, who will collaborate to collect data from key European marine eco-regions. CoralFISH will: i) develop essential methodologies and indicators for baseline and subsequent monitoring of closed areas, ii) integrate fish into coral ecosystem models to better understand coral fish-carrying capacity, iii) evaluate the distribution of deepwater bottom fishing effort to identify areas of potential interaction and impact upon coral habitat, iv) use genetic fingerprinting to assess the potential erosion of genetic fitness of corals due to long-term exposure to fishing impacts, v) construct bio-economic models to assess management effects on corals and fisheries to provide policy options, and vi) produce as a key output, habitat suitability maps both regionally and for OSPAR Region V to identify areas likely to contain vulnerable habitat. The latter will provide the EU with the tools to address the issues raised by the UNGA resolution.

**Partners:**

| | | |
|---|---|---|
| 1 | NATIONAL UNIVERSITY OF IRELAND, GALWAY | IE |
| 2 | HAVFORSKNINGSINSTITUTTET | NO |
| 3 | HAFRANNSOKNASTOFNUNIN | IS |
| 4 | INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER | FR |
| 5 | IMAR- INSTITUTO DO MAR | PT |
| 6 | HELLENIC CENTRE FOR MARINE RESEARCH | EL |
| 7 | CONSORZIO NAZIONALE INTERUNIVERSITARIO PER LE SCIENZE DEL MARE | IT |
| 8 | KONINKLIJKE NEDERLANDSE AKADEMIE VAN WETENSCHAPPEN - KNAW | NL |
| 9 | Zoological Society of London, Institute of Zoology | UK |
| 10 | UNIVERSITETET I TROMSOE | NO |
| 11 | THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN | UK |
| 12 | STICHTING KONINKLIJK NEDERLANDS INSTITUUT VOOR ZEEONDERZOEK (NIOZ) | NL |
| 13 | O'MALLEY FISHERIES | IE |
| 14 | FRIEDRICH-ALEXANDER-UNIVERSITAT ERLANGEN NURNBERG | DE |
| 15 | UNIVERSITY COLLEGE CORK, NATIONAL UNIVERSITY OF IRELAND, CORK | IE |
| 16 | UNIVERSITAET BREMEN | DE |
| 17 | AARHUS UNIVERSITET | DK |
| 17 | AARHUS UNIVERSITET | DK |
| 18 | SENCKENBERG GESELLSCHAFT FUR NATURFORSCHUNG | DE |

**Activity Code:** ENV.2.2. **Funding Scheme:** CSA **Duration (Months):** 23

**Title:** Joint Baltic Sea Research and Development Programme (BONUS) undertaken by several Member States with the participation of the Union

**Proposed EC Grant:** 949.181 €

**Abstract:**

This Grant Agreement covers the Strategic Phase of the BONUS Joint Baltic Sea Research and Development Programme.The strategic phase of BONUS shall last up to 23 months . It shall prepare the implementation phase. During the strategic phase, BONUS EEIG shall carry out the following tasks:(a) Preparation of the Strategic Research Agenda defining the part on scientific content of the programme focussing on calls for proposals, in conformity with the objectives set in the Seventh Framework Programme;(b) Setting up of the Stakeholder Consultation Platforms with the aim of strengthening and institutionalising the involvement of stakeholders from all relevant sectors;(c) Preparation of the implementation modalities including legal and financial rules and procedures, provisions governing the intellectual property rights arising from the BONUS activities, human resources and communication aspects.

**Partners:**

1 BALTIC ORGANISATIONS NETWORK FOR FUNDING SCIENCE FI

**Activity Code:** ENV.2008.2.2.1.2. **Funding Scheme:** CP **Duration (Months):** 42

**Title:** Hotspot Ecosystem Research and Man's Impact on European seas

**Proposed EC Grant:** 7.998.955 €

**Abstract:**

The HERMIONE project is designed to make a major advance in our knowledge of the functioning of deep-sea ecosystems and their contribution to the production of goods and services. This will be achieved through a highly interdisciplinary approach (including biologists, ecologists, microbiologists, biogeochemists, sedimentologists, physical oceanographers, modelers and socio-economists) that will integrate biodiversity, specific adaptions and biological capacity in the context of a wide range of highly vulnerable deep-sea habitats. Gaining this understanding is crucial, because these ecosystems are now being affected by climate change and impacted by man through fishing, resource extraction, seabed installations and pollution. To design and implement effective governance strategies and management plans we must understand the extent, natural dynamics and interconnection of ocean ecosystems and integrate socio-economic research with natural science. The study sites include the Arctic, North Atlantic and Mediterranean and cover a range of ecosystems including cold-water corals, canyons, cold and hot seeps, seamounts and open slopes and deep-basins. The project will make strong connections between deep-sea science and user needs. HERMIONE will enhance the education and public perception of the deep-ocean issues also through some of the major EU aquaria. These actions, together with GEOSS databases that will be made available, will create a platform for discussion between a range of stakeholders, and contribute to EU environmental policies.

**Partners:**

| | | |
|---|---|---|
| 1 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 2 | INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER | FR |
| 3 | STICHTING KONINKLIJK NEDERLANDS INSTITUUT VOOR ZEEONDERZOEK (NIOZ) | NL |
| 4 | UNIVERSITAT DE BARCELONA | ES |
| 5 | HELLENIC CENTRE FOR MARINE RESEARCH | EL |
| 6 | LEIBNIZ-INSTITUT FUER MEERESWISSENSCHAFTEN AN DER UNIVERSITAET KIEL | DE |
| 7 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 8 | ALFRED-WEGENER-INSTITUT FUER POLAR- UND MEERESFORSCHUNG | DE |
| 9 | UNIVERSITETET I TROMSOE | NO |
| 10 | NATIONAL UNIVERSITY OF IRELAND, GALWAY | IE |
| 11 | FRIEDRICH-ALEXANDER-UNIVERSITAT ERLANGEN NURNBERG | DE |
| 12 | UNIVERSITEIT GENT | BE |
| 13 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 14 | CONSORZIO NAZIONALE INTERUNIVERSITARIO PER LE SCIENZE DEL MARE | IT |
| 15 | MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. | DE |
| 16 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 17 | INSTITUTO HIDROGRAFICO | PT |
| 18 | JACOBS UNIVERSITY BREMEN GMBH | DE |
| 19 | UNIVERSITAET BREMEN | DE |
| 20 | CARDIFF UNIVERSITY | UK |
| 21 | HAVFORSKNINGSINSTITUTTET | NO |
| 22 | GOETEBORGS UNIVERSITET | SE |
| 23 | UNIVERSITY OF SOUTHAMPTON | UK |
| 24 | KONINKLIJKE NEDERLANDSE AKADEMIE VAN WETENSCHAPPEN - KNAW | NL |
| 25 | THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN | UK |
| 26 | THE UNIVERSITY OF LIVERPOOL | UK |
| 27 | THE SCOTTISH ASSOCIATION FOR MARINE SCIENCE | UK |
| 28 | UNIVERSIDADE DE AVEIRO | PT |
| 29 | UNIVERSITE PIERRE ET MARIE CURIE - PARIS 6 | FR |
| 30 | P.P. SHIRSHOV INSTITUTE OF OCEANOLOGY OF RUSSIAN ACADEMY OF SCIENCES | RU |
| 31 | UNITED NATIONS ENVIRONMENT PROGRAMME | KE |
| 32 | Universidade dos Açores | PT |
| 33 | Median SCP | ES |
| 34 | ArchimediX, Möckl & Munzel GbR | DE |
| 35 | PANEPISTIMIO THESSALIAS (UNIVERSITY OF THESSALY) | EL |
| 36 | UNIVERSITY COLLEGE CORK, NATIONAL UNIVERSITY OF IRELAND, CORK | IE |
| 37 | National Marine Aquarium Ltd. | UK |
| 38 | COSTA EDUTAINMENT S.P.A | IT |

| | | |
|---|---|---|
| 39 | HERIOT-WATT UNIVERSITY | UK |
| 40 | SENCKENBERG GESELLSCHAFT FUR NATURFORSCHUNG | DE |

**Activity Code:** ENV.2008.2.2.1.1. **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Monitoring and Evaluation of Spatially Managed Areas (MESMA)

**Proposed EC Grant:** 6.568.842 €

**Abstract:**

The increasing pressures upon the marine realm call for a well planned approach of further spatial development of this area. An ecosystem-based approach to fisheries, the increasing demand for sustainable energy, coastal defence systems, building materials and safe transport routes and the need to protect marine habitats and species all compete for the same valuable space. At the same time climate change will alter the composition and functioning of marine ecosystems, calling for a robust approach of future spatial planning that also takes cross boundary developments into account. MESMA will supply innovative methods and integrated strategies for governments, local authorities, stakeholders and other managerial bodies for planning and decision making at different local, national and European scales. This will also comprise an easy accessible information system to gain support from politicians, stakeholders and the public in general for difficult (inter)national decisions that will be needed for sustainable use and protection of this vulnerable area. This data system, containing information on the distribution of marine habitats and species, economic values and benefits and human uses and its effects will also be an interface between science, policy and decision makers.MESMA will supply strategic tools for sustainable development of European seas and coastal areas. The major challenge is to combine an optimized use with a sustained ecosystem of high quality, taking into account ecological and economic differences. By studying and comparing different national situations and solutions from a selected number of sites throughout Europe and by determining common features and differences, including the socio-economic settings and requirements, an integrated toolbox that can be applied throughout Europe will be made available.

**Partners:**

| | | |
|---|---|---|
| 1 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 2 | UNIVERSITY COLLEGE LONDON | UK |
| 3 | SENCKENBERG GESELLSCHAFT FUR NATURFORSCHUNG | DE |
| 4 | UNIVERSITEIT GENT | BE |
| 5 | HELLENIC CENTRE FOR MARINE RESEARCH | EL |
| 6 | INSTITUTE OF OCEANOLOGY - BULGARIAN ACADEMY OF SCIENCES | BG |
| 7 | HAVFORSKNINGSINSTITUTTET | NO |
| 8 | UNIVERSITY COLLEGE CORK, NATIONAL UNIVERSITY OF IRELAND, CORK | IE |
| 9 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 10 | FUNDACION AZTI/AZTI FUNDAZIOA | ES |
| 11 | MINISTRY FOR RESOURCES AND RURAL AFFAIRS | MT |
| 12 | DANMARKS TEKNISKE UNIVERSITET | DK |
| 13 | THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS | UK |
| 14 | HERIOT-WATT UNIVERSITY | UK |
| 16 | STICHTING DELTARES | NL |
| 17 | NORSK INSTITUTT FOR VANNFORSKNING | NO |
| 18 | NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO | NL |
| 19 | VLAAMS GEWEST | BE |
| 20 | JOHANN HEINRICH VON THUENEN-INSTITUT, BUNDESFORSCHUNGSINSTITUT FUER LANDLICHE RAUME, WALD UND FISCHEREI | DE |
| 21 | INSTITUT ROYAL DES SCIENCES NATURELLES DE BELGIQUE | BE |
| 22 | INSTYTUT OCEANOLOGII - POLSKIEJ AKADEMII NAUK | PL |

**Activity Code:** ENV.2008.2.2.1.3. **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Knowledge-based Sustainable Management for Europe's Seas

**Proposed EC Grant:** 5.764.200 €

**Abstract:**

Europe's four regional seas (Baltic, Black, Mediterranean and NE Atlantic) have suffered severe environmental degradation due to human pressure. Existing measures to manage pressures have proven inadequate and the EC has responded by proposing a new policy (Maritime Strategy Blue Book) and environmental legislation (Marine Strategy Directive), both currently close to adoption. These instruments rely on the Ecosystem Approach, a management paradigm that encompasses humans and the supporting ecosystem. But the science base for this approach needs strengthening and practical tools must be developed and tested for policy implementation. In particular, criteria for assessing costs and benefits of management actions are poorly developed, particularly in the complex marine environment where multiple uses and management conflicts are common. The KnowSeas consortium will strengthen the science base for managing Europe's seas through the practical application of systems thinking. It will work at the two scales envisaged for emergent EU policy: the Regional Sea Scale and Member State Economic Exclusive Zones (EEZs). We have developed a new approach of Decision Space Analysis to investigate mismatches of scale. Knowledge created through the FP6 European Lifestyles and Marine Ecosystems project, augmented with necessary new studies of climate effects, fisheries and maritime industries - in EEZ case studies - will provide a basis for assessing changes to natural systems and their human causes. New research will examine and model economic and social impacts of changes to ecosystem goods and services and costs and benefits of various management options available through existing and proposed policy instruments. Institutional and social analysis will determine conflicts of interest and examine governance as well as stakeholder values and perceptions. Our research will develop and test an assessment toolbox through regional liaison groups and a multisectoral Project Advisory Board.

**Partners:**

| | | |
|---|---|---|
| 1 | THE SCOTTISH ASSOCIATION FOR MARINE SCIENCE | UK |
| 2 | ALFRED-WEGENER-INSTITUT FUER POLAR- UND MEERESFORSCHUNG | DE |
| 3 | STOCKHOLMS UNIVERSITET | SE |
| 4 | THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS | UK |
| 5 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 7 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 8 | STICHTING DELTARES | NL |
| 9 | ENVISION MANAGEMENT LTD | UK |
| 10 | Coastal & Marine Union | NL |
| 11 | HELMHOLTZ-ZENTRUM GEESTHACHT ZENTRUM FUR MATERIAL- UND KUSTENFORSCHUNG GMBH | DE |
| 12 | INSTITUTE FOR EUROPEAN ENVIRONMENTAL POLICY, LONDON | UK |
| 13 | IMAR- INSTITUTO DO MAR | PT |
| 14 | INSTITUTE OF OCEANOLOGY - BULGARIAN ACADEMY OF SCIENCES | BG |
| 15 | KONINKLIJKE NEDERLANDSE AKADEMIE VAN WETENSCHAPPEN - KNAW | NL |
| 16 | UNIVERSITA DEGLI STUDI DI PADOVA | IT |
| 17 | MEGAPESCA FORMACAO PROFISSIONAL EPRESTACAO DE SERVICOS LDA | PT |
| 18 | MIDDLE EAST TECHNICAL UNIVERSITY | TR |
| 19 | NORSK INSTITUTT FOR LUFTFORSKNING | NO |
| 20 | SIR ALISTER HARDY FOUNDATION FOR OCEAN SCIENCE | UK |
| 21 | UNIVERSITY OF PLYMOUTH | UK |
| 22 | SYDDANSK UNIVERSITET | DK |
| 23 | Morski Instytut Rybacki w Gdyni | PL |
| 24 | SUOMEN YMPARISTOKESKUS | FI |
| 25 | UNIVERSITE DE BRETAGNE OCCIDENTALE | FR |
| 26 | UNIVERSITY COLLEGE CORK, NATIONAL UNIVERSITY OF IRELAND, CORK | IE |
| 27 | UNIVERSITY OF EAST ANGLIA | UK |
| 28 | UNIVERSITETET I BERGEN | NO |
| 29 | UNIVERSITA CA' FOSCARI VENEZIA | IT |
| 30 | UNIVERSITY OF BATH | UK |
| 31 | VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG | NL |
| 32 | UNIVERSIDAD DE SEVILLA | ES |
| 33 | INSTITUT PO BIORAZNOOBRAZIE I EKOSISTEMNI IZSLEDVANIYA BALGARSKA AKADEMIYA NA NAUKITE | BG |

**Activity Code:** ENV.2009.2.2.1.3 **Funding Scheme:** CSA **Duration (Months):** 28

**Title:** Towards an Integrated Marine and Maritime Science Community

**Proposed EC Grant:** 998.455 €

**Abstract:**

The 'Aberdeen plus interest group' joined forces with the 'Venice Platform group' to take further steps in integrating the marine, maritime and coastal research sectors in Europe. The goal is to establish a sustainable and long-lasting partnership forum ("European Marine and Maritime Forum"), based on shared interests and shared leadership, and to test it on regional seas and pan-European basis. The process will contribute to developing interactions between partners (the research community, industry, regional authorities, civil society and other stakeholders) starting from regional scales to broader issues shared with EU-neighbouring countries. This, being in line with the European Strategy for Marine and Maritime Research, will underpin the future integrated EU Maritime Policy. The action will be supported by the already established key structures and will constitute a Forum which will be an operationally open structure.

**Partners:**

| | | |
|---|---|---|
| 1 | INTERNATIONAL COUNCIL FOR THE EXPLORATION OF THE SEA | DK |
| 2 | Coastal & Marine Union | NL |
| 3 | European Council for Maritime Applied R&D Association | BE |
| 4 | FONDATION EUROPEENNE DE LA SCIENCE | FR |
| 5 | COMMISSION INTERNATIONALE POUR L'EXPLORATION SCIENTIFIQUE DE LA MER MEDITERRANEE (CIESM) | MC |
| 6 | European Aquaculture Technology and Innovation Platform | BE |
| 7 | European Fisheries and Aquaculture Organisation | FR |
| 8 | HELLENIC CENTRE FOR MARINE RESEARCH | EL |
| 9 | KONINKLIJKE NEDERLANDSE AKADEMIE VAN WETENSCHAPPEN - KNAW | NL |
| 10 | Community of European Shipyards Associations asbl | BE |

**Activity Code:** ENV.2009.2.2.1.6 **Funding Scheme:** CSA **Duration (Months):** 30

**Title:** The Deep Sea & Sub-Seafloor Frontier

**Proposed EC Grant:** 1.000.000 €

**Abstract:**

The Deep Sea and Sub-Seafloor Frontier project (DS³F) provides a pathway towards sustainable management of oceanic resources on a European scale. It will develop subseafloor sampling strategies for enhanced understanding of deep-sea and subseafloor processes by connecting marine research in life and geosciences, climate and environmental change, with socio-economic issues and policy building. Subseafloor drilling and sampling provide two key aspects for understanding how deep-sea ecosystems presently function and how they may respond to global change: (a) an inventory of current subsurface processes and biosphere, and their links to surface ecosystems, utilising seafloor observation and baseline studies and (b) a high resolution archive of past variations in environmental conditions and biodiversity. For both aspects, an international effort is needed to maximise progress by sharing knowledge, ideas and technologies, including mission-specific platforms to increase the efficiency, coverage and effectiveness of subseafloor sampling and exploration. The deep biosphere has been discovered only within the past two decades and comprises a major new frontier for biological exploration. We lack fundamental knowledge about biomass distribution, diversity and physiological activity of deep biosphere communities at life's extremes, and their impact on seafloor and deep sea ecosystems. Similarly, the geodynamic processes fuelling biological activity, and how these processes impinge upon the emission of geofuels, hydrocarbon formation and other resources including seafloor ecosystems, need to be understood. This Coordination & Support Action will develop the most efficient use of subseafloor sampling techniques and existing marine infrastructure to study the geosystem, its effects on the deep biosphere and marine ecosystems, and provide a comprehensive "white paper" and an open access web portal for a sustainable use of the oceans and a Maritime Policy.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITAET BREMEN | DE |
| 2 | AARHUS UNIVERSITET | DK |
| 2 | AARHUS UNIVERSITET | DK |
| 3 | INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER | FR |
| 4 | ISTITUTO NAZIONALE DI GEOFISICA E VULCANOLOGIA | IT |
| 5 | INSTITUT DE PHYSIQUE DU GLOBE DE PARIS | FR |
| 6 | MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. | DE |
| 8 | UNIVERSITAT DE BARCELONA | ES |
| 9 | UNIVERSITETET I TROMSOE | NO |
| 10 | UNIVERSITY OF SOUTHAMPTON | UK |

**Activity Code:** ENV.2009.2.2.1.5 **Funding Scheme:** CP **Duration (Months):** 53

**Title:** Future of Reefs in a Changing Environment (FORCE): An ecosystem approach to managing Caribbean coral reefs in the face of climate change

**Proposed EC Grant:** 6.474.632 €

**Abstract:**

The Future of Reefs in a Changing Environment (FORCE) Project partners a multi-disciplinary team of researchers from Europe and the Caribbean to enhance the scientific basis for managing coral reefs in an era of rapid climate change and unprecedented human pressure on coastal resources. The overall aim is to provide coral reef managers with a toolbox of sustainable management practices that minimise the loss of coral reef health and biodiversity. An ecosystem approach is taken that explicitly links the health of the ecosystem with the livelihoods of dependent communities, and identifies the governance structures needed to implement sustainable development. Project outcomes are reached in four steps. First, a series of experimental, observational and modelling studies are carried out to understand both the ultimate and proximate drivers of reef health and therefore identify the chief causes of reef degradation. Second, the project assembles a toolbox of management measures and extends their scope where new research can significantly improve their efficacy. Examples include the first 'coral-friendly' fisheries policies that balance herbivore extraction against the needs of the ecosystem, the incorporation of coral bleaching into marine reserve design, and creation of livelihood enhancement and diversification strategies to reduce fisheries capacity. Third, focus groups and ecological models are used to determine the efficacy of management tools and the governance constraints to their implementation. This step impacts practical reef management by identifying the tools most suited to solving a particular management problem but also benefits high-level policy-makers by highlighting the governance reform needed to implement such tools effectively. Lastly, the exploitation and dissemination of results benefits from continual engagement with practitioners. The project will play an important and measurable role in helping communities adapt to climate change in the Caribbean.

**Partners:**

| | | |
|---|---|---|
| 1 | THE UNIVERSITY OF EXETER | UK |
| 2 | Integrated Marine Management Ltd. | UK |
| 3 | UNIVERSITY OF NEWCASTLE UPON TYNE | UK |
| 4 | UNIVERSITEIT VAN AMSTERDAM | NL |
| 5 | STICHTING KONINKLIJK NEDERLANDS INSTITUUT VOOR ZEEONDERZOEK (NIOZ) | NL |
| 6 | Wageningen IMARES | NL |
| 7 | WAGENINGEN UNIVERSITEIT | NL |
| 8 | Stichting Koninklijke Rotterdamse Diergaarde | NL |
| 9 | Carmabi | AN |
| 10 | VEREIN ZUR FOERDERUNG DER WISSENSCHAFTLICHEN FORSCHUNG IN DER FREIEN HANSESTADT BREMEN E.V. | DE |
| 11 | BAR ILAN UNIVERSITY | IL |
| 12 | University of Costa Rica | CR |
| 14 | THE UNIVERSITY OF THE WEST INDIES U WI* | JM |
| 15 | UNIVERSIDAD NACIONAL AUTONOMA DE MEXICO | MX |
| 16 | EL COLEGIO DE LA FRONTERA SUR | MX |
| 17 | Centro de Ecologia Marina de Utila | HN |
| 20 | THE UNIVERSITY OF QUEENSLAND | AU |
| 21 | ALTERRA B.V. | NL |
| 22 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |

**Activity Code:** ENV.2009.2.2.1.4 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** People for Ecosystem Based Governance in Assessing Sustainable Development of Ocean and Coast

**Proposed EC Grant:** 6.999.005 €

**Abstract:**

Many efforts have been deployed for developing Integrated Coastal Zone Management (ICZM) in the Mediterranean and the Black Sea. Both basins have, and continue to suffer severe environmental degradation. In many areas this has led to unsustainable trends, which have impacted, on economic activities and human well-being. An important progress has been made with the launch of the ICZM Protocol for the Mediterranean Sea in January 2008. The ICZM Protocol offers, for the first time in the Mediterranean, an opportunity to work in a new way, and a model that can be used as a basis for solving similar problems elsewhere, such as in the Back Sea. The aim of PEGASO is to build on existing capacities and develop common novel approaches to support integrated policies for the coastal, marine and maritime realms of the Mediterranean and Black Sea Basins in ways that are consistent with and relevant to the implementation of the ICZM Protocol for the Mediterranean. PEGASO will use the model of the existing ICZM Protocol for the Mediterranean and adjust it to the needs of the Black Sea through three innovative actions:- Constructing an ICZM governance platform as a bridge between scientist and end-user communities, going far beyond a conventional bridging. The building of a shared scientific and end users platform is at the heart of our proposal linked with new models of governance.-Refining and further developing efficient and easy to use tools for making sustainability assessments in the coastal zone (indicators, accounting methods and models, scenarios, socio-economic valuations, etc). They will be tested and validated in 10 sites (CASES) and by the ICZM Platform, using a multi-scale approach for integrated regional assessment.-Implementing a Spatial Data Infrastructure (SDI), following INSPIRE Directive, to organize local geonodes and standardize spatial data to support information sharing on an interactive visor, to make it available to the ICZM Platform, and to disseminate all results of the project to all interested parties and beyond.-Enhancing regional networks of scientists and stakeholders in ICPC countries, supported by capacity building, to implement the PEGASO tools and lessons learned, to assess the state and trends for coast and sea in both basins, identifying present and future main threats agreeing on responses to be done at different scales in an integrated approach, including transdisciplinary and transbondary long-term collaborations.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITAT AUTONOMA DE BARCELONA | ES |
| 2 | UNIVERSIDAD PABLO DE OLAVIDE | ES |
| 3 | PLAN BLEU POUR L'ENVIRONNEMENT ET LE DEVELOPPEMENT EN MEDITERRANNEE | FR |
| 4 | INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER | FR |
| 5 | ACRI ETUDES ET CONSEIL | MA |
| 6 | UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION -UNESCO | FR |
| 7 | Priority Actions Programme Regional Activity Centre | HR |
| 9 | THE UNIVERSITY OF NOTTINGHAM | UK |
| 10 | VLAAMS INSTITUUT VOOR DE ZEE VZW | BE |
| 11 | UNIVERSITA CA' FOSCARI VENEZIA | IT |
| 12 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 13 | UNIVERSITE DE GENEVE | CH |
| 14 | HELLENIC CENTRE FOR MARINE RESEARCH | EL |
| 15 | AKDENIZ KIYI VAKFI | TR |
| 17 | University Mohammed V-Agdal | MA |
| 18 | Association de Réflexion, d'Echanges et d'Actions pour l'Environnement et le Développement | DZ |
| 19 | National Institute of Oceanography and Fisheries | EG |
| 20 | UNIVERSITY OF BALAMAND | LB |
| 21 | MARINE HYDROPHYSICAL INSTITUTE - UKRAINIAN NATIONAL ACADEMY OF SCIENCES | UA |
| 23 | FONDATION TOUR DU VALAT | FR |
| 24 | National Authority for Remote Sensing and Space Sciences | EG |
| 25 | THE COMMISSION ON THE PROTECTION OFTHE BLACK SEA AGAINST POLLUTION | TR |
| 26 | UNION INTERNATIONALE POUR LA CONSERVATION DE LA NATURE ET DE SES RESSOURCES | CH |
| 27 | INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE DELTA DUNARII | RO |

**Activity Code:** ENV.2009.2.2.1.1 **Funding Scheme:** CP **Duration (Months):** 42

**Title:** Options for Delivering Ecosystem-Based Marine Management

**Proposed EC Grant:** 6.499.133 €

**Abstract:**

The overall aim of the ODEMM project is to develop a set of fully-costed ecosystem management options that would deliver the objectives of the Marine Strategy Framework Directive, the Habitats Directive, the European Commission Blue Book and the Guidelines for the Integrated Approach to Maritime Policy. This will be achieved by: (i) providing a comprehensive knowledge base to support policy for the development of sustainable and integrated management of European marine ecosystems; (ii) developing Operational Objectives to achieve the High-Level Policy Objectives set by the MSFD and the HD, and with reference to the proposed Maritime Policy; (iii) identifying Management Options (individual management tools and combinations of tools) to meet the Operational Objectives; (iv) providing a risk assessment framework for the evaluation of Management Options and to assess the risk associated with the different options; (v) conducting a cost-benefit analysis of a range of Management Options using appropriate techniques; (vi) identifying stakeholder opinions on the creation of governance structures directed towards implementation of the ecosystem approach, and to elaborate different scenarios for changing governance structures and legislation to facilitate a gradual transition from the current fragmented management approach towards fully integrated ecosystem management; (vii) documenting the steps necessary for the transition from the current fragmented management scheme to a mature and integrated approach, and providing a toolkit that could be used to evaluate options for delivering ecosystem-based management; and (viii) communicating and consulting on the outcomes of the project effectively with policy makers and other relevant user groups.

**Partners:**

| | | |
|---|---|---|
| 1 | THE UNIVERSITY OF LIVERPOOL | UK |
| 2 | HELLENIC CENTRE FOR MARINE RESEARCH | EL |
| 3 | A.O. KOVALEVSKIY INSTITUTE OF BIOLOGY OF SOUTHERN SEAS | UA |
| 4 | AALBORG UNIVERSITET | DK |
| 5 | MIDDLE EAST TECHNICAL UNIVERSITY | TR |
| 6 | THE SCOTTISH AGRICULTURAL COLLEGE | UK |
| 7 | INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE MARINA GRIGORE ANTIPA | RO |
| 8 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 9 | ISRAEL OCEANOGRAPHIC AND LIMNOLOGICAL RESEARCH LIMITED | IL |
| 10 | Morski Instytut Rybacki w Gdyni | PL |
| 11 | PANEPISTIMIO THESSALIAS (UNIVERSITY OF THESSALY) | EL |
| 12 | THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS | UK |
| 13 | Marine Law and Ocean Policy Research Services Ltd | IE |
| 14 | WAGENINGEN UNIVERSITEIT | NL |
| 15 | INSTITUTE OF OCEANOLOGY - BULGARIAN ACADEMY OF SCIENCES | BG |
| 16 | SUOMEN YMPARISTOKESKUS | FI |
| 17 | TEL AVIV UNIVERSITY | IL |

**Activity Code:** ENV.2009.2.2.1.2 **Funding Scheme:** CSA **Duration (Months):** 48

**Title:** Towards integrated European marine research strategy and programmes

**Proposed EC Grant:** 1.999.928 €

**Abstract:**

This proposal is intended to take into account the ongoing and previous integrating initiatives (AMPERA, marinERA, Marifish,...) so as to constitute a stable and durable structure for coordination and integration of national and regional marine and maritime research programmes with the major goal of providing a clear reply to the need for developing and implementing common research strategies and programmes related to the European sea basins. To this end, SEAS ERA will bring together, through several mechanisms, the four european sea basins working at two different levels: regional and pan european; this work structure will enable to harmonise common priorities and needs in marine and maritime research while respecting diversities between regions.

**Partners:**

| | | |
|---|---|---|
| 1 | MINISTERIO DE CIENCIA E INNOVACION | ES |
| 2 | SERVICE PUBLIC FEDERAL DE PROGRAMMATION POLITIQUE SCIENTIFIQUE | BE |
| 3 | MINISTRY OF EDUCATION, YOUTH AND SCIENCE | BG |
| 4 | AGENCE NATIONALE DE LA RECHERCHE | FR |
| 6 | FORSCHUNGSZENTRUM JUELICH GMBH | DE |
| 7 | GENIKI GRAMMATIA EREVNAS KAI TECHNOLOGIAS, YPOURGIO PAIDIAS, DIA VIOU MATHISIS & THRISKEVMATON | EL |
| 8 | THE ICELANDIC CENTRE FOR RESEARCH | IS |
| 9 | MARINE INSTITUTE | IE |
| 10 | MINISTERO DELL'UNIVERSITA E DELLA RICERCA | IT |
| 11 | NORGES FORSKNINGSRAD | NO |
| 12 | FOUNDATION OF SCIENCE AND TECHNOLOGY | MT |
| 13 | FUNDACAO PARA A CIENCIA E A TECNOLOGIA | PT |
| 14 | NEDERLANDSE ORGANISATIE VOOR WETENSCHAPPELIJK ONDERZOEK | NL |
| 15 | TURKIYE BILIMSEL VE TEKNOLOJIK ARASTIRMA KURUMU | TR |
| 16 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 17 | THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS | UK |
| 18 | FONDATION EUROPEENNE DE LA SCIENCE | FR |
| 19 | Unitatea Executiva pentru Finantarea Invatamantului Superior, a Cercetarii, Dezvoltarii si Inovarii | RO |
| 20 | KYIV STATE CENTER FOR SCIENTIFIC TECHNICAL AND ECONOMIC INFORMATION | UA |
| 21 | Shota Rustaveli National Science Foundation | GE |
| 22 | INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER | FR |

**Activity Code:** ENV.2010.2.2.1-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** European Union Basin-scale Analysis, Synthesis and Integration (EURO-BASIN)

**Proposed EC Grant:** 6.996.407 €

**Abstract:**

EURO-BASIN is designed to advance our understanding on the variability, potential impacts, and feedbacks of global change and anthropogenic forcing on the structure, function and dynamics of the North Atlantic and associated shelf sea ecosystems as well as the key species influencing carbon sequestering and ecosystem functioning. The ultimate goal of the program is to further our capacity to manage these systems in a sustainable manner following the ecosystem approach. Given the scope and the international significance, EURO-BASIN is part of a multidisciplinary international effort linked with similar activities in the US and Canada. EURO-BASIN focuses on a number of key groups characterizing food web types, e.g. diatoms versus microbial loop players; key species copepods of the genus Calanus; pelagic fish, herring (Clupea harengus), mackerel (Scomber scombrus), blue whiting (Micromesistius poutassou) which represent some of the largest fish stocks on the planet; piscivorous pelagic bluefin tuna (Thunnus thynnus) and albacore (Thunnus alalunga) all of which serve to structure the ecosystem and thereby influence the flux of carbon from the euphotic zone via the biological carbon pump. In order to establish relationships between these key players, the project identifies and accesses relevant international databases and develops methods to integrate long term observations. These data will be used to perform retrospective analyses on ecosystem and key species/group dynamics, which are augmented by new data from laboratory experiments, mesocosm studies and field programs. These activities serve to advance modelling and predictive capacities based on an ensemble approach where modelling approaches such as size spectrum; mass balance; coupled NPZD; fisheries; and “end to end” models and as well as ecosystem indicators are combined to develop understanding of the past, present and future dynamics of North Atlantic and shelf sea ecosystems and their living marine resources.

**Partners:**

| | | |
|---|---|---|
| 1 | DANMARKS TEKNISKE UNIVERSITET | DK |
| 2 | UNIVERSITAET BREMEN | DE |
| 3 | UNIVERSITAET HAMBURG | DE |
| 4 | FUNDACION AZTI/AZTI FUNDAZIOA | ES |
| 5 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 6 | HAFRANNSOKNASTOFNUNIN | IS |
| 7 | Morski Instytut Rybacki w Gdyni | PL |
| 8 | PLYMOUTH MARINE LABORATORY | UK |
| 9 | UNIVERSITY OF EAST ANGLIA | UK |
| 10 | AARHUS UNIVERSITET | DK |
| 10 | AARHUS UNIVERSITET | DK |
| 11 | HAVFORSKNINGSINSTITUTTET | NO |
| 12 | INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER | FR |
| 13 | SIR ALISTER HARDY FOUNDATION FOR OCEAN SCIENCE | UK |
| 14 | INSTITUT DE RECHERCHE POUR LE DEVELOPPEMENT | FR |
| 15 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 16 | UNIVERSITY OF STRATHCLYDE | UK |
| 17 | THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS | UK |
| 18 | HOGSKOLEN I BODO | NO |
| 19 | UNI RESEARCH AS | NO |
| 20 | INSTITUTO ESPANOL DE OCEANOGRAFIA | ES |
| 21 | COLLECTE LOCALISATION SATELLITES SA | FR |
| 22 | SWANSEA UNIVERSITY | UK |
| 23 | MIDDLE EAST TECHNICAL UNIVERSITY | TR |
| 24 | UNIVERSITE PIERRE ET MARIE CURIE - PARIS 6 | FR |

**Activity Code:** ENV.2010.2.2.1-3 **Funding Scheme:** CSA **Duration (Months):** 24

**Title:** Integration of European marine research networks of excellence - Euromarine

**Proposed EC Grant:** 999.636 €

**Abstract:**

EuroMarine is a coordination action that seeks to develop and implement an agreed framework for the long-lasting and durable co-operation between research institutions that were partners in FP6 marine Networks of Excellence in order to achieve further integration of marine research in Europe. Particular areas for cooperation will be: research programming, joint development and use of data bases, training and mobility of researchers, joint programming and use of research infrastructures. The objective is to provide an agreed frame for strong institutional commitment to this durable collaboration. The ultimate aim will be the sustainable integration of marine research and a significant contribution to the structure of the ERA.

**Partners:**

| | | |
|---|---|---|
| 1 | GOETEBORGS UNIVERSITET | SE |
| 2 | CENTRO DE CIENCIAS DO MAR DO ALGARVE | PT |
| 3 | CLIMAR - Centro Interdisciplinar de Investigação Marinha e Ambiental | PT |
| 4 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 5 | DANMARKS TEKNISKE UNIVERSITET | DK |
| 6 | INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER | FR |
| 7 | INSTITUT DE RECHERCHE POUR LE DEVELOPPEMENT | FR |
| 8 | STICHTING KONINKLIJK NEDERLANDS INSTITUUT VOOR ZEEONDERZOEK (NIOZ) | NL |
| 9 | MARINE BIOLOGICAL ASSOCIATION OF THE UNITED KINGDOM | UK |
| 10 | MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. | DE |
| 11 | STAZIONE ZOOLOGICA ANTON DOHRN | IT |
| 12 | RIJKSUNIVERSITEIT GRONINGEN | NL |
| 13 | UNIVERSITEIT GENT | BE |
| 14 | VLAAMS INSTITUUT VOOR DE ZEE VZW | BE |
| 15 | UNIVERSITAET BREMEN | DE |
| 16 | Dr. Johanna B. Wesnigk | DE |
| 17 | KONINKLIJKE NEDERLANDSE AKADEMIE VAN WETENSCHAPPEN - KNAW | NL |

**Activity Code:** ENV.2010.2.2.1-2 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Development of global plankton data base and model system for eco-climate early warning

**Proposed EC Grant:** 3.476.469 €

**Abstract:**

GreenSeas shall advance the quantitative knowledge of how planktonic marine ecosystems, including phytoplankton, bacterioplankton and zooplankton, will respond to environmental and climate changes. To achieve this GreenSeas will employ a combination of observation data, numerical simulations and a cross-disciplinary synthesis to develop a high quality, harmonized and standardized plankton and plankton ecology long time-series, data inventory and information service. The focus will be on capturing the latitudinal gradients, biogeographical distributions and provinces in the planktonic ecosystem from the Arctic, through the Atlantic and into the Southern Ocean. It will build on historical data-sets, and ongoing multidisciplinary ocean planktonic ecosystem monitoring programs, enhanced where possible with an emphasis on the Southern Ocean. GreenSeas will also enhance international cooperative links with other plankton monitoring and analysis surveys around the globe. The heart of the GreenSeas concept is establishing a ‘core’ service following the open and free data access policy implemented in the Global Monitoring for Environment and Security (GMES) programme.Using state-of-the-art web-based data delivery systems the ‘core’ service will make available both new and historical plankton data and information products along with error-quantified numerical simulations to a range of users. Connecting with ‘downstream’ services GreenSeas will moreover offer ecosystem assessment and indicator reports tailored for decision makers, stakeholders and other user groups contributing in the policy making process. Finally, knowledge transfer will be guaranteed throughout the project lifetime, while the legacy of the GreenSeas database web-server will be maintained for at least 5 years beyond the project lifetime.

**Partners:**

| | | |
|---|---|---|
| 1 | STIFTELSEN NANSEN SENTER FOR FJERNMAALING | NO |
| 2 | PLYMOUTH MARINE LABORATORY | UK |
| 3 | UNI RESEARCH AS | NO |
| 4 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 5 | Murmansk Marine Biological Institute of the Kola Science centre of the Russian Academy of Sciences | RU |
| 6 | COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH | ZA |
| 7 | UNIVERSITY OF CAPE TOWN | ZA |
| 8 | CENTRO EURO-MEDITERRANEO PER I CAMBIAMENTI CLIMATICI SCARL | IT |
| 9 | UNIVERSIDADE FEDERAL DO RIO GRANDE-FURG | BR |

**Activity Code:** Ocean.2010-3 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Sub-seabed CO2 Storage: Impact on Marine Ecosystems (ECO2)

**Proposed EC Grant:** 10.500.000 €

**Abstract:**

The ECO2 project sets out to assess the risks associated with the storage of CO2 below the seabed. Carbon Capture and Storage (CCS) is regarded as a key technology for the reduction of CO2 emissions from power plants and other sources at the European and international level. The EU will hence support a selected portfolio of demonstration projects to promote, at industrial scale, the implementation of CCS in Europe. Several of these projects aim to store CO2 below the seabed. However, little is known about the short-term and long-term impacts of CO2 storage on marine ecosystems even though CO2 has been stored sub-seabed in the North Sea (Sleipner) for over 13 years and for one year in the Barents Sea (Snøhvit). Against this background, the proposed ECO2 project will assess the likelihood of leakage and impact of leakage on marine ecosystems. In order to do so ECO2 will study a sub-seabed storage site in operation since 1996 (Sleipner, 90 m water depth), a recently opened site (Snøhvit, 2008, 330 m water depth), and a potential storage site located in the Polish sector of the Baltic Sea (B3 field site, 80 m water depth) covering the major geological settings to be used for the storage of CO2. Novel monitoring techniques will be applied to detect and quantify the fluxes of formation fluids, natural gas, and CO2 from storage sites and to develop appropriate and effective monitoring strategies. Field work at storage sites will be supported by modelling and laboratory experiments and complemented by process and monitoring studies at natural CO2 seeps that serve as analogues for potential CO2 leaks at storage sites. ECO2 will also investigate the perception of marine CCS in the public and develop effective means to disseminate the project results to stakeholders and policymakers. Finally, a best practice guide for the management of sub-seabed CO2 storage sites will be developed applying the precautionary principle and valuing the costs for monitoring and remediation.

**Partners:**

| | | |
|---|---|---|
| 1 | LEIBNIZ-INSTITUT FUER MEERESWISSENSCHAFTEN AN DER UNIVERSITAET KIEL | DE |
| 2 | PLYMOUTH MARINE LABORATORY | UK |
| 3 | NORSK INSTITUTT FOR VANNFORSKNING | NO |
| 4 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 5 | UNIVERSITETET I BERGEN | NO |
| 6 | MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. | DE |
| 7 | UNIVERSITAET TRIER | DE |
| 8 | UNIVERSITETET I TROMSOE | NO |
| 9 | KONSORTIUM DEUTSCHE MEERESFORSCHUNG e.V. | DE |
| 10 | ALFRED-WEGENER-INSTITUT FUER POLAR- UND MEERESFORSCHUNG | DE |
| 11 | INSTITUT FUER OSTSEEFORSCHUNG WARNEMUENDE AN DER UNIVERSITAET ROSTOCK | DE |
| 12 | UNIVERSITA DEGLI STUDI DI ROMA LA SAPIENZA | IT |
| 13 | ISTITUTO NAZIONALE DI OCEANOGRAFIA E DI GEOFISICA SPERIMENTALE - OGS | IT |
| 14 | UNIVERSITAET STUTTGART | DE |
| 15 | STATOIL PETROLEUM AS | NO |
| 16 | DET NORSKE VERITAS AS | NO |
| 17 | UNIVERSITY OF SOUTHAMPTON | UK |
| 18 | INSTITUT FUR WELTWIRTSCHAFT | DE |
| 19 | THE UNIVERSITY OF EDINBURGH | UK |
| 20 | UNIVERSITEIT GENT | BE |
| 21 | HERIOT-WATT UNIVERSITY | UK |
| 22 | GOETEBORGS UNIVERSITET | SE |
| 23 | NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO | NL |
| 24 | STICHTING ENERGIEONDERZOEK CENTRUM NEDERLAND | NL |
| 25 | INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER | FR |
| 26 | UNIWERSYTET GDANSKI | PL |
| 27 | GRUPA LOTOS Spolka Akcyjna | PL |

**Activity Code:** OCEAN.2011-3 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Policy-oriented marine Environmental Research in the Southern EUropean Seas

**Proposed EC Grant:** 12.973.123 €

**Abstract:**

The overall scientific objectives of PERSEUS are to identify the interacting patterns of natural and human-derived pressures on the Mediterranean and Black Seas, assess their impact on marine ecosystems and, using the objectives and principles of the Marine Strategy Framework Directive as a vehicle, to design an effective and innovative research governance framework based on sound scientific knowledge. Well-coordinated scientific research and socio-economic analysis will be applied at a wide-ranging scale, from basin to coastal. The new knowledge will advance our understanding on the selection and application of the appropriate descriptors and indicators of the MSFD. New tools will be developed in order to evaluate the current environmental status, by way of combining monitoring and modelling capabilities and existing observational systems will be upgraded and extended. Moreover, PERSEUS will develop a concept of an innovative, small research vessel, aiming to serve as a scientific survey tool, in very shallow areas, where the currently available research vessels are inadequate.In view of reaching Good Environmental Status (GES), a scenario-based framework of adaptive policies and management schemes will be developed. Scenarios of a suitable time frame and spatial scope will be used to explore interactions between projected anthropogenic and natural pressures. A feasible and realistic adaptation policy framework will be defined and ranked in relation to vulnerable marine sectors/groups/regions in order to design management schemes for marine governance. Finally, the project will promote the principles and objectives outlined in the MSFD across the SES.Leading research Institutes and SMEs from EU Member States, Associated States, Associated Candidate countries, non-EU Mediterranean and Black Sea countries, will join forces in a coordinated manner, in order to address common environmental pressures, and ultimately, take action in the challenge of achieving GES.

**Partners:**

| | | |
|---|---|---|
| 1 | HELLENIC CENTRE FOR MARINE RESEARCH | EL |
| 2 | MIDDLE EAST TECHNICAL UNIVERSITY | TR |
| 3 | INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER | FR |
| 4 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 5 | CONSORZIO NAZIONALE INTERUNIVERSITARIO PER LE SCIENZE DEL MARE | IT |
| 6 | INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE PENTRU GEOLOGIE SI GEOECOLOGIE MARINA-GEOECOMAR | RO |
| 7 | PLAN BLEU POUR L'ENVIRONNEMENT ET LE DEVELOPPEMENT EN MEDITERRANNEE | FR |
| 8 | COSNAV ENGINEERING SRL | IT |
| 9 | UNIVERSITA TA MALTA | MT |
| 10 | EIR SYMVOULOI ANAPTYXIS ETAIREIA PERIORISMENIS EFTHYNIS | EL |
| 11 | BC3 BASQUE CENTRE FOR CLIMATE CHANGE - KLIMA ALDAKETA IKERGAI | ES |
| 12 | INSTITUTO ESPANOL DE OCEANOGRAFIA | ES |
| 13 | UNIVERSITAT DE BARCELONA | ES |
| 14 | UNIVERSITAT POLITECNICA DE CATALUNYA | ES |
| 15 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 16 | UNIVERSITE D'AIX MARSEILLE | FR |
| 17 | UNIVERSITE PIERRE ET MARIE CURIE - PARIS 6 | FR |
| 18 | UNIVERSITE PAUL SABATIER TOULOUSE III | FR |
| 19 | CENTRO EURO-MEDITERRANEO PER I CAMBIAMENTI CLIMATICI SCARL | IT |
| 20 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 21 | AGENZIA NAZIONALE PER LE NUOVE TECNOLOGIE,L'ENERGIA E LO SVILUPPO ECONOMICO SOSTENIBILE | IT |
| 22 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 23 | ISTITUTO NAZIONALE DI OCEANOGRAFIA E DI GEOFISICA SPERIMENTALE - OGS | IT |
| 24 | STAZIONE ZOOLOGICA ANTON DOHRN | IT |
| 25 | PLYMOUTH MARINE LABORATORY | UK |
| 26 | UNIVERSITY OF PLYMOUTH | UK |
| 27 | STICHTING DELTARES | NL |
| 28 | UNIVERSITEIT UTRECHT | NL |
| 29 | UNIVERSITE DE LIEGE | BE |
| 30 | University of the Aegean-Research Unit | EL |
| 31 | NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS | EL |
| 32 | PANEPISTIMIO KRITIS (UNIVERSITY OF CRETE) | EL |
| 33 | THE CYPRUS RESEARCH AND EDUCATIONAL FOUNDATION | CY |
| 34 | UNIVERSITY OF CYPRUS | CY |
| 35 | NACIONALNI INSTITUT ZA BIOLOGIJO | SI |

| | | |
|---|---|---|
| 36 | Institute of Oceanography and Fisheries | HR |
| 37 | ISRAEL OCEANOGRAPHIC AND LIMNOLOGICAL RESEARCH LIMITED | IL |
| 38 | UNIVERSITY OF HAIFA | IL |
| 39 | BLACK SEA NGO NETWORK | BG |
| 40 | SOFIISKI UNIVERSITET SVETI KLIMENT OHRIDSKI | BG |
| 41 | INSTITUT PO BIORAZNOOBRAZIE I EKOSISTEMNI IZSLEDVANIYA BALGARSKA AKADEMIYA NA NAUKITE | BG |
| 42 | INSTITUTE OF OCEANOLOGY - BULGARIAN ACADEMY OF SCIENCES | BG |
| 43 | INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE MARINA GRIGORE ANTIPA | RO |
| 44 | ISTANBUL UNIVERSITY | TR |
| 45 | A.O. KOVALEVSKIY INSTITUTE OF BIOLOGY OF SOUTHERN SEAS | UA |
| 46 | MARINE HYDROPHYSICAL INSTITUTE - UKRAINIAN NATIONAL ACADEMY OF SCIENCES | UA |
| 47 | ODESSA NATIONAL I.I. MECHNIKOV UNIVERSITY | UA |
| 48 | P.P. SHIRSHOV INSTITUTE OF OCEANOLOGY OF RUSSIAN ACADEMY OF SCIENCES | RU |
| 49 | IVANE JAVAKHISHVILI TBILISI STATE UNIVERSITY | GE |
| 50 | National Institute of Oceanography and Fisheries | EG |
| 51 | INSTITUT NATIONAL DE RECHERCHE HALIEUTIQUE | MA |
| 52 | CLU srl | IT |
| 53 | ECOLOGIC INSTITUT gemeinnützige GmbH | DE |
| 54 | SAROST SA | TN |

**Activity Code:** ENV.2012.6.2-6 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Development of Tools and Techniques to Survey, Assess, Stabilise, Monitor and Preserve Underwater Archaeological Sites

**Proposed EC Grant:** 2.231.732 €

**Abstract:**

SASMAP's purpose is to develop new technologies and best practices in order to locate, assess and manage Europe's underwater cultural heritage in a more effective way than is possible today. SASMAP will take holistic- and process- based approaches to investigate underwater environments and the archaeological sites contained therein.SASMAP will benefit the management of underwater cultural heritage in Europe and in the rest of the world by providing valuable tools to plan the preservation of offshore archaeological sites and their contents in accordance with both the Treaty of Valletta (1992) and research driven investigations. The need for SASMAP is based on the results from previous and current EU initiatives, the networks resulting from these projects and on-going research at the consortium's institutions. Within SASMAP a holistic approach will be taken to locating, assessing, monitoring and safeguarding underwater cultural heritage. This will involve developing and utilising tools and technologies to allow "down-scaling" from the large scale regional level, moving on to the local site level and finally to the individual components of a site. Results obtained from the down-scaling approach at the proposed study areas will show the effectiveness of such an approach for locating and detailed mapping of archaeological sites and their preservation potential. The end results of this approach will be used to develop a plan for assessing archaeological sites in European waters. From a management point of view this is an up-scaling approach to planning (bottom up). All information and experiences obtained during the course of the project will be utilised to enhance and develop existing legislation and best practice for mapping and preserving Europe's underwater and coastal heritage.

**Partners:**

| | | |
|---|---|---|
| 1 | NATIONALMUSEET | DK |
| 2 | INNOMAR Technologie GmbH | DE |
| 3 | UNISENSE AS | DK |
| 4 | AKUT ROBERT MARTIN FLONG PEDERSEN*AKUT | DK |
| 5 | SEABED SCOUR CONTROL SYSTEMS LIMITED | UK |
| 6 | The Geological Survey of Denmark and Greenland | DK |
| 7 | VIKINGESKIBSMUSEET I ROSKILDE | DK |
| 8 | MINISTERIE VAN ONDERWIJS, CULTUUR EN WETENSCHAP | NL |
| 9 | GOETEBORGS UNIVERSITET | SE |
| 10 | MINISTERO PER I BENI E LE ATTIVITA CULTURALI | IT |
| 11 | UNIVERSITY OF PATRAS | EL |

**Activity Code:** ENV.2012.6.2-4 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Towards a Clean, Litter-Free European Marine Environment through Scientific Evidence, Innovative Tools and Good Governance

**Proposed EC Grant:** 2.986.571 €

**Abstract:**

There is an urgent need for an improved knowledge base for the management of marine litter. CLEANSEA aims to generate new information on the impacts (biological, social and economic) of marine litter, develop novel tools needed to collect and monitor litter and protocols needed for monitoring data (litter composition and quantities) and evaluate the impact of mitigation strategies and measures in order to provide options to policy makers in the EU. This will be achieved through 7 work packages. WPs 2 and 3 cover biological impacts and technical aspects of marine monitoring, monitoring tools and applications. WP4 investigates multilevel socio-economic impact and barriers to Good Environmental Status, providing a justification for the development of management measures and policy options in WP5. This WP combines advanced institutional analysis with a participatory approach in order to identify and assess management measures, strategies and policy options in collaboration with stakeholders that reduce marine litter and alleviate diverse ecological and socio-economic impacts as identified in WPs 2-4. WP6 will integrate the outcomes of the project and hosts the CLEANSEA Stakeholder Platform. Management is dealt with under WP1 with a professional dissemination package, including a documentary film, website, publications, etc. covered in WP7. CLEANSEA includes top scientific groups from eleven European countries distributed over all marine regions. It also includes six SMEs, four of them focused on technological innovation of monitoring, mitigation and recycling tools. CLEANSEA will tackle the marine litter problem from a broad interdisciplinary perspective . Advancement is expected in the array of monitoring tools and systems, knowledge about impacts, and management measures and policy options. By searching for new paradigms and integrating knowledge and methods, CLEANSEA intends to contribute concrete elements to the road map towards strong reductions in marine litter.

**Partners:**

| | | |
|---|---|---|
| 1 | VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG | NL |
| 2 | THE UNIVERSITY OF EXETER | UK |
| 3 | CENTRO MEDITERRANEO DE ESTUDIOS PARA EL USO Y CONSERVACION DE LAS COSTAS | ES |
| 4 | STICHTING DELTARES | NL |
| 5 | KIMO Nederland en België | NL |
| 6 | EIGEN VERMOGEN VAN HET INSTITUUT VOOR LANDBOUW EN VISSERIJONDERZOEK | BE |
| 7 | denkstatt Bulgaria OOD | BG |
| 8 | OREBRO UNIVERSITY | SE |
| 9 | University of the Aegean-Research Unit | EL |
| 10 | NORSK INSTITUTT FOR LUFTFORSKNING | NO |
| 11 | CORPUS DATA MINING HANDELSBOLAG | SE |
| 12 | CALLISTO PRODUCTIONS LTD | UK |
| 13 | KC Denmark | DK |
| 14 | ECOLOGIC INSTITUT gemeinnützige GmbH | DE |
| 15 | Investments in Sustainable Innovations | NL |

**Activity Code:** ENV.2012.6.2-3 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** DEVelopment Of innovative Tools for understanding marine biodiversity and assessing good Environmental Status

**Proposed EC Grant:** 8.997.986 €

**Abstract:**

The objectives are to:(i) improve our understanding of human activities impacts (cumulative, synergistic, antagonistic) and variations due to climate change on marine biodiversity, using long-term series (pelagic and benthic). This objective will identify the barriers and bottlenecks (socio-economic and legislative) that prevent the GES being achieved(ii) test the indicators proposed by the EC, and develop new ones for assessment at species, habitats and ecosystems level, for the status classification of marine waters, integrating the indicators into a unified assessment of the biodiversity and the cost-effective implementation of the indicators (i.e. by defining monitoring and assessment strategies). This objective will allow for the adaptive management including (a) strategies & measures, (b) the role of industry and relevant stakeholders (including non-EU countries), and (c) provide an economic assessment of the consequences of the management practices proposed. It will build on the extensive work carried out by the Regional Seas Conventions (RSC) and Water Framework Directive, in which most of the partners have been involved(iii) develop/test/validate innovative integrative modelling tools to further strengthen our understanding of ecosystem and biodiversity changes (space & time); such tools can be used by statutory bodies, SMEs and marine research institutes to monitor biodiversity, applying both empirical and automatic data acquisition. This objective will demonstrate the utility of innovative monitoring systems capable of efficiently providing data on a range of parameters (including those from non-EU countries), used as indicators of GES, and for the integration of the information into a unique assessmentThe consortium has 25 partners, including 4 SMEs (17.7% of the total budget) and 3 non-EU partners (Ukraine & USA). Moreover, an Advisory Board (RSC & scientific international scientists) has been designed,to ensure a good relationship with stakeholders

**Partners:**

| | | |
|---|---|---|
| 1 | FUNDACION AZTI/AZTI FUNDAZIOA | ES |
| 2 | NORSK INSTITUTT FOR LUFTFORSKNING | NO |
| 3 | SUOMEN YMPARISTOKESKUS | FI |
| 4 | AARHUS UNIVERSITET | DK |
| 4 | AARHUS UNIVERSITET | DK |
| 5 | UNIVERSITY OF HULL | UK |
| 6 | THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS | UK |
| 7 | PLYMOUTH MARINE LABORATORY | UK |
| 8 | IMAR- INSTITUTO DO MAR | PT |
| 9 | INSTITUTE OF OCEANOLOGY - BULGARIAN ACADEMY OF SCIENCES | BG |
| 10 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 11 | HELLENIC CENTRE FOR MARINE RESEARCH | EL |
| 12 | KLAIPEDOS UNIVERSITETAS | LT |
| 13 | AKVAPLAN-NIVA AS | NO |
| 14 | CONSORZIO NAZIONALE INTERUNIVERSITARIO PER LE SCIENZE DEL MARE | IT |
| 15 | STICHTING KONINKLIJK NEDERLANDS INSTITUUT VOOR ZEEONDERZOEK (NIOZ) | NL |
| 16 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 17 | DOKUZ EYLUL UNIVERSITESI | TR |
| 18 | U.S. ENVIRONMENTAL PROTECTION AGENCY - EPA | US |
| 19 | MARINE HYDROPHYSICAL INSTITUTE - UKRAINIAN NATIONAL ACADEMY OF SCIENCES | UA |
| 20 | MariLim Gesellschaft fur Gewasseruntersuchung mbH | DE |
| 21 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 22 | oceanDTM | UK |
| 23 | National Oceanic and Atmospheric Administration, Pacific Island Fisheries Science Center | US |
| 24 | Ecoreach s.r.l. | IT |

**Activity Code:** ENV.2012.6.2-5 **Funding Scheme:** CSA **Duration (Months):** 24

**Title:** Science and Technology Advancing Governance of Good Environmental Status

**Proposed EC Grant:** 999.692 €

**Abstract:**

The Marine Strategy Framework Directive is designed to deliver “Good Environmental Status” (GES) in EU marine waters by 2020. This Directive requires that Member States (MS) with marine territories put in place measures to achieve and maintain GES within a defined timeframe and according to eleven key descriptors of environmental status. However, there is a significant knowledge deficit which may hinder full implementation of the MSFD and the achievement of GES in EU waters.STAGES (Science and Technology Advancing Governance on Good Environmental Status) project is designed to directly address this knowledge deficit. The project has to overarching goals: i) to synthezise per major MSFD themes the information from research projects and ii) to develop a platform to ensure that the knowledge generated through European science and technology can be channeled to a broad range of relevant end users, to inform and facilitate implementation of the MSFD and the achievement of GES. To achieve this, STAGES will target a number of critical gaps in the knowledge transfer process. Firstly, STAGES will identify and synthesize relevant existing EU research results and make them available in a usable format for decision and policy making authorities. Through comprehensive scientific foresight targeted at MSFD knowledge gaps, STAGES will identify needs for futher research. STAGES will also develop innovative solutions to achieve an effective collaboration between the broad range of stakeholders necessary to support MSDF implementation, including policy and governance, science, industry and civil society. Moreover, the role and input of MSFD stakeholders will be central to the activities of the project and to the proposals for a science policy interface which will be delivered by the project. The partnership has been constructed to include a combination of EU/international organizations which can represent a broad constituency of MSFD stakeholders, and national organizations with responsibility to support research and provide advice on MSFD implementation at MS level.

**Partners:**

| | | |
|---|---|---|
| 1 | CENTRO TECNOLOGICO DEL MAR - FUNDACION CETMAR | ES |
| 2 | FUNDACAO EUROCEAN | PT |
| 3 | INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER | FR |
| 4 | FONDATION EUROPEENNE DE LA SCIENCE | FR |
| 5 | AquaTT UETP Ltd | IE |
| 6 | INTERNATIONAL COUNCIL FOR THE EXPLORATION OF THE SEA | DK |
| 7 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 8 | HAVFORSKNINGSINSTITUTTET | NO |

**Activity Code:** ENV.2012.6.2-6 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** ARchaeological RObot systems for the World's Seas

**Proposed EC Grant:** 2.977.726 €

**Abstract:**

ARROWS proposes to adapt and develop low cost autonomous underwater vehicle technologies to significantly reduce the cost of archaeological operations, covering the full extent of archaeological campaign.Benefiting from the significant investments already made for military security and offshore oil and gas applications, the project aims to demonstrate an illustrative portfolio of mapping, diagnosis and excavation tasks.ARROWS approach is to identify the archaeologists' requirements in all phases of the campaign, identify problems and propose technological solutions with the technological readiness levels that predict their maturation for exploitation within 3-5 years.The individual technologies are then developed during the course of the project using agile development method comprising rapid cycles of testing and comparison against the end user requirements.To ensure the wide exploitability of the results the requirements are defined and the solutions are tested in two historically significant but environmentally very different contexts, in The Mediterranean Sea and in The Baltic Sea.Both immediate, low risk and long term, high risk developments will be pursued. In particular:• Fast a low cost horizontal surveys of large areas using customised AUVs with multimodal sensing.• Fast and low cost semi-automated data analysing tools for site and object relocation• High quality maps from better image reconstruction methods and better localization abilities of AUVs.• Shipwreck penetration and internal mapping using small low cost vehicles localising using fixed pingers.• Soft excavation tool for diagnosis and excavation of fragile objects.• Mixed reality environments for virtual exploration of archaeological sites.• Monitoring of changes via back-to-the-site missions.The ARROWS consortium comprises expertise from underwater archaeology, underwater engineering, robotics, image processing and recognition from academia and industry.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITA DEGLI STUDI DI FIRENZE | IT |
| 2 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 3 | TALLINNA TEHNIKAULIKOOL | EE |
| 4 | HERIOT-WATT UNIVERSITY | UK |
| 5 | EDGELAB SRL | IT |
| 6 | ALBATROS MARINE TECHNOLOGIES SL | ES |
| 7 | NESNE ELEKTRONİK TASARIM VE DANIŞMANLIK LTD. ŞTİ. | TR |
| 8 | TWI LIMITED | UK |
| 9 | Regione Sicilia | IT |
| 10 | EESTI MEREMUUSEUM | EE |

**Activity Code:** ENV.2007.3.1.2.1. **Funding Scheme:** CP **Duration (Months):** 42

**Title:** Interactions between soil related sciences - Linking geophysics, soil science and digital soil mapping

**Proposed EC Grant:** 3.420.623 €

**Abstract:**

As formulated in the Thematic Strategy for Soil Protection prepared by the European Commission soil degradation is a serious problem in Europe. The degradation is driven or exacerbated by human activity and has a direct impact on water and air quality, biodiversity, climate and human life-quality. High-resolution soil property maps are one major prerequisite for the specific protection of soil functions and restoration of degraded soils as well as sustainable land use, water and environmental management. However, the currently available techniques for (digital) soil mapping still have deficiencies in terms of reliability and precision, the feasibility of investigation of large areas (e.g. catchments and landscapes) and the assessment of soil degradation threats at this scale. A further quandary is the insufficient degree of dissemination of knowledge between the scientific community, relevant authorities and prospective users and deficiencies in standardisation. The focus of the iSOIL project is on improving fast and reliable mapping of soil properties, soil functions and soil degradation threats. This requires the improvement as well as integration of geophysical and spectroscopic measurement techniques in combination with advanced soil sampling approaches, pedometrical and pedophysical approaches. An important aspect of the project is the sustainable dissemination of the technologies and concepts developed. For this purpose guidelines will be written and published. Furthermore, the results will be implemented in national and European soil databases. The present state of technologies and future perspectives will also be transferred to authorities, providers of technologies (SMEs), and end users through workshops at regional level, international conferences and publications throughout the duration of the project.

**Partners:**

| | | |
|---|---|---|
| 1 | HELMHOLTZ-ZENTRUM FUER UMWELTFORSCHUNG GMBH - UFZ | DE |
| 2 | NATIONAL INSTITUTE OF GEOPHYSICS GEODESY AND GEOGRAPHY - BULGARIAN ACADEMY OF SCIENCES | BG |
| 3 | ALLIED ASSOCIATES (GEOPHYSICAL) LIMITED | UK |
| 4 | ALLSAT GMBH NETWORK + SERVICES | DE |
| 5 | VYZKUMNY USTAV ROSTLINNE VYROBY | CZ |
| 6 | CESKA ZEMEDELSKA UNIVERSZITA V PRAZE | CZ |
| 7 | EIJKELKAMP AGRISEARCH EQUIPMENT BV | NL |
| 8 | COMITE EUROPEEN DE NORMALISATION | BE |
| 9 | CONSULAQUA HAMBURG BERATUNGSGESELLSCHAFT MBH | DE |
| 10 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 12 | The Soil Company BV | NL |
| 13 | UNIVERSITAET BERN | CH |
| 14 | CRANFIELD UNIVERSITY | UK |
| 15 | CHRISTIAN-ALBRECHTS-UNIVERSITAET ZU KIEL | DE |
| 16 | UNIVERSITA DEGLI STUDI DI PADOVA | IT |
| 17 | EBERHARD KARLS UNIVERSITAET TUEBINGEN | DE |
| 18 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 19 | JOANNEUM RESEARCH FORSCHUNGSGESELLSCHAFT MBH | AT |
| 20 | RHEINISCHE FRIEDRICH-WILHELMS-UNIVERSITAET BONN | DE |

**Activity Code:** ENV.2007.3.1.2.1. **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Integrated system of data collection technologies for mapping soil properties

**Proposed EC Grant:** 3.401.258 €

**Abstract:**

The multidisciplinary DIGISOIL consortium intends to integrate and improve in situ and proximal measurement technologies for the assessment of soil properties assessment and soil degradation indicators, going from the sensing technologies to their integration and their application in (digital) soil mapping (DSM). In addition, our SMEs experience will allow to take into account the feasibility of such developments based on economical constraints, reliability of the results and needs of the DSM community. In order to assess and prevent soil degradation and to benefit from the different ecological, economical and historical functions of the soil in a sustainable way, there is an obvious need for high resolution and accurate maps of soil properties. The core objective of the project is to explore and exploit new capabilities of advanced geophysical technologies for answering this societal demand. To this aim, DIGISOIL addresses four issues covering technological, soil science and economic aspects: (i) the validation of geophysical (in situ, proximal and airborne) technologies and integrated pedo-geophysical inversion techniques (mechanistic data fusion) (ii) the relation between the geophysical parameters and the soil properties, (iii) the integration of the derived soil properties for mapping soil functions and soil threats, (iv) the evaluation, standardisation and sub-industrialization of the proposed methodologies, including technical and economical studies.

**Partners:**

| | | |
|---|---|---|
| 1 | BUREAU DE RECHERCHES GEOLOGIQUES ET MINIERES | FR |
| 2 | INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE | FR |
| 3 | UNIVERSITE CATHOLIQUE DE LOUVAIN | BE |
| 4 | FORSCHUNGSZENTRUM JUELICH GMBH | DE |
| 5 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 6 | INSTITUTUL GEOLOGIC AL ROMANIEI | RO |
| 7 | Pannon Egyetem | HU |
| 8 | ABEM Instrument AB | SE |
| 9 | SELEX GALILEO SPA | IT |
| 10 | UNIVERSITA DEGLI STUDI DI FIRENZE | IT |

**Activity Code:** ENV.2007.3.1.1.1. **Funding Scheme:** CP **Duration (Months):** 51

**Title:** Water in Industry, Fit-for-Use Sustainable Water Use in Chemical, Paper, textile and Food Industry

**Proposed EC Grant:** 9.650.000 €

**Abstract:**

Sustainable water use in industry is the goal of AquaFit4Use, by a cross-sectorial, integrated approach. The overall objectives are: the development and implementation of new, reliable, cost-effective technologies, tools and methods for sustainable water supply, use and discharge in the main water consuming industries in order to significantly reduce water use, mitigate environmental impact and produce and apply water qualities in accordance with industrial own specifications (fit - for - use) from all possible sources, and contributing to a far-going closure of the water cycle in a economical, sustainable and safe way while improving their product quality and process stability. The 4 pillars of the project are Industrial Water Fit-for-use, Integrated water resource management, Strong industrial participation and Cross-sectorial technologies and approach. Water fit-for-use is the basis for sustainable water use; the integrated approach a must. Tools will be developed to define and control water quality. The heart of AquaFit4Use however is the development of new cross-sectorial technologies, with a focus at biofouling and scaling prevention, the treatment of saline streams, disinfection and the removal of specific substances. By intensive co-operation between the industries, the knowledge and the technologies developed in this project will be broadly transferred and implemented. This AquaFit4Use project is based on the work of the Working group "Water in Industry" of the EU Water Platform WSSTP; 40 % of the project partners of AquaFit4Use were involved in this working group. The expected impacts of AquaFit4Use are: A substantial reduction of fresh water needs (20 to 60%) and effluent discharge of industries; Integrating process technologies for further closing the water cycles; Improved process stability and product quality in the different sectors and strengthening the competitiveness of the European Water Industry.

**Partners:**

| | | |
|---|---|---|
| 1 | NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO | NL |
| 2 | PAPIERTECHNISCHE STIFTUNG | DE |
| 3 | UNIVERSIDAD COMPLUTENSE DE MADRID | ES |
| 4 | VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V. | BE |
| 5 | CENTRO DE ESTUDIOS E INVESTIGACIONES TECNICAS | ES |
| 6 | VEOLIA ENVIRONNEMENT RECHERCHE ET INNOVATION SNC | FR |
| 7 | UNIVERZA V MARIBORU | SI |
| 8 | AGENZIA NAZIONALE PER LE NUOVE TECNOLOGIE,L'ENERGIA E LO SVILUPPO ECONOMICO SOSTENIBILE | IT |
| 10 | NESTLE WATERS MANAGEMENT AND TECHNOLOGY SA | FR |
| 11 | PERSTORP SPECIALTY CHEMICALS AB | SE |
| 12 | DHI | DK |
| 13 | CONSERVAS HIJOS DE MANUEL SANCHEZ BASARTE SA | ES |
| 14 | ASISTENCIA TECNOLOGICA MEDIOAMBIENTAL, SA | ES |
| 15 | SAPPI NETHERLANDS SERVICES B.V. | NL |
| 18 | UNILEVER RESEARCH AND DEVELOPMENT VLAARDINGEN BV | NL |
| 19 | VERMICON AKTIENGESELLSCHAFT | DE |
| 20 | ENVIRO-CHEMIA POLSKA SPOLKA Z OGRANICZONA ODPOWIEDZIALNOSCIA | PL |
| 21 | ITT WEDECO GMBH | DE |
| 22 | MOSTFORWATER NV | BE |
| 23 | BASF ANTWERPEN NV | BE |
| 24 | TEKSTILNA INDUSTRIJA AJDOVSCINA DD | SI |
| 25 | SVILANIT TEKSTILNA TOVANA DD | SI |
| 26 | AQUATEST AS | CZ |
| 27 | Alpro UK Ltd | UK |
| 28 | SMURFIT KAPPA C.D. HAUPT PAPIER- UND PAPPENFABRIK GMBH | DE |
| 29 | UNIRESEARCH BV | NL |
| 30 | HOLMEN PAPER MADRID | ES |
| 31 | OBEM SPA | IT |
| 32 | INOTEX SPOL SRO | CZ |
| 33 | INDUSTRIJSKI RAZVOJNI CENTER SLOVENSKE PREDILNE INDUSTRIJE | SI |
| 34 | THE EUROPEAN COMMITTEE OF ENVIRONMENTAL TECHNOLOGY SUPPLIERS ASSOCIATION AISBL | BE |
| 35 | PCCELL GMBH | DE |
| 36 | LOGISTICON WATER TREATMENT B.V. | NL |
| 37 | Papierfabrik Rieger GmbH & Co. KG | DE |
| 38 | STICHTING DELTARES | NL |

**Activity Code:** ENV.2007.3.1.3.3. **Funding Scheme:** CSA **Duration (Months):** 30

**Title:** Integrated Sustainable Solid Waste Management in Asia

**Proposed EC Grant:** 989.523 €

**Abstract:**

The general inadequate, when existing, methods of collection and disposal of solid waste in most Asian cities are causing important environmental and social harms, as human diseases spreading, environmental pollution and ground and water pollution. In order to raise awareness, promote an adequate waste collection and treatment system and the economic growth of this activity sector in a technological efficient and sustainable way, new waste management systems must be established, which also take into account the informal sector. This integrated approach should comprise technical, environmental, legal, socio-economic and financial aspects, involving the key actors at different levels to ensure an effective implementation. The proposed project aims to bring together experts and stakeholders in the field of solid waste management in Asian developing countries and Europe. The project will promote international cooperation between research organisations, universities, and social and governmental stakeholders in a European and Asian context (local waste processors, local municipalities and policy makers, local NGOs representatives, etc). A solid waste management expert and research co-ordination platform, and an expertise network, will be established in order to co-ordinate, assess and guide suitable research and strategic activities with the aim of identifying aspects like cost-effective treatment and sorting technologies, environmental impacts, gaps in technical knowledge and socio-economic and policy barriers to further execution. The network will also propose directions for futures research and for local implementation. The general aim of the proposed network will be to develop a variety of innovative, adaptable and replicable approaches to a more efficient solid waste management, integrating appropriate low-cost and efficient technologies with community-based management and their relevant governance, institutional frameworks and socio-economic constraints.

**Partners:**

| | | |
|---|---|---|
| 1 | VEREIN ZUR FOERDERUNG DES TECHNOLOGIETRANSFERS AN DER HOCHSCHULE BREMERHAVEN E.V. | DE |
| 2 | EIDGENOESSISCHE ANSTALT FUR WASSERVERSORGUNG ABWASSERREINIGUNG UND GEWAESSERSCHUTZ | CH |
| 3 | WAGENINGEN UNIVERSITEIT | NL |
| 4 | STICHTING WASTE | NL |
| 5 | BIOAZUL | ES |
| 6 | WINROCK INTERNATIONAL INDIA | IN |
| 7 | THE ENERGY AND RESOURCES INSTITUTE | IN |
| 10 | KHULNA UNIVERSITY OF ENGINEERING AND TECHNOLOGY | BD |
| 11 | DHAKA CITY CORPORATION | BD |
| 12 | TSINGHUA UNIVERSITY | CN |
| 14 | KING MONGKUT'S UNIVERSITY OF TECHNOLOGY THONBURI | TH |
| 15 | ASIAN INSTITUTE OF TECHNOLOGY | TH |
| 17 | DEPARTMENT OF ENVIRONMENT PHNOM PENH MUNICIPALITY | KH |
| 18 | ROYAL UNIVERSITY OF PHNOM PENH | KH |
| 19 | UNIVERSITY OF INDONESIA | ID |
| 20 | SOLID WASTE MANAGEMENT ASSOCIATION OF THE PHILIPPINES | PH |
| 21 | SCHOOL OF URBAN AND REGIONAL PLANNING UNIVERSITY OF THE PHILIPPINES | PH |
| 22 | THE INTERNATIONAL SOLID WASTES AND PUBLIC CLEANING ASSOCIATION | DK |
| 24 | ZKK FOUNDATION INC | PH |
| 25 | ANNA UNIVERSITY CHENNAI | IN |
| 26 | VAN LANG UNIVERSITY | VN |
| 27 | IPM Construction and Development Corporation | PH |

**Activity Code:** ENV.2007.3.1.3.2. **Funding Scheme:** CP **Duration (Months):** 42

**Title:** Recovered Paper Sorting with Innovative Technologies

**Proposed EC Grant:** 2.868.967 €

**Abstract:**

SORT IT aims at developing new technologies for a more efficient and profitable sorting of recovered paper and board from various collection systems. These include: * New sensors based on near infrared spectrometry, image analysis and colour measurement (WP 2) * New physical separation devices like robots (WP 3) * New sorting concepts (WP 4) The new sorting devices will be implemented into an industrial sorting chain. Full scale sorting trials of recovered paper will be carried out (WP 5). Extensive life cycle studies will be carried out to assess the environmental, economic and social benefits (WP 1). The dissemination and communication plan (WP 6) includes conventional dissemination activities, introduction of new findings to the market and production of foreground for the development of the European environmental policy.

**Partners:**

| | | |
|---|---|---|
| 1 | PAPIERTECHNISCHE STIFTUNG | DE |
| 2 | CENTRE TECHNIQUE DE L'INDUSTRIE DES PAPIERS, CARTONS ET CELLULOSES | FR |
| 3 | INNVENTIA AB | SE |
| 4 | TECHNICAL UNIVERSITY 'GHEORGHE ASACHI' OF IASI | RO |
| 5 | INSTITUTO TECNOLOGICO DEL EMBALAJE, TRANSPORTE Y LOGISTICA | ES |
| 6 | BUMAGA BV | NL |
| 7 | MACHINE FABRIEK BOLLEGRAAF APPINGEDAM BV | NL |
| 8 | EVK DI Kerschhaggl GmbH | AT |
| 9 | RAUCH RECYCLING DIENSTLEISTUNGS GMBH | AT |
| 10 | VRANCART SA ADJUD | RO |
| 11 | GREGOIRE SA | FR |
| 12 | NORSKE SKOGINDUSTRIER ASA | NO |
| 13 | RTT SYSTEMTECHNIK GMBH | DE |
| 14 | PAPELES Y CARTONES DE EUROPA SA | ES |

**Activity Code:** ENV.2007.3.1.5.1. **Funding Scheme:** CSA **Duration (Months):** 36

**Title:** Low Resource consumption buildings and constructions by use of LCA in design and decision making

**Proposed EC Grant:** 841.650 €

**Abstract:**

LoRe-LCA aims to coordinate activities regarding the application of LCA in the European construction sector, focusing on comparing and improving the functional units used for LCA for whole buildings, improving the possibilities to compare results for different alternatives during design stage, and for comparison of results for different buildings. The project focuses on harmonisation and use of LCA-methods in design and decision-making for reaching overall goals of reduced resource consumption. The main objectives are: 1. Analyse the potential and restrictions of the European building regulations framework to influence the resource consumption in construction, and to derive policy recommendations on energy, pollution prevention, landfill, waste, etc, 2.Collect and compare assessment methods of environmental performance used in different countries, with emphasis on LCA methods, to facilitate meaningful evaluation and communication to stakeholders including the public. 3. Support the standardisation activities of CEN TC350 and other initiatives by taking into account the different approaches and local specificities which exist and provide input to European harmonisation activities. 4. Encourage the use of LCA methodologies by dissemination to the relevant actors in the design and construction process. 5. Resolve methodological problems related to the scope and limits of the system under study by defining needs and objectives of different user groups, hereunder defining functional units and performance indicators, for instance for health and indoor climate, to ensure comparability. 6. Facilitate comparisons and scenarios to improve decision making at the design stage and provide guidelines on the use of benchmarking data. 7. Establish best practices for use of LCA in design and decision, analysing case studies and looking at products and the building/construction as a whole. 8. Implement the use of open standards to facilitate use of LCA tools in design

**Partners:**

| | | |
|---|---|---|
| 1 | STIFTELSEN SINTEF | NO |
| 2 | ASSOCIATION POUR LA RECHERCHE ET LE DEVELOPPEMENT DES METHODES ET PROCESSUS INDUSTRIELS - ARMINES | FR |
| 3 | FUNDACION CIRCE CENTRO DE INVESTIGACION DE RECURSOS Y CONSUMOS ENERGETICOS | ES |
| 4 | INTERDISZIPLINARES FORSCHUNGSZENTRUM FUR TECHNIK, ARBEIT UND KULTUR | AT |
| 5 | SOFIA ENERGY CENTRE LTD | BG |
| 6 | EPITESUGYI MINOSEGELLENORZO INNOVACIOS KOEHASZNU TARSASAG | HU |
| 8 | KUNGLIGA TEKNISKA HOEGSKOLAN | SE |
| 9 | CalCon Holding GmbH | DE |

**Activity Code:** ENV.2007.3.1.2.2. **Funding Scheme:** CP **Duration (Months):** 54

**Title:** Soil Contamination: Advanced integrated characterisation and time-lapse Monitoring

**Proposed EC Grant:** 3.177.024 €

**Abstract:**

This project is aimed at improving current methods for monitoring contaminant distribution and biodegradation in the subsurface. Currently proven methods (based on invasive sampling of soil, soil water and gaseous phase) are unable to provide sufficiently accurate data with high enough resolution. Resulting in inability to assess of bioremediation progress and quantification of the processes involved in such bioremediation at field sites. Consequently, present assessment strategies to decide on optimal remediation approach, including design of monitoring systems, and evaluation of degradation progress, are severely flawed by uncertainty. Geophysical time-lapse measurements in combination with novel ground truthing methods give the possibility to determine: absolute contamination levels, spatial spreading, and reduced concentrations of contaminants in a heterogeneous environment. Geophysical methods of data acquisition alone are presently unable to provide absolute levels of biodegradable contamination concentrations. We aim to make improvements of fundamental constitutive relations between soil physical and degradation activity parameters and geophysically measurable parameters. Despite current improvements, there is a strong need to test these theories in practical field situations. Our project is dedicated to improving both site contamination assessment and the monitoring of bioremediation processes, and changes in soil environmental conditions. We suggest combining improved conventional soil monitoring techniques with state-of-the-art geophysical approaches. Partners in the project range from microbiologists to geophysicist, all with working experience from contaminated sites. Process studies involving lysimeters, and testing of the combination of technologies at two field sites are the major aims of the project. Focus on practical field situations and strong communication with stake-holders and SMEs will ensure high relevance for society.

**Partners:**

| | | |
|---|---|---|
| 1 | NORWEGIAN INSTITUTE FOR AGRICULTURAL AND ENVIRONMENTAL RESEARCH - BIOFORSK | NO |
| 2 | AMRA - ANALISI E MONITORAGGIO DEL R ISCHIO AMBIENTALE SCARL | IT |
| 3 | POLITECNICO DI TORINO | IT |
| 4 | WAGENINGEN UNIVERSITEIT | NL |
| 5 | FRIEDRICH-SCHILLER-UNIVERSITAET JENA | DE |
| 7 | MINISTERUL MEDIULUI SI DEZVOLTARII DURABILE - INSTITUTUL NATIONAL DE CERCETARE - DEZVOLTARE PENTRU PROTECTIA MEDIULUI | RO |
| 8 | MAGYAR TUDOMANYOS AKADEMIA TALAJTANI ES AGROKEMIAI KUTATO INTEZETE | HU |
| 9 | UMWELTANALYTISCHE MESS-SYSTEME GMBH | DE |
| 10 | IRIS INSTRUMENTS SAS | FR |
| 11 | UPPSALA UNIVERSITET | SE |

**Activity Code:** ENV.2007.3.1.2.2. **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Contaminant-specific isotope analyses as sharp environmental-forensics tools for site characterisation, monitoring and source apportionment of pollutants in soil

**Proposed EC Grant:** 2.099.958 €

**Abstract:**

Conventional remediation-monitoring programmes, i.e. analysis of contaminant and metabolite concentrations over time and space, often provide inconclusive assessments due to inability to resolve among mixing of several contaminant sources, degradation, dispersion and other redistribution processes. The isoSoil objective is to firmly establish concentration-independent contaminant-specific isotope analysis (CSIA) as a novel, user-friendly and powerful tool for both degradation monitoring and source apportionment of organic contaminants in soil. The balanced isoSoil consortium with world-leading CSIA research groups, progressive remediation-focused and analytical services companies and experienced software enterprises will enable a) applications of multiple CSIA systems (13C/12C, 2H/1H, 15N/14N and 37Cl/35Cl) for improved site-specific characterization and monitoring of microbial and abiotic degradation, b) applications of CSIA “isotopic fingerprinting” (14C/12C, 2H/1H, 37Cl/35Cl, and 81Br/79Br) for source apportionment of both regional diffuse and locally mixed contamination scenarios (i.e., environmental forensics) and, c) emphasis on development and demonstration of web-based commercial software to aid soil managers in sampling and interpretation of CSIA results. The CSIA concept provides a well-defined and improved tool to for assessment and monitoring of the 3.5 mill contaminated soil sites in EU. Application of multi-element CSIA enables enhanced power to resolve between the many co-occurring processes. CSIA-based DEGRADATION MONITORING answers to Call Topic “improved tools for site characterization and monitoring of contaminated soils including chemical analysis”. CSIA-based SOURCE APPORTIONMENT answers to Call Topic “development of tools for detection of local, primary, or secondary sources”.

**Partners:**

| | | |
|---|---|---|
| 1 | STOCKHOLMS UNIVERSITET | SE |
| 3 | ALS SCANDINAVIA AB | SE |
| 4 | HELLENIC CENTRE FOR MARINE RESEARCH | EL |
| 5 | EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZURICH | CH |
| 6 | MASARYKOVA UNIVERZITA | CZ |
| 7 | AECOM CZ SRO | CZ |
| 8 | POLITECHNIKA LODZKA | PL |
| 9 | UNIVERSITY OF BRISTOL | UK |
| 10 | FQS POLAND SP. Z O.O. | PL |
| 11 | MakoLab S.A. | PL |
| 12 | IVL SVENSKA MILJOEINSTITUTET AB | SE |
| 13 | EIDGENOESSISCHE ANSTALT FUR WASSERVERSORGUNG ABWASSERREINIGUNG UND GEWAESSERSCHUTZ | CH |

**Activity Code:** ENV.2007.3.1.3.2. **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Magnetic Sorting and Ultrasound Sensor Technologies for Production of High Purity Secondary Polyolefins from Waste

**Proposed EC Grant:** 2.761.772 €

**Abstract:**

The European consumption of plastics increased from 24,6 Mtons in 1993 to 39,7 Mtons in 2003 and its growth rate exceeds that of the economy as a whole. At the same time, polymer recyclers and manufacturing industries have a problem buying feed materials and secondary polymers of sufficient volume and quality, as a result of the pull of China and India on all raw material resources. The alternative of using more primary plastics has a range of environmental impacts and needs more resources (about two kg oil for one kg plastic). The polymer resources in complex wastes, such as WEEE, household waste and ASR (ACEA: 7.5 million tons of shredder residue in the EU17 in 2002), are largely unused, because of the problem to produce high-purity products from such sources at acceptable costs. Today just one million out of 14 million ton polyolefin's yearly sold in Europe is being recycled. W2Plastics aims to develop cost-effective and clean technology based on Magnetic Density Separation (MDS) and Ultrasound process control to recover high-purity polyolefin's from complex wastes. A substantial effort is spent on making the new technologies fit in between the state-of-the-art technology of waste processors and the demands of the compounding and manufacturing industries by defining standards and best practices as well as effective quality-control tools (hyperspectral imaging). The integrated set of technologies and standards aims at changing the status of complex wastes to a resource of high-purity polyolefin's for a wide range of industries. The development of such technology is in line with the European legislation (COM/2001/0031, 99/31/EC, 2000/53/EC, 2002/96/EC, 2003/108/EC) aiming at fostering the development environmental friendly technologies to reduce the environmental impact of human activities, to protect the environment, to minimize depletion of resources and to promote at the same time) business opportunities and improved competitiveness of European industry and SMEs

**Partners:**

| | | |
|---|---|---|
| 1 | TECHNISCHE UNIVERSITEIT DELFT | NL |
| 2 | UNIVERSITA DEGLI STUDI DI ROMA LA SAPIENZA | IT |
| 3 | DANMARKS TEKNISKE UNIVERSITET | DK |
| 4 | UNIVERSITATEA TRANSILVANIA DIN BRASOV | RO |
| 5 | BARCELONA SUPERCOMPUTING CENTER - CENTRO NACIONAL DE SUPERCOMPUTACION | ES |
| 6 | BUDAPESTI MUSZAKI ES GAZDASAGTUDOMANYI EGYETEM | HU |
| 7 | AKG POLYMERS B.V. | NL |
| 8 | BAKKER MAGNETICS BV | NL |
| 9 | RECYCLING AVENUE BV | NL |
| 10 | ALCUFER IPARI KERESKEDELMI ES SZOLGALTATO KORLATOLT FELELOSSEGU TARSASAG | HU |
| 11 | S.C. Urban S.A. | RO |
| 12 | OLDELFT BV | NL |
| 13 | DV SRL | IT |

**Activity Code:** ENV.2007.3.1.1.2. **Funding Scheme:** CP **Duration (Months):** 38

**Title:** Floating Sensorised Networked Robots for Water Monitoring

**Proposed EC Grant:** 2.591.475 €

**Abstract:**

Water is one of our most precious and valuable resources. It is important to determine how to fairly use, protect and preserve water. New strategies and new technologies are needed to assess the chemical and ecological status of water bodies and to improve the water quality and quantity. The relatively recent progress in micro-electronics and micro-fabrication technologies has allowed a miniaturization of sensors and devices, opening a series of new exciting possibilities for water monitoring. Moreover, robotics and advanced ICTbased technology can dramatically improve detection and prediction of risk/crisis situations, providing new tools for the global management of the water resources. The HydroNet proposal is aimed at designing, developing and testing a new technological platform for improving the monitoring of water bodies based on a network of autonomous, floating and sensorised mini-robots, embedded in an Ambient Intelligence infrastructure. Chemo- and bio-sensors, embedded in the mobile robots will be developed and used for monitoring in real time physical parameters and pollutants in water bodies. Enhanced mathematical models will be developed for simulating the pollutants transport and processes in rivers, lakes and sea. The unmanaged, self-assembling and self-powered wireless infrastructure, with an ever-decreasing cost per unit, will really support decisional bodies and system integrators in managing water bodies resources. The robots and sensors will be part of an Ambient Intelligence platform, which will integrate not only sensors for water monitoring and robot tasks execution, but also communications backhaul systems, databases technologies, knowledge discovery in databases (KDD) processes for extracting and increasing knowledge on water management. Following the computation on stored data, feedback will be sent back to human actors (supervisors, decision makers, industrial people, etc.) and/or artificial actuators, in order to perform actions.

**Partners:**

| | | |
|---|---|---|
| 1 | SCUOLA SUPERIORE DI STUDI UNIVERSITARI E DI PERFEZIONAMENTO SANT'ANNA | IT |
| 2 | DEDALUS SPA | IT |
| 3 | FACHHOCHSCHULE ZENTRALSCHWEIZ - HOCHSCHULE LUZERN | CH |
| 4 | INSTITUT JOZEF STEFAN | SI |
| 5 | Lumex-marketing LLC | RU |
| 6 | NORSK INSTITUTT FOR LUFTFORSKNING | NO |
| 7 | UNIVERZA V LJUBLJANI | SI |
| 8 | THE HEBREW UNIVERSITY OF JERUSALEM. | IL |
| 9 | INSTITUT ZA FIZIKALNO BIOLOGIJO D.O.O. | SI |
| 10 | ROBOTECH SRL | IT |

**Activity Code:** ENV.2007.3.1.5.2. **Funding Scheme:** CSA **Duration (Months):** 36

**Title:** PERFORMANCE INDICATORS FOR HEALTH, COMFORT AND SAFETY OF THE INDOOR ENVIRONMENT

**Proposed EC Grant:** 1.599.999 €

**Abstract:**

The aim of PERFECTION is to help enable the application of new building design and technologies that improve the impact of the indoor built environment on health, comfort, feeling of safety and positive stimulation. The project concept consists of the following components: - the inventory of current standards, regulations, technologies and ongoing and recent research activities and policies related with optimal indoor environment - analysis of current indoor performance indicators and their applicability positioned within a generic framework, and identifying areas where new indicators for health and safety should be developed - experiences from use cases of building design and technologies exploiting the indicators in different building types - development of a decision support tool to guide the use of correct indicators for a given context - identification of incentives and barriers for the wide use of performance indicators - a roadmap and recommendations for building design and technologies, and support for policies - a wide dissemination of findings through an extensive expert network. The project is carried out at an EU scale and the project results will reach every EU country. More than 40 experts from over 30 countries and representing industry, academia and research were carefully selected to the PERFECTION team to ensure the needed depth and width. The network consists of experts from various domains that are in the focus of the call, such as indoor health issues, acoustics, universal design, performance metrics and tools, sustainable design and construction, etc. The PERFECTION project will organize 5 events all across Europe and will produce a quality publication - showcase of a number of case studies across all EU-27 countries, whereby the impact of innovative and well defined technologies as well as policies on specific buildings will be presented in a user friendly way.

**Partners:**

| | | |
|---|---|---|
| 1 | CENTRE SCIENTIFIQUE ET TECHNIQUE DE LA CONSTRUCTION | BE |
| 2 | TEKNOLOGIAN TUTKIMUSKESKUS VTT | FI |
| 3 | APPLIED INDUSTRIAL TECHNOLOGIES LTD | EL |
| 4 | CESKE VYSOKE UCENI TECHNICKE V PRAZE | CZ |
| 5 | ASSOCIATION POUR LA RECHERCHE ET LE DEVELOPPEMENT DES METHODES ET PROCESSUS INDUSTRIELS - ARMINES | FR |
| 6 | BAUPHYSIKBUERO PROF. KORNADT UND PARTNER | DE |
| 7 | INTERDISCIPLINARY CENTER FOR TECHNOLOGICAL ANALYSIS AND FORECASTING | IL |
| 8 | SITI - ISTITUTO SUPERIORE SUI SISTEMI TERRITORIALI PER L'INNOVAZIONE | IT |
| 9 | TECHNISCHE UNIVERSITEIT EINDHOVEN | NL |
| 10 | ASM CENTRUM BADAN I ANALIZ RYNKU SP. Z O O | PL |
| 11 | BUILDING RESEARCH ESTABLISHMENT LTD | UK |

**Activity Code:** ENV.2007.3.1.2.2. **Funding Scheme:** CP **Duration (Months):** 52

**Title:** Model driven Soil Probing, Site Assessment and Evaluation

**Proposed EC Grant:** 3.397.609 €

**Abstract:**

Conventional techniques for site characterization are time consuming, cost intensive, and do not support decision making. Therefore, new techniques for step by step site characterization strategy with smart feed back loops are necessary. These will be able to support a future “soil framework directive”. Advanced geophysical site characterization techniques combined with new types of vegetation analysis will be developed. Based on these non-invasive surveys, the extension of sources, contamination levels (THP, BTEX, PAH, CHC, explosives, heavy metals and radio nuclides) and soil heterogeneities will be localized first. Hot spots will then be investigated by new direct push probing systems integrated with geophysical & hydrogeological methods and combined with chemical & isotopic contaminant analysis for source localization and identification (environmental forensics). The actually occurring bioprocesses, such as contaminant degradation or precipitation/mobilization processes, will be assessed using biosensors, in situ microcosms, and stable isotope and biomarker analysis. These new techniques and tools will be evaluated against best practice of conventional methods. Therefore, they will be applied at fully equipped and characterized European reference sites available in the project and will be provided to consultants and SME´s for application. Integrated statistical analysis and modelling at different stages of the step by step approach will result in an improved view of soil and subsurface contamination and will provide a sound basis for risk assessment and decision.

**Partners:**

| | | |
|---|---|---|
| 1 | HELMHOLTZ-ZENTRUM FUER UMWELTFORSCHUNG GMBH - UFZ | DE |
| 2 | UNIVERSITA DEGLI STUDI DI PADOVA | IT |
| 4 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 5 | DANMARKS TEKNISKE UNIVERSITET | DK |
| 6 | AECOM CZ SRO | CZ |
| 8 | LANCASTER UNIVERSITY | UK |
| 9 | AARHUS UNIVERSITET | DK |
| 9 | AARHUS UNIVERSITET | DK |
| 11 | UNIVERSITE CATHOLIQUE DE LOUVAIN | BE |
| 12 | UNIVERSITA DEGLI STUDI DI ROMA LA SAPIENZA | IT |
| 13 | SAINT PETERSBURG STATE UNIVERSITY - SPSU | RU |
| 14 | CREATEC CONSORZIO PER L'AMBIENTE E L'INNOVAZIONE TECNOLOGICA | IT |
| 15 | CHRISTIAN-ALBRECHTS-UNIVERSITAET ZU KIEL | DE |
| 16 | RHEINISCHE FRIEDRICH-WILHELMS-UNIVERSITAET BONN | DE |
| 17 | STICHTING DELTARES | NL |
| 18 | MPBF Mess- und Probenahmetechnik Berndsen und Faiß GbR | DE |
| 19 | INSTITUT DE PHYSIQUE DU GLOBE DE PARIS | FR |
| 20 | UMWELTBUNDESAMT GMBH | AT |

**Activity Code:** ENV.2008.3.1.5.1. **Funding Scheme:** CP **Duration (Months):** 72

**Title:** PoroElastic Road SUrface: an innovation to Avoid Damages to the Environment

**Proposed EC Grant:** 3.376.832 €

**Abstract:**

Low-noise road surfaces are recognized as a cost-effective tool for traffic noise abatement. The best performance can be achieved by optimizing surface texture and porosity. That way, a bottom line of a 3dB lifetime average reduction with respect to ordinary asphalt has been reached. Any progress must resort to another noise-relevant characteristic i.e. elasticity by which the noise due to tyre vibrations can be suppressed. A recently completed European project has shown that, in order to be effective, the elasticity of the road surface must be in the same range as that of the tyre itself. This explains why previous attempts of incorporating a little rubber in an asphalt mix failed to produce significant noise reductions. The solution consists of a fully rubberized, porous compound: a so-called “PoroElastic Road Surface” (PERS). Trials in Japan and Sweden have demonstrated vehicle noise reduction close to 10 dB. However, that promising technology is not ready for application. The following problems have to be solved: resistance to wear and tear, adhesion to the base, winter maintenance, mechanical behaviour and the following have to be clarified: rolling resistance, skid resistance, frost behaviour, fire hazard, workability and production/laying processes including workers safety. The project aims at developing a durable, cost-effective PERS using scrapped tyres, which would benefit the environment by contributing to abating traffic noise and vibrations but also helping to solve the problem of over 3 million tons of used tyres being dumped or burned every year in the 27 MS. One will take advantage of Swedish and Japanese experience. The former country is represented in the Consortium while the latter will be represented in an External Reference Group. Five countries including two NMS will host the experimental sites and test different variants of mixes and construction methods. One will also analyze the global, possibly positive impact on CO2 emissions.

**Partners:**

| | | |
|---|---|---|
| 1 | CENTRE DE RECHERCHES ROUTIERES - OPZOEKINGSCENTRUM VOOR DE WEGENBOUW | BE |
| 2 | STATENS VAG- OCH TRANSPORTFORSKNINGSINSTITUT | SE |
| 3 | Danish Road Directorate | DK |
| 4 | NCC Roads A/S | DK |
| 5 | ZAVOD ZA GRADBENISTVO SLOVENIJE | SI |
| 6 | INSTYTUT BADAWCZY DROG I MOSTOW | PL |
| 7 | POLITECHNIKA GDANSKA. | PL |
| 8 | Dura Vermeer Infrastructuur BV | NL |
| 9 | EUROPEAN TYRE RECYCLERS ASSOCIATION | FR |
| 10 | HET ELASTOMERTECHNIK GMBH | DE |
| 11 | INSTITUT FRANCAIS DES SCIENCES ET TECHNOLOGIES DES TRANSPORTS, DE L'AMENAGEMENT ET DES RESEAUX | FR |
| 12 | KATHOLIEKE UNIVERSITEIT LEUVEN | BE |

**Activity Code:** ENV.2008.3.1.3.2. **Funding Scheme:** CP **Duration (Months):** 42

**Title:** High added value materials from waste tyre gasification residues

**Proposed EC Grant:** 3.349.992 €

**Abstract:**

This project is focused on the waste tyres recycling and promotes a thermal process mainly devoted to the production of ceramic materials. The disposal of waste tyres represents a relevant problem within the waste management strategy of the European Community and, despite the attempts of reusing waste tyre in many different ways, a relevant fraction (nearly 23%) is still landfilled. Pyrolysis and gasification are a promising way for alternative high-efficiency material and energy production, since both the processes provide a gaseous and a liquid fraction easily usable as fuels or chemical sources. Nevertheless, besides these encouraging preliminary remarks, the experiences on both pilot and industrial scale have shown that without a valuable exploitation of the solid by-product (char), the whole economic balance of the process is not advantageous and therefore the process is not sustainable. The gasification/pyrolysis treatment of waste tyres, apart from a high hydrogen rich syngas, brings to a very high carbon-rich char fraction, which has been tested in the past as a semi-reinforcing filler for new tyres or as an active carbon. Nevertheless, despite the recent technological advances, it is still unclear whether there is a market demand for this product. On these bases, the main idea of the proposal consists in redirecting the gasification process towards the material recycling, by coupling a second thermal process, dedicated to the plasma synthesis of silicon carbide, to the preliminary waste tyres gasification. The overall strategy of the project's workplan mainly consists of three levels: a.the development of a sustainable recycling process for the waste tyre treatments, with the final construction of a prototype plant; b.the sustainability assessment, in terms of impact analyses on economical, ecological and social aspects; c.the market requirements analysis and the future perspectives in view of potential stakeholders, and the diffusion of the results.

**Partners:**

| | | |
|---|---|---|
| 1 | AGENZIA NAZIONALE PER LE NUOVE TECNOLOGIE,L'ENERGIA E LO SVILUPPO ECONOMICO SOSTENIBILE | IT |
| 2 | EUROPEAN TYRE RECYCLERS ASSOCIATION | FR |
| 3 | RHEINISCH-WESTFAELISCHE TECHNISCHE HOCHSCHULE AACHEN | DE |
| 4 | TURKIYE BILIMSEL VE TEKNOLOJIK ARASTIRMA KURUMU | TR |
| 6 | ELASTRADE S.R.L. | IT |
| 7 | RESEARCH CENTRE FOR NATURAL SCIENCES, HUNGARIAN ACADEMY OF SCIENCES | HU |
| 8 | FEBE ECOLOGIC - STUDIO ASSOCIATO DI CONSULENSA E FORMAZIONE AMBIENTALE | IT |
| 9 | LIQTECH INTERNATIONAL A/S | DK |
| 10 | SOCIETA ITALIANA CARBONI ATTIVI VEGETALI SRL | IT |

**Activity Code:** ENV.2008.3.1.4.1. **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Life Cycle Assessment of Environment-Compatible Flame Retardants ( Prototypical case study)

**Proposed EC Grant:** 3.157.554 €

**Abstract:**

Brominated flame retardants (BFRs) will be phased out because of their environmental hazards. Less toxic alternatives appear to be available already but comprehensive information on their possible toxicological effects are lacking. ENFIRO offers a prototypical case study on substitution options for BFRs resulting in a comprehensive dataset on viability of production and application, environmental safety, and a complete life cycle assessment. Dissemination will ensure the project results to arrive at policymakers' desks. The ENFIRO consortium is a unique collaboration between industries, SME's and universities with a wide variety of scientific disciplines. ENFIRO will contribute to the phasing out of BFRs as proposed in the European Water Framework Directive. The approach and the results of ENFIRO will be useful for similar substitution studies, e.g. in REACH. Following a study on literature and industrial information, and prioritizing , three flame retardant (FR)/product combinations will be selected (e.g. metal-based FRs, phosphorous-based and nanoclay-based FRs in printed circuit boards, paints and foam). These will be studied for environmental and toxicological risks, and for viability of industrial implementation, i.e. production of the FR, fire safety and application of the FR into products (electronics, furniture, paints, foams, etc.). All information from these tests will be used for a risk assessment. The outcome of that assessment will, together with socio-economic information be used in a complete life cycle assessment. The project will follow a pragmatic approach, avoiding final recommendations on environment-compatible substitution options that would not be viable for implementation by industry. A Substitution Information Exchange Forum with members representing FR users (large industries) has been invited to guide this project.

**Partners:**

| | | |
|---|---|---|
| 1 | VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG | NL |
| 2 | UNIVERSITY OF ULSTER | UK |
| 3 | Clariant Produkte (Deutschland) GmbH | DE |
| 4 | IRIS VERNICI SRL | IT |
| 5 | PROCOAT Consorzio per la promozione dei prodotti vernicianti e ricopenti | IT |
| 6 | IVAM UVA | NL |
| 7 | STOCKHOLMS UNIVERSITET | SE |
| 8 | UNIVERSITEIT UTRECHT | NL |
| 9 | SWEREA IVF AB | SE |
| 10 | UNIVERSITEIT VAN AMSTERDAM | NL |
| 11 | CALLISTO PRODUCTIONS LTD | UK |
| 12 | ITRI Innovation Ltd | UK |

**Activity Code:** ENV.2008.3.1.1.1. **Funding Scheme:** CP **Duration (Months):** 56

**Title:** Development of rehabilitation technologies and approaches for multipressured degraded waters and the integration of their impact on river basin management

**Proposed EC Grant:** 6.584.659 €

**Abstract:**

Within the AQUAREHAB project, different innovative rehabilitation technologies for soil, groundwater and surface water will be developed to cope with a number of hazardous (nitrates, pesticides, chlorinated and aromatic compounds, mixed pollutions,…) within heavily degraded water systems. The technologies are activated riparian zones/wetlands; smart biomass containing carriers for treatment of water in open trenches; in-situ technologies to restore degraded surface water by inhibiting influx of pollutants from groundwater to surface water; multifunctional permeable barriers and injectable Fe-based particles for rehabilitation of groundwater. Methods will be developed to determine the (long-term) impact of the innovative rehabilitation technologies on the reduction of the influx of these priority pollutants towards the receptor. A connection between the innovative technologies and river basin management will be worked out. In a first stage of the project, the technologies and integration of their impact in river basin management will be developed in three different river basins (Denmark, Israel, Belgium). In a second stage, the generic approaches will be extrapolated to one or two more river basins. One of the major outcomes of the project will be a generic river basin management tool that integrates multiple measures with ecological and economic impact assessments of the whole water system. The research in the project is focussed on innovative rehabilitation strategies to reduce priority pollutants in the water system whereas the generic management tool will include other measures related to flood protection, water scarcity and ecosystem health, The project will aid in underpinning river basin management plans being developed in EU Member States, and will demonstrate cost effective technologies that can provide technical options for national and local water managers, planners and other stakeholders (drinking water companies, industry, agriculture,

**Partners:**

| | | |
|---|---|---|
| 1 | VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V. | BE |
| 2 | KATHOLIEKE UNIVERSITEIT LEUVEN | BE |
| 3 | The Geological Survey of Denmark and Greenland | DK |
| 4 | HELMHOLTZ ZENTRUM MUENCHEN DEUTSCHES FORSCHUNGSZENTRUM FUER GESUNDHEIT UND UMWELT GMBH | DE |
| 5 | CTM CENTRE TECNOLOGIC | ES |
| 6 | TECHNISCHE UNIVERSITEIT DELFT | NL |
| 7 | SAPION HANS MILIEU-ADVIES | BE |
| 8 | Isodetect GmbH | DE |
| 9 | UNIVERSITAET STUTTGART | DE |
| 10 | WAGENINGEN UNIVERSITEIT | NL |
| 11 | BEN-GURION UNIVERSITY OF THE NEGEV | IL |
| 12 | MASARYKOVA UNIVERZITA | CZ |
| 13 | UNESCO-IHE INSTITUTE FOR WATER EDUCATION | NL |
| 14 | THE UNIVERSITY OF SHEFFIELD | UK |
| 15 | POLITECNICO DI TORINO | IT |
| 16 | HÖGANÄS AB | SE |
| 17 | KOBENHAVNS UNIVERSITET | DK |
| 18 | INSTITUT NATIONAL DE L ENVIRONNEMENT ET DES RISQUES INERIS | FR |
| 19 | ENVIRONMENTAL INSTITUTE s.r.o. | SK |

**Activity Code:** ENV.2008.3.1.3.1. **Funding Scheme:** CP **Duration (Months):** 60

**Title:** Towards Zero Waste in Industrial Networks

**Proposed EC Grant:** 6.159.927 €

**Abstract:**

The first work package will define a common vision on zero-waste entrepreneurship within the first 6 months. The mythos Individual Producer Responsibility will be investigated if it can become the all-healing-solution in electronics industry as well as how this concept can be applied to other industrial sectors. WP2 concentrates on new technological developments, WP3 on waste prevention methodologies and strategies and WP4 will adapt existing software tools supporting waste prevention. All this knowledge will be then formalised into an innovative production model for resource-use optimisation and waste prevention in WP5. This preparatory work will enable the 9 industrial case studies in Work package 6 that forms the core of the ZeroWIN project with more than half of the total budget. These case studies will be used to prove that the ZeroWIN approach can meet at least 2 of the stringent targets of the call. WP7 closely monitors and validates the improvements by quantitative assessment. WP 8 investigates the implications to policy and formulates recommendations. Finally WP9 will disseminate the results of ZeroWIN as broad as possible and WP10 ensures the efficient operation of the ZeroWIN project. By concentrating on industrial networks in the automotive, construction, electronics and photovoltaic industries ZeroWIN will address • nearly 3 million companies (of which 80% are SMEs) • with more than 2,8 trillion € turnover and a value creation of more than 800 billion € • with more than 20 million employees • creating about 40% or more than 400 million tons of industrial waste • using as much as 50% of all materials extracted from the earth´s crust • generating about 40% of all energy use and about 35% of all greenhouse gas emissions. The ZeroWIN consortium has 29 partners from 10 countries (AT, DE, ES, FR, HU, IE, PL, PT, RO, UK), dominated by industry - 3 large companies (one of which is the electronics cluster in the Basque region) and 13 SMEs.

**Partners:**

| | | |
|---|---|---|
| 1 | OSTERREICHISCHE GESELLSCHAFT FUER SYSTEM- UND AUTOMATISIERUNGSTECHNIK | AT |
| 2 | EUSKAL HERRIKO ELEKTRONIKA ETA INFORMAZIO | ES |
| 3 | bauserve GmbH | DE |
| 4 | BIO INTELLIGENCE SERVICE SA | FR |
| 5 | CENTRO DE ESTUDOS INFORMACAEO E FORMACAEO PARA O AMBIENTE | PT |
| 6 | FLECTION GERMANY GMBH | DE |
| 7 | FUNDACION GAIKER | ES |
| 8 | Greentronics | RO |
| 9 | HEWLETT-PACKARD LIMITED | UK |
| 10 | INSTITUT EUROPEEN D'ADMINISTRATION DES AFFAIRES | FR |
| 11 | WIRTSCHAFTSKAMMER OESTERREICH | AT |
| 12 | MULTIMEDIA COMPUTER SYSTEM LTD | IE |
| 13 | PE INTERNATIONAL AG | DE |
| 14 | Remade South East Ltd. | UK |
| 15 | SAFT SA | FR |
| 16 | TECHNISCHE UNIVERSITAT BERLIN | DE |
| 17 | REGIONAL ENVIRONMENTAL CENTER FOR CENTRAL AND EASTERN EUROPE -REC | HU |
| 18 | TRAMA TECNOAMBIENTAL S.L. | ES |
| 19 | tricom GmbH | DE |
| 20 | UNITED NATIONS UNIVERSITY | JP |
| 21 | UNIVERSITY COLLEGE FOR THE CREATIVE ARTS AT CANTERBURY EPSOM FARNHAM M AIDSTONE AND ROCHESTER | UK |
| 22 | UNIVERSITY OF LIMERICK | IE |
| 23 | UNIVERSITAET FUER BODENKULTUR WIEN | AT |
| 24 | UNIVERSITY OF SOUTHAMPTON | UK |
| 25 | UP Umweltanalytische Produkte GmbH | DE |
| 26 | VFJ WERKSTATTEN GMBH | DE |
| 27 | WAMECO S.C. RYSZARD SZPADT, WOJCIECH GORNIKOWSKI | PL |
| 28 | Wilding Butler Construction Ltd | UK |
| 29 | POLITECHNIKA WROCLAWSKA | PL |
| 30 | UNIVERSITAET STUTTGART | DE |
| 31 | AU Optronics Corporation | TW |
| 32 | CONTINENTAL TEVES AG & CO. OHG | DE |

**Activity Code:** ENV.2008.3.1.1.2. **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Development of intensified water treatment concepts by integrating nano- and membrane technologies

**Proposed EC Grant:** 1.930.800 €

**Abstract:**

The Nametech project harnesses benefits of nanotechnology to bring about improvements in membrane filtration for advanced water treatment. The general objective is to strengthen the European membrane market by making nanotechnology available to large scale European membrane manufacturers. A unique feature of the project is the knowledge transfer between the experienced membrane manufacturer Norit and the coating expert and new-comer to the membrane field Agfa Gevaert. The S&T focus is on the use of nano-structured materials to alter the physical and chemical properties of polymeric ultrafiltration membranes and thereby improving the filtration performance at macroscale installations. The project aims at adapting commercial nanoparticles such as TiO2 and Ag for the modification of UF membranes to reduce fouling, and thus improve its permeability (i.e. Technology Path 1). In Technology Path 2 and 3, the potential of using active nanoparticles, such as bionano-catalysts, in combination with membranes is examined to remove micropollutants such as chlorinated compounds, nitroaromatic compounds or redox active metals, thus improving the water quality. A specific novelty is the development of an integrated permeate channel concept, whereby the nanoparticles are embedded in 3D textiles, functioning as membrane support and permeate channel. The nanoparticles will be deposited on the membrane surface or embedded in the membrane (mixed matrix). The S&T challenges regarding the modification of the nanoparticles, the deposition of the nanoparticles on membrane surface as well as the production of nano-activated membranes (NAMs) will be addressed in WP 1, 2 and 3. The newly developed NAMs will be tested at laboratory scale (WP 4) before selecting the most promising concept for testing at pilot scale (WP 5). The activities will be complemented by a toxicological study and the application of LCA to assess the environmental impacts (WP 6). The high industrial involvement puts a strong focus on the exploitation strategies and handling IPR issues (WP 7).

**Partners:**

| | | |
|---|---|---|
| 1 | VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V. | BE |
| 2 | RHEINISCH-WESTFAELISCHE TECHNISCHE HOCHSCHULE AACHEN | DE |
| 3 | NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO | NL |
| 4 | THE UNIVERSITY OF MANCHESTER | UK |
| 5 | PENTAIR WATER PROCESS TECHNOLOGY BV | NL |
| 6 | AGFA-GEVAERT N.V. | BE |
| 7 | CONSORZIO VENEZIA RICERCHE | IT |
| 8 | TECHNICKA UNIVERZITA V LIBERCI | CZ |
| 9 | AQUATEST AS | CZ |
| 10 | SUEZ ENVIRONNEMENT SA | FR |
| 11 | FACHHOCHSCHULE NORDWESTSCHWEIZ | CH |

**Activity Code:** ENV.2008.3.1.5.1. **Funding Scheme:** CP **Duration (Months):** 31

**Title:** SUSTAINABLE REFURBISHMENT OF BUILDING FACADES AND EXTERNAL WALLS

**Proposed EC Grant:** 2.652.123 €

**Abstract:**

SUSREF will develop new sustainable technologies for refurbishment of external walls. SUSREF is based on the premise that 1) Refurbishment of external walls is one of the most efficient ways of reducing environmental impacts from European building stock. 2) European building sector is facing huge refurbishment requirements; refurbishment of external walls is among the most urgent tasks. 3) Although there are technological solutions, the risks and optimal solutions are not understood. 4) External walls have an extensive effect on building performance and several aspects have to be taken into account when developing new concepts: a) effect on energy consumption, b) building physical behaviour and durability, c) good integration with building structure, details and building services, d) effect on indoor environment, e) aesthetics. 5) Urgent needs of refurbishment are not only faced in the EU but also in neighbouring areas. Development of functional and environmentally efficient technologies would support the European industry to export projects and the neighbouring areas to adopt sustainable technologies. SUSREF will 1) identify the foreseen needs to refurbish building envelops in the EU in order to understand the significance in terms of environmental and economic impacts and business potentials; 2) develop a systemized methods to manage the functional performance of solutions. Analyse technologies from the view point of building physics, comfort and durability. Consider different challenges in different parts of Europe in terms of present climate and foreseen risks of its changes, technological and cultural-historic issues; 3) develop systemized methods for consideration of energy and environmental performance of external walls; 4) develop sustainable product and project concepts; 5) disseminate results for building industry, standardisation bodies, and policy-makers and authorities in terms of technological knowledge, guidelines and recommendations.

**Partners:**

| | | |
|---|---|---|
| 1 | TEKNOLOGIAN TUTKIMUSKESKUS VTT | FI |
| 2 | STIFTELSEN SINTEF | NO |
| 3 | Vahanen Oy | FI |
| 4 | CARDIFF UNIVERSITY | UK |
| 5 | BUILDING RESEARCH ESTABLISHMENT LTD | UK |
| 6 | FUNDACION TECNALIA RESEARCH & INNOVATION | ES |
| 7 | REPAIR ESTRUCTURAS, S.L. | ES |
| 8 | ONEKA ARQUITECTURA SL | ES |
| 9 | Sustainable Gwynedd Gynaladwy | UK |
| 10 | Ehituskonstrueerimise ja Katsetuste OÜ | EE |
| 11 | TRONDHEIM OG OMEGN BOLIGBYGGELAG | NO |

**Activity Code:** ENV.2008.3.1.2.1. **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Using MicroBes for the REgulation of heavy metaL mobiLity at ecosystem and landscape scAle: an integrative approach for soil remediation by geobiological processes

**Proposed EC Grant:** 2.337.421 €

**Abstract:**

The overall goal of UMBRELLA is to use microorganisms to develop cost-efficient and sustainable measures for soil remediation at heavy metal contaminated sites throughout Europe. This will be facilitated by research in microbiology, plant uptake and (hydro)geochemistry centers on the study of microbial influence on metal biogeochemical cycles and their impact for use in soil and water protection. The technologies developed provide a speed-up of existing bioremediation techniques and will provide a tool-box to end-users with microbes for remediation actions in different European climatic, geological and biological setting which will allow low-cost, sustainable, on-site bioremediation of metal contaminations. At the same time, the introduction of a concerted, internationalized education of interdisciplinary trained PhD students across Europe will ascertain a long-lasting, sustainable education profile with relevance to soil remediation. The involvement of government agencies is focussing on the possibility to provide governments with fused guidelines for soil and water protection in a way that overcomes the practises of separated agencies by focussing on ecotoxicological risks resulting from metal contamination on-site as well as by transport through water paths in ground water and international water ways. Dissemination of results will be ensured by international congresses and publications. The management of an integrative, multi-partner consortium ensures the applicability by combination of eight sites across Europe in one modeling approach which will cover Northern, Southern, Middle and Eastern European sites to guarantee future applicability across Europe.

**Partners:**

| | | |
|---|---|---|
| 1 | FRIEDRICH-SCHILLER-UNIVERSITAET JENA | DE |
| 2 | AGENZIA NAZIONALE PER LE NUOVE TECNOLOGIE,L'ENERGIA E LO SVILUPPO ECONOMICO SOSTENIBILE | IT |
| 3 | BANGOR UNIVERSITY | UK |
| 4 | LULEA TEKNISKA UNIVERSITET | SE |
| 5 | UNIVERSITATEA DIN BUCURESTI | RO |
| 6 | UNIWERSYTET JAGIELLONSKI | PL |
| 7 | UNIVERSITAET WIEN | AT |
| 8 | HELMHOLTZ-ZENTRUM DRESDEN-ROSSENDORF EV | DE |
| 9 | OREBRO UNIVERSITY | SE |
| 10 | UNIVERSIDAD DE VALLADOLID | ES |
| 11 | UNIVERSITA DEGLI STUDI DI CAGLIARI | IT |
| 12 | ABERYSTWYTH UNIVERSITY | UK |
| 14 | Kwazar Corporation Sp.z o.o. | PL |
| 15 | VIROTEC ITALIA SRL | IT |
| 17 | OSTERREICHISCHE AGENTUR FUR GESUNDHEIT UND ERNAHRUNGSSICHERHEIT GMBH | AT |

**Activity Code:** ENV.2008.3.1.6.1. **Funding Scheme:** CP **Duration (Months):** 36

**Title:** PRODUCTIVITY TOOLS: Automated Tools to Measure Primary Productivity in European Seas. A New Autonomous Monitoring Tool to Measure the Primary Production of Major European Seas

**Proposed EC Grant:** 2.985.343 €

**Abstract:**

PROTOOL stands for PROductivity TOOLs: Automated Tools to Measure Primary Productivity in European Seas. The project will develop and adapt sensor technologies to measure primary production of phytoplankton with automated optical techniques, so that they can be placed on ships of opportunity (SOOP, ferries, container ships). The complete PROTOOL Measuring Device will consist of (1) a fluorometer measuring the rate of photosynthesis (using the variable fluorescence approach), (2) an algal absorption meter and (3) a hyperspectral reflectance unit. It will measure key water quality parameters like chlorophyll a, suspended matter concentrations and the light attenuation coefficient. The design will be modular so that each unit can also be used separately. The different versions of the sensors and protocol modules will be tested in the Baltic Sea, the North Sea, the English-Channel and the Gulf of Biscay, as well as in a number of Dutch estuaries. In the first 3 cases, the PROTOOL equipments will be placed next to a ferrybox on ships of opportunity. These field tests will provide the conversion factors required to calibrate the PROTOOL fluorometer. These campaigns will also produce maps of primary production with high temporal and spatial resolutions. The PROTOOL Measuring Device is unique because it is the first sensor technology that can measure autonomously biological process RATES and not only biological quantities (like chlorophyll concentration). It will provide detailed information on primary productivity which is a fundamental parameter in the carrying capacity of any ecosystem. With its technological development, PROTOOL will contribute to a much better assessment of changing marine ecosystems. PROTOOL partners will further promote the inclusion of primary production within the list of important biological properties to be considered for ecological status assessment in the future in the context of the Water Framework (WFD) and the Marine Strategy Framework Directives.

**Partners:**

| | | |
|---|---|---|
| 1 | KONINKLIJKE NEDERLANDSE AKADEMIE VAN WETENSCHAPPEN - KNAW | NL |
| 2 | SUOMEN YMPARISTOKESKUS | FI |
| 3 | HELMHOLTZ-ZENTRUM GEESTHACHT ZENTRUM FUR MATERIAL- UND KUSTENFORSCHUNG GMBH | DE |
| 4 | UNIVERSITY OF ESSEX | UK |
| 5 | MIKROBIOLOGICKY USTAV - AVCR, V.V.I. | CZ |
| 6 | THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS | UK |
| 7 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 8 | PHOTON SYSTEMS INSTRUMENTS SPOL SRO | CZ |
| 9 | TRIOS MESS- UND DATENTECHNIK GMBH | DE |

**Activity Code:** ENV.2008.3.1.2.1. **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Sustainable Soil Upgrading by Developing Cost-effective, Biogeochemical Remediation Approaches

**Proposed EC Grant:** 3.394.869 €

**Abstract:**

UPSOIL aims to achieve a breakthrough in in-situ remediation through an innovative technological perspective taking into account the physical properties and the biogeochemical reactivity of the soil as well as the contaminants. To this end UPSOIL will develop robust technologies for fast, cost-effective, integrated source zone and plume treatment. These are designed to result both in timely reached restored soil functions and associated risk levels, and a maximal use of the natural soil rehabilitation potential at a longer term. UPSOIL thus supports soil function preservation and faster restoration and sustainable redevelopment of European regions and cities that carry the burden of historical soil contamination. Accompanying goals are to broaden the market of soil remediation for SMEs and to build confidence with regulators in adopting sustainable in-situ remediation as the preferable approach for soil restoration. UPSOIL will focus on soils with organic contaminants while addressing effects on metal mobilization, aiding in the remediation of the most pressing soil pollution cases in Europe. Within the UPSOIL perspective, smart coupling of technologies is one approach to optimise remediation with respect to cost, time and soil sustainability. In addition, highly innovative techniques (to be patented) will be developed. These include the automatic targeting of the injection of the remedial agent, and the use of specifically developed selective remedial agents that preferably react with the contaminant and not with the soil matrix. UPSOIL joins strong partners from different EU regions that form a balanced mix of scientific knowledge groups, applied science experience, and practical input through SMEs and contractors that also secure testing of the technologies develop in real field site situations and a further market application of the developed knowledge.

**Partners:**

| | | |
|---|---|---|
| 1 | FUNDACION TECNALIA RESEARCH & INNOVATION | ES |
| 2 | VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V. | BE |
| 3 | STICHTING DELTARES | NL |
| 4 | WAGENINGEN UNIVERSITEIT | NL |
| 5 | INSTYTUT EKOLOGII TERENOW UPRZEMYSLOWIONYCH | PL |
| 6 | INSTITUTUL NATIONAL DE CERCETARE DEZVOLTARE PENTRU ECOLOGIE INDUSTRIALA | RO |
| 7 | STATENS GEOTEKNISKA INSTITUT | SE |
| 8 | ENACON SRO | CZ |
| 9 | Ecorem Baltija UAB | LT |
| 10 | DEKONTA, a.s. | CZ |
| 11 | Przedsiebiorstwo Oczyszczania Wod i Ziemi POWIZ Sp. z o. o. | PL |
| 12 | Ejlskov Consult A/S | DK |
| 13 | REHABILITACION DE SUELOS, S.L. | ES |
| 14 | BIUTEC - Biotechnologie und Umwelttechnologie Forschungs- und EntwicklungsgmbH | AT |
| 15 | GEOTECNIA Y CIMIENTOS S.A. | ES |

**Activity Code:** ENV.2008.3.1.1.2. **Funding Scheme:** CP **Duration (Months):** 42

**Title:** Advanced bipolar membrane processes for remediation of highly saline waste water streams

**Proposed EC Grant:** 1.163.159 €

**Abstract:**

NEW ED aims at closing industrial water cycles and reducing the amount of waste water streams with highly concentrated salt loads stemming from a broad range of industrial production processes by exploiting the waste components (salts) and transforming them to valuable products. This will be achieved by developing new micro- to nano-porous bipolar membranes for bipolar electrodialysis (BPMED), a new membrane module concept and by integrating this new technology into relevant production processes. The bipolar membrane process produces acids and bases from their corresponding salts by dissociating water at the interface within the bipolar membranes. However, BPMED so far has been applied only in niche markets due to limitations of the current state of membrane and process development. Major drawbacks of the classic BPMED process are low product purity, limited current density and formation of metal hydroxides at or in the bipolar membrane. The objective of this project is to overcome these limitations by developing a new bipolar membrane and membrane module with active, i.e. convective instead of diffusive water transport to the transition layer of the bipolar membranes, where water dissociation takes place. The key feature of the innovative new bipolar membranes is a nano- to micro-porous and at the same time ion conducting intermediate transition layer, through which water is convectively transported from the side into the transition layer. The porous transition layer may have either the character of a cation or an anion exchanger. Several promising intermediate layer materials together with different monopolar ion-exchange layers will be tested and characterized. Membrane manufacturing and new module concepts will be investigated to exploit the full potential of the new bipolar membrane technique. Integration of the developed membranes and modules into relevant production processes is an essential part of the project.

**Partners:**

| | | |
|---|---|---|
| 1 | RHEINISCH-WESTFAELISCHE TECHNISCHE HOCHSCHULE AACHEN | DE |
| 2 | FUMA-TECH GESELLSCHAFT FUER FUNKTIONELLE MEMBRANEN UND ANLAGENTECHNOLOGIE MBH | DE |
| 3 | UNIVERSITEIT TWENTE | NL |
| 4 | BEN-GURION UNIVERSITY OF THE NEGEV | IL |
| 5 | PRAYON S.A | BE |
| 6 | BAYER MATERIALSCIENCE AG | DE |

**Activity Code:** ENV.2008.3.1.1.2. **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Water Detoxification Using Innovative vi-Nanocatalysts

**Proposed EC Grant:** 1.705.224 €

**Abstract:**

The concept of the project is based on the development of innovative nanostructured UV-Visible photocatalysts for water treatment and detoxification by using doped TiO2 nanomaterials with visible light response. The project aims at an efficient and viable water detoxification technology exploiting solar energy and recent advances in nano-engineered titania photocatalysts and nanofiltration membranes for the destruction of extremely hazardous compounds in water. To this aim, the UV-vis responding titania nanostructured photocatalysts will be stabilized on nanotubular membranes of controlled pore size and retention efficiency as well as on carbon nanotubes exploiting their high surface area and unique electron transport properties to achieve photocatalytically active nanofiltration membranes. This will be the crucial component for the fabrication of innovative continuous flow photocatalytic-disinfection-membrane reactors for the implementation of a sustainable and cost effective water treatment technology based on nanoengineered materials. Comparative evaluation of the UV-visible and solar light efficiency of the modified titania photocatalysts for water detoxification will be performed on specific target pollutants focused mainly on cyanobacterial toxin MC-LR and endocrine disrupting compounds (EDC) in water supplies as well as classical water pollutants such us phenols, pesticides and azo-dyes. Particular efforts will be devoted on the analysis and quantification of degradation products. The final goal is the scale up of the photocatalytic reactor technology and its application in lakes, tanks and continuous flow systems for public water distribution.

**Partners:**

| | | |
|---|---|---|
| 1 | NATIONAL CENTER FOR SCIENTIFIC RESEARCH "DEMOKRITOS" | EL |
| 2 | OSMO SISTEMI | IT |
| 3 | Innovative Research & Technology ltd | UK |
| 4 | UNIVERSIDAD DE LAS PALMAS DE GRAN CANARIA | ES |
| 5 | UNIVERSIDADE DO PORTO | PT |
| 6 | ASSOCIATION POUR LA RECHERCHE ET LE DEVELOPPEMENT DES METHODES ET PROCESSUS INDUSTRIELS - ARMINES | FR |
| 7 | University of Cincinnati | US |

**Activity Code:** ENV.2009.3.1.5.1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Technologies for the cost-effective Flood Protection of the Built Environment

**Proposed EC Grant:** 3.498.727 €

**Abstract:**

The principal aim of FloodProBE is to provide cost-effective means for the flood protection and damage mitigation in urban areas. To this end, FloodProBE will develop, test and disseminate technologies, methods, concepts and tools for risk assessment and mitigation, focussing particularly on the adaptation of new and existing buildings (retrofitting) and on infrastructure networks. The three main elements addressed by FloodProBE are (a) the vulnerability of critical infrastructure and high-density value assets, being the main originators of direct and indirect flood damage, (b) the reliability of urban flood defences by improving understanding and assessment of failure processes that have proven to be critical in recent flood events and (c) construction technologies and concepts for flood-proofing buildings and infrastructure networks to increase the flood-resilience of the urban system as well as for retrofit and repair of flood defences in the most economic and cost beneficial manner. The afore-mentioned elements will be integrated into state-of-the-art flood risk management strategies and will be developed, tested and validated via pilot study sites. A wide range of stakeholders will be involved in the project from the outset through an Associate Partner programme and by an external Advisory Board. This involvement will provide guidance on the project programme to directly meet industry needs, whilst also facilitating international dissemination, supporting uptake and implementation of project deliverables. The primary impact of FloodProBE will be a significant increase in the cost-effectiveness (i.e. performance) of investments in newly developed and existing flood protection and flood resilience measures. This will be achieved by focusing the research on “risk hotspots”, i.e. weak links in flood defence system performance and vulnerable assets, that, if damaged, cause very large direct and indirect adverse consequences (e.g. infrastructure networks).

**Partners:**

| | | |
|---|---|---|
| 1 | STICHTING DELTARES | NL |
| 2 | HR WALLINGFORD LTD | UK |
| 3 | INSTITUT NATIONAL DE RECHERCHE EN SCIENCES ET TECHNOLOGIES POUR L'ENVIRONNEMENT ET L'AGRICULTURE | FR |
| 4 | STIFTELSEN SINTEF | NO |
| 5 | EIVP | FR |
| 6 | Regionalni Environmentalni Centrum (REC), Ceska republica, o.p.s. | CZ |
| 7 | OXFORD BROOKES UNIVERSITY | UK |
| 8 | Dura Vermeer Groep NV | NL |
| 9 | ACCIONA INFRAESTRUCTURAS S.A. | ES |
| 10 | Samui Design & Management Ltd | UK |
| 11 | MOSTOSTAL WARSZAWA SA | PL |
| 13 | DeltaSync BV | NL |
| 14 | SOLINTEL M&P SL | ES |
| 15 | INSTITUT FRANCAIS DES SCIENCES ET TECHNOLOGIES DES TRANSPORTS, DE L'AMENAGEMENT ET DES RESEAUX | FR |

**Activity Code:** ENV.2009.3.1.5.2 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Sustainability and performance assessment and benchmarking of buildings - SuPerBuildings

**Proposed EC Grant:** 1.949.569 €

**Abstract:**

The project will develop 1) sustainability indicators for buildings, 2) understanding about the needed performance levels considering new and existing buildings, different building types and local requirements, 3) methods for the benchmarking of sustainable buildings (SB) and 4) recommendations for the effective use of benchmarking systems as instruments of steering and in building processes. The work will make use of the existing knowledge of SB assessment and rating systems. However, the project recognises that there are still unsolved issues and areas with no common understanding. These include: a) the integration of social and economic issues with SB assessment, b) consideration of certain environmental aspects as land use, c) defining appropriate performance levels considering both minimal levels and advanced targets, d) consideration of local conditions, different building types, and both new and existing buildings when selecting performance levels, d) selection of benchmarking criteria to be easily adopted in different parts of Europe, e) effective mobilisation of the benchmarking system, f) effective making use of the system in building processes and in building regulation and steering. The work will be divided into 8 work packages: WP1 ensures the effective work progress and the good communication between project members and between the project and the Commission; WP2 establishes the common starting point for the project; WP3 analyses the potential of SB benchmarking systems as an instrument of steering and when used in different phases of building projects, WP4 develops and selects sustainability indicators that describe the environmental, social and economic performance of buildings. WP4 will focus on the development of data validity and reliability for each key indicator. WP5 defines performance levels and benchmarking criteria, WP6 makes recommendations for effective exploitation, WP7 pilots the system, and WP8 disseminates the outcomes with help of the project NETWORK GROUP and with help of powerful organisations of building professionals.

**Partners:**

| | | |
|---|---|---|
| 1 | TEKNOLOGIAN TUTKIMUSKESKUS VTT | FI |
| 2 | BRE GLOBAL LIMITED | UK |
| 3 | CENTRE SCIENTIFIQUE ET TECHNIQUE DU BATIMENT | FR |
| 4 | CENTRE SCIENTIFIQUE ET TECHNIQUE DE LA CONSTRUCTION | BE |
| 5 | Karlsruher Institut fuer Technologie | DE |
| 6 | CESKE VYSOKE UCENI TECHNICKE V PRAZE | CZ |
| 8 | FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V | DE |
| 9 | FUNDACION TECNALIA RESEARCH & INNOVATION | ES |
| 10 | OSTERREICHISCHE GESELLSCHAFT FUR UMWELT UND TECHNIK | AT |
| 11 | YIT Kiinteistötekniikka Oy | FI |
| 12 | VINCI CONSTRUCTION FRANCE | FR |
| 13 | Werner Sobek Stuttgart GmbH & Co. KG | DE |
| 15 | STICHTING W/E ADVISEURS DUURZAAM BOUWEN - W/E CONSULTANTS SUSTAINABLE BUILDING* | NL |

**Activity Code:** ENV.2009.3.1.5.1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Smart Resilience Technology, Systems and Tools

**Proposed EC Grant:** 3.488.457 €

**Abstract:**

The programme, involving leading European organisations, will develop innovative smart technology, systems and implementation tools. The project is set out into six main work packages: WP1 – Management: controlling the operation, scientific excellence and finance of the consortium. WP2 – FRe technology: developing innovative and smart technology and products, based on extending current products and introducing smart systems that rely less on manual intervention. The emphasis is on cost effective solutions. The WP will develop guidance and standards for FRe technology that could be adopted by standards organisations as harmonised standards. WP3 – FRe systems: developing the concept of flood resilient systems in the urban environment through the use of case studies in seven partner countries. FRe systems are the combination of FRe technology and the urban environment within which they sit. The FRe systems can range from individual building and infrastructure level to whole cities. WP4 – FRe implementation: considering how to implement FRe technology and systems in practice. It will consider appropriate tools and develop a decision support system. WP5 – Integration: bringing together the theory and practical research in WP2 – WP4, the intention is to demonstrate how FRe technology, systems and implementation can work in practice. The involvement of relevant stakeholders through national support groups will be essential. WP6 – Dissemination: a range of dissemination activities are planned within the project. A project web site will host an information platform. National and international conferences will disseminate the research results and create impact amongst stakeholders. A manual of FRe technology, systems and implementation tools will be produced. The project partners have already cooperated for more than three years in COST Action C22 – Urban Flood Management and are therefore well placed to successfully undertake this project.

**Partners:**

| | | |
|---|---|---|
| 1 | BUILDING RESEARCH ESTABLISHMENT LTD | UK |
| 2 | TECHNISCHE UNIVERSITAET HAMBURG-HARBURG | DE |
| 3 | CENTRE SCIENTIFIQUE ET TECHNIQUE DU BATIMENT | FR |
| 4 | THE UNIVERSITY OF MANCHESTER | UK |
| 5 | NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS | EL |
| 6 | Dion. Toumazis & Associates | CY |
| 7 | ECOLE NATIONALE DES PONTS ET CHAUSSEES | FR |
| 8 | TECHNISCHE UNIVERSITEIT DELFT | NL |
| 9 | UNIVERSIDAD POLITECNICA DE MADRID | ES |
| 10 | LEIBNIZ-INSTITUT FUR OKOLOGISCHE RAUMENTWICKLUNG EV | DE |

**Activity Code:** ENV.2009.3.1.6.1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Innovative coastal technologies for safer European coasts in a changing climate

**Proposed EC Grant:** 6.530.000 €

**Abstract:**

Coastal areas are vital economic hubs in terms of settlement, industry, agriculture, trade and tourism to mention some key sectors. There are already many coastal problems including erosion, flood risk and long-term habitat deterioration. As economies continue to develop the asset base at risk will grow, while accelerating climate change will increase the likelihood of damaging extreme events, as well as accelerate habitat decline.Existing coastal management and defence approaches are not well tuned to these challenges as they assume a static situation.THESEUS will develop a systematic approach to delivering both a low-risk coast for human use and healthy habitats for evolving coastal zones subject to multiple change factors.The innovative combined mitigation and adaptation technologies to be considered will include ecologically-based mitigation measures (such as restoration and/or creation of habitats), hydro-morphodynamic techniques (such as wave energy converters, sediment reservoirs, multi-purpose structures, overtop resistant dikes), actions to reduce the impact on society and economy (such as promotion of risk awareness or spatial planning) and GIS-based software to support defence planning.To integrate the best of these technical measures in a strategic policy context we will develop overarching THESEUS guidelines which will considers the environmental, social and economic issues raised in any coastal area.It is in this spirit that THESEUS will advance European and international experience in applying innovative technologies to reducing coastal risks.THESEUS activities will be carried out within a multidisciplinary framework using 8 study sites across Europe, with specific attention to the most vulnerable coastal environments such as deltas, estuaries and wetlands, where many large cities and industrial areas are located.

**Partners:**

| | | |
|---|---|---|
| 1 | ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA | IT |
| 2 | UNIVERSIDAD DE CANTABRIA | ES |
| 3 | UNIVERSITY OF PLYMOUTH | UK |
| 4 | AALBORG UNIVERSITET | DK |
| 5 | Infram International BV | NL |
| 6 | HELMHOLTZ-ZENTRUM GEESTHACHT ZENTRUM FUR MATERIAL- UND KUSTENFORSCHUNG GMBH | DE |
| 7 | UNIVERSITY OF SOUTHAMPTON | UK |
| 8 | UNIVERSITE DE VERSAILLES SAINT-QUENTIN-EN-YVELINES. | FR |
| 9 | CENTRE D'ETUDES TECHNIQUES MARITIMES ET FLUVIALES | FR |
| 10 | MIDDLESEX UNIVERSITY HIGHER EDUCATION CORPORATION | UK |
| 11 | INSTYTUT METEOROLOGII I GOSPODARKI WODNEJ | PL |
| 12 | INSTITUTE OF OCEANOLOGY - BULGARIAN ACADEMY OF SCIENCES | BG |
| 13 | ATHENS UNIVERSITY OF ECONOMICS AND BUSINESS - RESEARCH CENTER | EL |
| 14 | KONINKLIJKE NEDERLANDSE AKADEMIE VAN WETENSCHAPPEN - KNAW | NL |
| 15 | CONSORZIO PER LA GESTIONE DEL CENTRO DI COORDINAMENTO DELLE ATTIVITA DI RICERCA INERENTI IL SISTEMA LAGUNARE DI VENEZIA | IT |
| 16 | INSTYTUT BUDOWNICTWA WODNEGO POLSKIEJ AKADEMII NAUK | PL |
| 17 | BANGOR UNIVERSITY | UK |
| 18 | BUREAU DE RECHERCHES GEOLOGIQUES ET MINIERES | FR |
| 19 | HAMBURG PORT AUTHORITY | DE |
| 20 | Entente interdepartementale pour la demoustication du littoral méditerranéen | FR |
| 21 | LATVIJAS UNIVERSITATE | LV |
| 22 | Istituto Superiore per la Protezione e la Ricerca Ambientale | IT |
| 23 | VLAAMS INSTITUUT VOOR DE ZEE VZW | BE |
| 24 | ARISTOTELIO PANEPISTIMIO THESSALONIKIS | EL |
| 25 | KATHOLIEKE UNIVERSITEIT LEUVEN | BE |
| 26 | MARINE HYDROPHYSICAL INSTITUTE - UKRAINIAN NATIONAL ACADEMY OF SCIENCES | UA |
| 27 | P.P. SHIRSHOV INSTITUTE OF OCEANOLOGY OF RUSSIAN ACADEMY OF SCIENCES | RU |
| 28 | University of Delaware | US |
| 29 | UNIVERSIDAD NACIONAL AUTONOMA DE MEXICO | MX |
| 30 | EAST CHINA NORMAL UNIVERSITY ECNU | CN |
| 31 | NATIONAL CHENG KUNG UNIVERSITY | TW |

**Activity Code:** ENV.2009.3.1.5.2 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** OPEN HOUSE - Benchmarking and mainstreaming building sustainability on the EU based on transparency and openness (open source and availability) from model to implementation.

**Proposed EC Grant:** 3.498.730 €

**Abstract:**

The overall objective of OPEN HOUSE is to develop and to implement a common European transparent building assessment methodology, complementing the existing ones, for planning and constructing sustainable buildings by means of an open approach and technical platform. OPEN HOUSE will develop a transparent approach able to emerge collectively in an open way across the EU. This approach will be communicated to all stakeholders and their interaction and influence on the methodology will be assured in a democratic way. The baseline will be existing standards (both CEN/TC 350 and ISO TC59/SC17), the EPBD Directive and its national transpositions, and methodologies for assessing building sustainability at international, European and national level.

**Partners:**

| | | |
|---|---|---|
| 1 | ACCIONA INFRAESTRUCTURAS S.A. | ES |
| 2 | CAE Services GEIE | BE |
| 3 | APPLIED INDUSTRIAL TECHNOLOGIES LTD | EL |
| 4 | OVE ARUP & PARTNERS INTERNATIONAL LIMITED | UK |
| 5 | EUSKO JAURLARITZA-GOBIERNO VASCO. | ES |
| 6 | BOUYGUES CONSTRUCTION | FR |
| 7 | Miasto Stołeczne Warszawa | PL |
| 8 | SLOVENSKI GRADBENI GROZD, GOSPODARSKO INTERESNO ZDRUZENJE | SI |
| 9 | D'APPOLONIA SPA | IT |
| 10 | DEUTSCHE GESELLSCHAFT FUER NACHHALTIGES BAUEN | DE |
| 11 | ELECTRICITE DE FRANCE S.A. | FR |
| 12 | EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZURICH | CH |
| 13 | FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V | DE |
| 14 | INSTYTUT TECHNIKI BUDOWLANEJ | PL |
| 15 | MOSTOSTAL WARSZAWA SA | PL |
| 16 | SP SVERIGES TEKNISKA FORSKNINGSINSTITUT AB* | SE |
| 17 | Vivienda y Suelo de Euskadi, S.A. | ES |
| 18 | GRADBENI INSTITUT ZRMK DOO | SI |
| 19 | FUNDACION AGUSTIN DE BETANCOURT | ES |
| 20 | INSTITUTE FOR SUSTAINABILITY | UK |

**Activity Code:** ENV.2009.3.1.3.1 **Funding Scheme:** CSA **Duration (Months):** 24

**Title:** INTEGRATED WASTE MANAGEMENT IN WESTERN AFRICA

**Proposed EC Grant:** 999.884 €

**Abstract:**

Most of African countries are struggling towards development and improving their living conditions. An appropriate waste management structure at a national and regional level is a milestone that must be achieved in order to improve living standards, health and environment. The situation in many countries is that the obvious lack of a functional waste management system brings perennial garbage problems such as inefficient garbage collection, poor public compliance to waste segregation, uncontrolled open burning, and tolerated presence of open dumpsites. Furthermore valuable resources are lost due to inefficient or non-existing recycling systems. The establishment of an efficient waste management and recycling system contributes to enhancing the resource efficiency of these countries and thus supports a sustainable development in the long-term. The present Coordination Action will seek the establishment of Integrated Solid Waste Management systems (ISWM) in Western Africa. ISWM systems combine waste streams, waste collection, treatment and disposal methods, with the objective of achieving environmental benefits, economic optimization and societal acceptability. For the achievement of the project objectives, a solid waste management expert and research co-ordination platform will analyze the current situation in the targeted countries (Ghana, Nigeria, Senegal and Ivory Coast), identifying main gaps and constraints of any type (technological, sociological, organisational, etc.) and selecting suitable management systems. According to the results obtained, including inputs from authorities and policy makers in participatory workshops, the consortium will provide valuable guidelines and recommendations to be used in the future implementation of developed strategies such as National and Regional Action Plans on solid waste management. The project will also build local capacities through workshops and seminars where relevant stakeholders must be involved.

**Partners:**

| | | |
|---|---|---|
| 1 | VEREIN ZUR FOERDERUNG DES TECHNOLOGIETRANSFERS AN DER HOCHSCHULE BREMERHAVEN E.V. | DE |
| 2 | BIOAZUL | ES |
| 3 | EIDGENOESSISCHE MATERIALPRUEFUNGS- UND FORSCHUNGSANSTALT | CH |
| 4 | SVERIGES LANTBRUKSUNIVERSITET | SE |
| 5 | OEKO-INSTITUT E.V. - INSTITUT FUER ANGEWANDTE OEKOLOGIE | DE |
| 6 | FUNDACION GAIKER | ES |
| 7 | TECHNISCHE UNIVERSITAT BERLIN | DE |
| 9 | ENVIRONNEMENT ET DEVELOPPEMENT DU TIERS MONDE ORGANISATION INTERNATIONALE | SN |
| 11 | CONSEIL REGIONAL DE MATAM | SN |
| 12 | INSTITUT AFRICAIN DE GESTION URBAINE | SN |
| 13 | ZOOM DOMESTIC WASTE SERVICES LIMITED | GH |
| 15 | Kwame Nkrumah University of Science and Technology Kumasi | GH |
| 16 | Basel Convention Regional Coordinating Centre for Africa for Training and Technology | NE |
| 17 | ENVIRONMENTAL LAW RESEARCH INSTITUTE | NG |
| 19 | UNIVERSITE D'ABOBO-ADJAME | CI |
| 20 | CENTRE FOR ENVIRONMENT AND DEVELOPMENT FOR THE ARAB REGION AND EUROPE | EG |
| 21 | Influential Inputs cc | ZA |
| 22 | CENTRE FOR ENVIROMNEMT IMPACTS ANALYSIS LTD | GH |

**Activity Code:** ENV.2009.3.1.1.1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** PREPARED “ENABLING CHANGE”

**Proposed EC Grant:** 6.993.815 €

**Abstract:**

IPCC climate change scenarios have a global perspective and need to be scaled down to the local level, where decision makers have to balance risks and investment costs. Very high investments might be a waste of money and too little investment could result in unacceptable risk for the local community. PREPARED is industry driven, 12 city utilities are involved in the project and the RDT carried out is based on the impacts of climate change the water supply and sanitation industry has identifed as a challenge for the years to come. The result of PREPARED will be an infrastructure for waste water, drinking water and storm water management that will not only be able better cope with new scenarios on climate change but that is also managed in a optimal way. We will have complexes monitoring and sensor systems, better integration and handling of complex data, better exploitation of existing infrastructures through improved real time control, new design concepts and guidelines for more flexible and more robust infrastructures. PREPARED will involve the local community in problem identification and in jointly finding acceptable system solutions, that are supported by all, through active learning processes. Activities and solutions in PREPARED will be based on a risk assessment and risk management approach for the whole urban water cycle, through the development of innovative Water Cycle Safety Plans. Other innovations are sensors and models that will enable faster and better actions on changes and new design rules for more resilient design. We will combine European knowledge with valuable knowledge from Australia and the USA, to make the European Water sector more competitive. This to enable our industrial partners to export the products developed in PREPARED to other regions of the world, thus contributing to the Lisbon Goals but also to the MDGs. To ensure this exploitation the PREPARED consortium consist of more than 50% industrial partners and is demand driven.

**Partners:**

| | | |
|---|---|---|
| 1 | KWR WATER B.V. | NL |
| 2 | DHI | DK |
| 3 | STIFTELSEN SINTEF | NO |
| 4 | KOMPENTENTZZENTRUM WASSER BERLIN GEMEINNUTZIGE GMBH | DE |
| 5 | INSTITUT NATIONAL DES SCIENCES APPLIQUEES DE LYON | FR |
| 6 | International Water Association | UK |
| 7 | THE UNIVERSITY OF EXETER | UK |
| 8 | UNIVERSITY OF BRADFORD | UK |
| 9 | CETAQUA, CENTRO TECNOLOGICO DEL AGUA, FUNDACIÓN PRIVADA | ES |
| 10 | IREN ACQUA GAS SPA | IT |
| 11 | TURKIYE BILIMSEL VE TEKNOLOJIK ARASTIRMA KURUMU | TR |
| 12 | INSTYTUT EKOLOGII TERENOW UPRZEMYSLOWIONYCH | PL |
| 13 | LABORATORIO NACIONAL DE ENGENHARIA CIVIL | PT |
| 14 | UNIVERSITAET INNSBRUCK | AT |
| 15 | Crimean Scientific and Research Center of Institute of Hydraulic Engineering and Land Reclamation of the Ukrainian Academy of Agricultural Sciences | UA |
| 16 | NIVUS | DE |
| 17 | scan Messtechnik | AT |
| 18 | KRUEGER A/S | DK |
| 19 | Aquateam - Norwegian Water Technology Centre AS | NO |
| 20 | IWW RHEINISCH WESTFALISCHES INSTITUT FUR WASSERFORSCHUNG GEMEINNUTZIGE GMBH | DE |
| 21 | Clavegueram de Barcelona, S.A. | ES |
| 22 | Berliner Wasserbetriebe | DE |
| 23 | Gemeente Eindhoven | NL |
| 24 | MEDITERRANEA DELLE ACQUE S.p.A. | IT |
| 25 | ISTANBUL SU VE KANALIZASYON IDARESI | TR |
| 26 | Przedsiebiorstwo Wodociagow i Kanalizacji Sp. z o.o. Gliwice | PL |
| 27 | EPAL-EMPRESA PORTUGUESA DAS ÁGUAS LIVRES, SA | PT |
| 28 | COMMUNAUTE URBAINE DE LYON | FR |
| 29 | OSLO KOMMUNE | NO |
| 30 | Crimean Republican Enterprise "Simferopol Drinking Water Supply and sewerage Company" | UA |
| 31 | ARHUS KOMMUNE | DK |
| 32 | DWR CYMRU CYFYNGEDIG | UK |
| 33 | City of Seattle / Seattle Public Utilities | US |
| 34 | MELBOURNE WATER CORPORATION | AU |
| 35 | MONASH UNIVERSITY | AU |

**Activity Code:** NMP-2009-1.3-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Toxicological impact of nanomaterials derived from processing, weathering and recycling of polymer nanocomposites used in various industrial applications

**Proposed EC Grant:** 2.433.555 €

**Abstract:**

The project NANOPOLYTOX will evaluate the toxicological impact of nanomaterials included in polymer nanocomposites, highly used in various industrial sectors, during their life cycle. The toxicological profile will be correlated with the changes in the physical and chemical properties of the nanomaterials during the artificial aging/weathering process of the polymeric nanocomposites. Raw nanomaterials and extracted nanomaterials will be characterized at different stages of their life cycle and their toxicity profiles will be obtained via in vitro and in vivo toxicity studies. The results from the in vivo studies will be used for the evaluation of the biological and environmental fate of nanomaterials. All the data generated during the project (physical, chemical and toxicological data) will be considered for the development of the novel LCIA methodology to apply to nanomaterials. These studies will also be taken into account for the selection of adequate digestion and extraction methods to separate the nanomaterials from the polymeric matrices. Moreover, optimization of these methods will facilitate the development of recycling techniques that will be applied in the end-stage of polymer nanocomposites. Disposal of the extracted toxic and/or innocuous nanomaterials will be carried out by mechanical and chemical recycling techniques. The chemical recycling technique will be based on a new separation method consisting of nanofiber filters to separate efficiently the raw nanomaterials from the polymeric matrices and re-use them in new applications. Finally, the nanofiber filters containing toxic nanomaterials will be immobilized in xerogel matrices by sol-gel processes and sintering.

**Partners:**

| | | |
|---|---|---|
| 1 | ACONDICIONAMIENTO TARRASENSE ASSOCIACION | ES |
| 2 | Global Nanotechnologies S.A. for the Design, Development, Production and Trading of Nanotechnology Materials | EL |
| 3 | CATALAN INSTITUTE OF NANOTECHNOLOGY | ES |
| 4 | POLYRISE SAS | FR |
| 5 | L'UREDERRA, FUNDACION PARA EL DESARROLLO TECNOLOGICO Y SOCIAL | ES |
| 6 | DHI | DK |
| 7 | LAVIOSA CHIMICA MINERARIA SPA | IT |
| 8 | LATI INDUSTRIA TERMOPLASTI SPA | IT |

**Activity Code:** NMP-2009-1.3-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Development of sustainable solutions for nanotechnology-based products based on hazard characterization and LCA

**Proposed EC Grant:** 2.475.054 €

**Abstract:**

Objective of the NanoSustain project is to develop innovative solutions for the sustainable design, use, recycling and final treatment of nanotechnology-based products This will be achieved by a comprehensive data gathering and generation of relevant missing data, as well as their evaluation and validation, for specific nanoproducts or product groups in relation to their human health and environmental hazards and possible impacts that may occur during after-production stages. Although production of nanomaterials is rapidly increasing, our knowledge about possible health and environmental effects associated with these materials is still rather poor. This lack of knowledge calls for more research. Due to their small size, nanoparticles behave different than their chemical analogues. They can be taken up easily and in a unique way with possible adverse effects in man and organisms. Assessing their hazard is complex and needs new approaches and a close international cooperation. NanoSustain will address the questions, (1) how and to what degree society and the environment will be exposed to nanomaterials and associated products, and (2) where do these particles end up? Expected results will improve our present knowledge on the impact and fate of these particles after entering economic and natural cycles. NanoSustain has mobilized the critical mass of expertise, resources and skills to tackle this complex issue. Based on results from hazard characterization, impact assessment and LCA, we will explore on a lab-scale new solutions for the design of selected nanomaterials and associated products and their sustainable use, recycling and final treatment. As the concerned nanotech industry will actively participate in the planned project, NanoSustain will set the ground for the development of new sustainable products and industrial applications, and hence help to strengthen competitiveness of the European nanotechnology industry.

**Partners:**

| | | |
|---|---|---|
| 1 | NordMiljö O. Grahn AB | SE |
| 2 | INSTITUTE OF NANOTECHNOLOGY | UK |
| 3 | DET NATIONALE FORSKNINGSCENTER FORARBEJDSMILJO | DK |
| 4 | TEKNOLOGIAN TUTKIMUSKESKUS VTT | FI |
| 5 | UNIVERSITAET BREMEN | DE |
| 6 | VENETO NANOTECH SCPA | IT |
| 7 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 8 | KAUNO TECHNOLOGIJOS UNIVERSITETAS | LT |
| 9 | INSTITUTUL NATIONAL DE CERCETAREDEZVOLTARE PENTRU MICROTEHNOLOGIE | RO |
| 10 | NANOLOGICA AB | SE |
| 11 | NANOGATE AG | DE |
| 12 | UPM-KYMMENE OYJ | FI |

**Activity Code:** ENV.2010.3.1.5-2 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Holistic Management of Brownfield Regeneration

**Proposed EC Grant:** 3.481.276 €

**Abstract:**

HOMBRE seeks to achieve a paradigm shift in sustainable brownfield land management practice. This strategic goal can be expressed in four underlying objectives:•Better understanding why, how, where and when brownfields are formed in order to avoid future brownfields.•Better solutions for long term land use of current and potential future brownfields.•Better operations, better implementation of state of the art technologies into practice and development of more sustainable integrated regeneration technologies for successful brownfield regeneration•Improving the dividend from brownfield remediation for the environment, economy and society in the surrounding area by means of integrative management methodologies in cooperation with stakeholdersThe project recognizes four different main tasks as part of a HOlistic Management of Brownfield REgeneration (HOMBRE) to be accomplished in associated case studies (mining, urban, industrial) with stakeholder participation:•Zero brownfields strategy: a better understanding of the life cycle of urban, industrial and mining sites and the origination of brownfields in these settings is necessary to device a successful overall brownfield redevelopment program.•Assessment of brownfield regeneration scenarios: development of an improved sustainable spatial (land-, urban) planning and decision making processes to enhance the up-take of brownfield regeneration projects based on a holistic approach.•Integrated Regeneration Technologies: combination of technologies that address different site aspects or issues (eg. linking soil, water, energy and materials) to create faster and cheaper solutions during brownfield regeneration.•Intermediate Renewal: solutions for greening, landscaping and amenity improvement of brownfields to ensure social, economical and environmental cohesion with the surrounding land use.

**Partners:**

| | | |
|---|---|---|
| 1 | STICHTING DELTARES | NL |
| 2 | FUNDACION TECNALIA RESEARCH & INNOVATION | ES |
| 3 | BUREAU DE RECHERCHES GEOLOGIQUES ET MINIERES | FR |
| 4 | ACCIONA INFRAESTRUCTURAS S.A. | ES |
| 5 | DECHEMA GESELLSCHAFT FUER CHEMISCHE TECHNIK UND BIOTECHNOLOGIE E.V. | DE |
| 6 | DR. FERBER, UWE UND GRAUMANN, DOREEN PROJEKTGRUPPE STADT + ENTWICKLUNG | DE |
| 7 | PN STUDIO DI FRANCESCA NEONATO E ENRICO POIASINA SOCIETA DI FATTO | IT |
| 8 | R3 ENVIRONMENTAL TECHNOLOGY LIMITED | UK |
| 9 | UNIVERSITA DEGLI STUDI DI ROMA TOR VERGATA | IT |
| 10 | AKADEMIA GORNICZO-HUTNICZA IM. STANISLAWA STASZICA W KRAKOWIE | PL |
| 11 | WAGENINGEN UNIVERSITEIT | NL |
| 12 | THE UNIVERSITY OF NOTTINGHAM | UK |
| 13 | IRMINSKI WOJCIECH | PL |
| 14 | NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO | NL |

**Activity Code:** ENV.2010.3.1.7-1 **Funding Scheme:** CSA **Duration (Months):** 30

**Title:** Air Quality Monitoring Technologies for Urban Areas

**Proposed EC Grant:** 997.552 €

**Abstract:**

With increasing requirements for air pollution monitoring in Europe, and a rising number and complexity of available instruments, harmonisation and innovation of air pollution monitoring in Europe is of vital importance. In the short term, harmonisation is needed to ensure comparability of measured concentrations, and their estimated measurement uncertainties, provided by European air pollution monitoring networks. To achieve harmonised air quality data, detailed recommendations on equipment evaluation and selection, standard operating procedures (SOPs) for set-up, operation and calibration, and proofs of equivalence to reference methods are needed. The necessity for harmonisation is especially important for particles (PM2.5 and PM10). Demonstration of equivalence to the reference methods, and QA/QC procedures for widely used automated PM monitors, are key current issues. In the longer term, the regulatory requirements for both metrics and methods need to be re-examined in the light of improved scientific knowledge (for example relating to health effects) and advances in monitoring technologies.The aim of AirMonTech is to compile the knowledge and information needed to harmonise current air pollution measurements and to guide research and decisions about monitoring in the future. The project is proposed by a consortium comprising air quality monitoring experts, measurement technique developers and health effect researchers from renowned research institutions and public bodies. Strong links to both urban and regional monitoring networks and European standardization institutions are ensured via direct links to AQUILA, EMEP and CEN. AirMonTech will gather information on instrument performance, test results, equivalence demonstrations and SOPs, and process them into specifically designed databases. Particular emphasis will be placed on methods for real-time monitoring of particles and particle-related proxy variables as well as indices particularly relevant for human health. A roadmap for research on and improvement of future urban air quality monitoring including recommendations on existing and new monitoring technologies will be developed and discussed with stakeholders. Opportunities and limitations for the improvement and harmonization of monitoring activities in EU member states will be evaluated in an interactive dissemination process involving all relevant stakeholder groups.

**Partners:**

| | | |
|---|---|---|
| 1 | INSTITUT FUR ENERGIE UND UMWELTTECHNIK EV - IUTA | DE |
| 2 | STICHTING ENERGIEONDERZOEK CENTRUM NEDERLAND | NL |
| 3 | EIDGENOESSISCHE MATERIALPRUEFUNGS- UND FORSCHUNGSANSTALT | CH |
| 4 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 5 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 6 | NORSK INSTITUTT FOR LUFTFORSKNING | NO |
| 7 | NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS | EL |
| 8 | NPL MANAGEMENT LIMITED | UK |
| 9 | UNIVERSITAET DUISBURG-ESSEN | DE |

**Activity Code:** ENV.2010.3.1.1-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Transitions to the Urban Water Services of Tomorrow

**Proposed EC Grant:** 6.982.781 €

**Abstract:**

The European project initiative TRUST will produce knowledge and guidance to support TRansitions to Urban Water Services of Tomorrow, enabling communities to achieve sustainable, low-carbon water futures without compromising service quality. We deliver this ambition through close collaboration with problem owners in ten participating pilot city regions under changing and challenging conditions in Europe and Africa. Our work provides research driven innovations in governance, modelling concepts, technologies, decision support tools, and novel approaches to integrated water, energy, and infrastructure asset management. An extended understanding of the performance of contemporary urban water services will allow detailed exploration of transition pathways. Urban water cycle analysis will include use of an innovative systems metabolism model, derivation of key performance indicators, risk assessment, as well as broad stakeholder involvement and an analysis of public perceptions and governance modes. A number of emerging technologies in water supply, waste and storm water treatment and disposal, in water demand management and in the exploitation of alternative water sources will be analysed in terms of their cost-effectiveness, performance, safety and sustainability. Cross-cutting issues include innovations in urban asset management and water-energy nexus strengthening. The most promising interventions will be demonstrated and legitimised in the urban water systems of the ten participating pilot city regions. TRUST outcomes will be incorporated into planning guidelines and decision support tools, will be subject to life-cycle assessment, and be shaped by regulatory considerations as well as potential environmental, economic and social impacts. Outputs from the project will catalyse transformatory change in both the form and management of urban water services and give utilities increased confidence to specify innovative solutions to a range of pressing challenges.

**Partners:**

| | | |
|---|---|---|
| 1 | IWW RHEINISCH WESTFALISCHES INSTITUT FUR WASSERFORSCHUNG GEMEINNUTZIGE GMBH | DE |
| 2 | KWR WATER B.V. | NL |
| 3 | LABORATORIO NACIONAL DE ENGENHARIA CIVIL | PT |
| 4 | NORGES TEKNISK-NATURVITENSKAPELIGE UNIVERSITET NTNU | NO |
| 5 | FACHHOCHSCHULE NORDWESTSCHWEIZ | CH |
| 6 | UNIVERSIDAD POLITECNICA DE VALENCIA | ES |
| 7 | THE UNIVERSITY OF BIRMINGHAM | UK |
| 8 | CRANFIELD UNIVERSITY | UK |
| 9 | THE UNIVERSITY OF EXETER | UK |
| 10 | STIFTELSEN SINTEF | NO |
| 11 | ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA | IT |
| 12 | INSTITUTO SUPERIOR TECNICO | PT |
| 13 | NATIONAL TECHNICAL UNIVERSITY OF ATHENS | EL |
| 14 | VEOLIA ENVIRONNEMENT RECHERCHE ET INNOVATION SNC | FR |
| 15 | International Water Association | UK |
| 16 | Ingenieurgesellschaft Prof. Dr. Sieker mbH | DE |
| 17 | BREIVOLL INSPECTION TECHNOLOGIES AS | NO |
| 18 | HR WALLINGFORD LTD | UK |
| 19 | YDREAMS - INFORMATICA S.A. | PT |
| 20 | S.T.E.P. RAUTENBACH YUCE GEBEL Consulting GmbH | DE |
| 21 | Addition Projectos e Servicos de Informatica Lda | PT |
| 22 | 3 C MEMBRANE AG | DE |
| 23 | Canal de Isabel II | ES |
| 24 | SCOTTISH WATER | UK |
| 25 | SCHIPHOL NEDERLAND B.V. | NL |
| 26 | IREN ACQUA GAS SPA | IT |
| 27 | OSLO KOMMUNE | NO |
| 28 | APA NOVA BUCURESTI SA | RO |
| 29 | ADP AGUAS DE PORTUGAL SERVICOS AMBIENTAIS SA | PT |
| 30 | Hamburger Wasserwerke GmbH | DE |
| 31 | Stichting Waternet | NL |

**Activity Code:** ENV.2010.3.1.1-2 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Novel processing routes for effective sewage sludge management

**Proposed EC Grant:** 3.364.600 €

**Abstract:**

The Routes project is addressed to discover new routes in wastewater and sludge treatment which allow:a) to prepare sludge for agricultural utilization by transforming it in a very clean and stabilized product regarding the presence of organic micropollutants (conventional and emerging ones) and of heavy metals, and with respect to hygienic aspects and to phytotoxicity;b) to minimize sludge production by innovative solutions which can be based on different approaches, i.e.: i) metabolic uncoupling where the free energy released by electrons transport is dissipated in heat, in the activation of alternative metabolic routes or in the accumulation of polymeric products, ii) the use of microbial fuel cells, iii) the use of sequencing batch biofilter granular reactor (SBBGR), iiii) the integration of a side-stream process in membrane bioreactors;c) to promote recovery of valuable materials from anaerobic digestion, i.e. biopolymers as polyhydroxyalkanoates and fertilizers;e) to set up and prove at practical scale a novel technique for sludge disposal (wet oxidation) as sustainable alternative to nowadays the most used incineration;f) to minimize energy pumping by adjusting solid concentration, on a practical installation where sludge is pumped from the production site to a centralized plant.The general objective of the Routes proposal is therefore to set up a panel of different solutions to be applied in different conditions and circumstances, strictly following the waste hierarchy of the Directive 08/98 on waste. The above solutions will be studied either in laboratory or at practical scale, depending on the maturity of the technology, in order to provide to the Commission and the technical and scientific community applicable solutions and new routes for sludge management, also based on the best integration between the water and sludge treatment lines.

**Partners:**

| | | |
|---|---|---|
| 1 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 2 | Consorzio Interuniversitario Nazionale "La Chimica per l'Ambiente" | IT |
| 3 | UNIVERSITA DEGLI STUDI DI BRESCIA | IT |
| 4 | EIDGENOESSISCHE ANSTALT FUR WASSERVERSORGUNG ABWASSERREINIGUNG UND GEWAESSERSCHUTZ | CH |
| 5 | Bundesanstalt fuer Gewaesserkunde | DE |
| 6 | AKADEMIA TECHNICZNO-HUMANISTYCZNA WBIELSKU-BIALEJ | PL |
| 7 | Uniwersytet Przyrodniczy w Lublinie | PL |
| 8 | UNIVERSITE DE REIMS CHAMPAGNE-ARDENNE | FR |
| 9 | UNIVERSITAT DE BARCELONA | ES |
| 10 | CHALMERS TEKNISKA HOEGSKOLA AB | SE |
| 11 | 3V GREENEAGLE SPA | IT |
| 12 | VERMICON AKTIENGESELLSCHAFT | DE |
| 13 | ECT OEKOTOXIKOLOGIE GMBH | DE |
| 14 | AnoxKaldnes AB | SE |
| 15 | Atemis GmbH ingenieurburo fur abwassertechnik energiemanagement und innovative systementwicklung | DE |
| 16 | MEDITERRANEA DELLE ACQUE S.p.A. | IT |
| 17 | Agriculture and Agri-Food Canada | CA |

**Activity Code:** ENV.2010.3.1.5-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Flexible Processes and Improved Technologies for Urban Infrastructure Construction Sites

**Proposed EC Grant:** 3.244.452 €

**Abstract:**

More than 50% of bridges in European cities are older than 40 years and bridges are a vital part of the infrastructure. Bridge managers are currently dealing with a large number of structurally deficient, obsolete bridges. The need to maintain, renew, strengthen and upgrade this part of the infrastructure will increase dramatically in the near future. PANTURA has bridges as its focal point. It is, however, important to stress that the approach proposed here can be applied to all infrastructure projects. The aims are to improve highly flexible off-site production processes, create resource-efficient construction sites, improve technologies and tools for bridge construction in densely populated areas and enhance communication between local authorities and construction companies.The main benefits of PANTURA are relevant to the Work Programme and are as follows: a) equip authorities, stakeholders and experts with a comprehensive instrument (methods, tools and techniques) to prepare and perform bridge construction, maintenance, repair and renovation processes in the most effective and efficient way, in the shortest possible time, with the most efficient, sustainable use of resources and with zero disturbance and disruption for the urban environment and urban life of the inhabitants, b) reduce lifecycle costs, i.e. the more efficient use of public funds by saving a significant amount of time and money, c) use new materials to increase off-site industrial production, technical innovations and new markets for SMEs and d) improve benchmarking systems to promote a performance-based, innovative, creative construction industry.PANTURA applies research based on a multidisciplinary, holistic approach and promotes innovative yet practical solutions, while covering the entire lifecycle process. PANTURA aims to realise these objectives by taking current research on construction processes, ICT tools and infrastructure technologies one step further.

**Partners:**

| | | |
|---|---|---|
| 1 | CHALMERS TEKNISKA HOEGSKOLA AB | SE |
| 2 | GOBIERNO DE CANARIAS | ES |
| 3 | Darellsoffice B.V. | NL |
| 4 | DEMO CONSULTANTS BV | NL |
| 5 | AICE CONSULTING SRL | IT |
| 6 | MOSTOSTAL WARSZAWA SA | PL |
| 7 | NCC AB | SE |
| 8 | STIFTELSEN SINTEF | NO |
| 9 | TRAFIKVERKET*TRV | SE |
| 10 | NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO | NL |
| 11 | GEMEENTE ROTTERDAM | NL |
| 12 | ACCIONA INFRAESTRUCTURAS S.A. | ES |

**Activity Code:** ENV.2010.3.1.3-2 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Bottom Up selection, collection and management of URBAn waste

**Proposed EC Grant:** 2.158.953 €

**Abstract:**

The aim of the BURBA project is to develop an automatic system to be used for intelligent waste management. The system consists of intelligent waste containers and an IT tool for waste collection and transport management, including RFID's (Radio Frequency Identification) ability to reliably identify individual receptacles, users, single marked items or waste categories, and cell-phone-based LBS' (location-based service) ability to allow an easy identification of the geographical position of the most suitable waste container and to improve its utilization by the citizen (the closest one to user actual position, not full, adequate for that waste category, etc). The BURBA rugged system is integrated into "intelligent waste containers" with capacities of 600 litres and over, for urban and industrial waste collection. It includes electronics for data transmission, for quantity and quality of waste measurement and a power pack that may be recharged using environmental energy scavenging. The foreseen IT tool will exploit the collected data in the frame of an advanced Waste Management concept. It will manage appropriately position and time of collection and optimize truck fleet path and queuing to waste disposal plants (for example incinerators that need continuous adequate feeding in quantity and quality); as well as the differential waste disposal to feed recycling facilities. It will compute service metrics and parameters for decision making and resources allocation. It will so far contribute to improve the management of the waste transport vehicles fleet, to minimise transportation path and diminish fuel expenditures as well as to optimise gain of disposal plants and service to citizens and industrial companies avoiding overfilled containers. Additional features of the platform are the support to rapid deployment of the containers on demand having the possibility to track their position and to redirect and reschedule the waste collection activities.

**Partners:**

| | | |
|---|---|---|
| 1 | D'APPOLONIA SPA | IT |
| 2 | POLITECNICO DI MILANO | IT |
| 3 | ACORDE TECHNOLOGIES S.A. | ES |
| 4 | RIDGEBACK S.A.S. DI PAOLO BARATTINI & C. | IT |
| 5 | TEKEVER - TECNOLOGIAS DE INFORMACAO, S.A. | PT |
| 6 | COMUNE CAMOGLI | IT |
| 7 | AYUNTAMIENTO DE SANTANDER | ES |
| 8 | SHANGHAI AOTO ENVIRONMENT EQUIPMENT CO LTD | CN |
| 9 | GMINA MIASTO RZESZOW | PL |

**Activity Code:** ENV.2010.3.1.8-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Biochar for Carbon sequestration and large-scale removal of greenhouse gases (GHG) from the atmosphere

**Proposed EC Grant:** 2.498.900 €

**Abstract:**

In the context of climate change mitigation, technologies for removing the CO2 from the atmosphere are key challenges. The transfer of carbon from the atmosphere into useful carbon deposits is currently one promising option.Transferring biomass to carbon-rich materials with potential mega-scale application is an option to sequester carbon from plant material, taking it out of the short-term carbon cycle and therefore binding CO2 efficiently and even in a useful, productive, way into longer term non-atmospheric carbon pools. EuroChar will investigate carbon sequestration potentials that can be achieved by transforming plant biomass into charcoal (or Biochar) and add that to agricultural soils. Biochar production will be demonstrated using thermochemical (TC) or hydrothermal carbonization processes (HTC) that can produce energy and store 15 to 20% of the Carbon originally contained in the biomass. Detailed ISO-accredited whole Life Cycle Assessment will be carried out according to the International Reference Life Cycle Data System (ILCD) Handbook on LCA, for both TC and HTC production systems to evaluate the net Carbon sequestration capacity associated to Biochar production. Physico-chemical properties of Biochar will be analysed in a series of laboratory studies that will use standardized analytical protocols, and a specific phyto-toxicity test will be made using molecular approaches involving a model plant. Part of the study will also address the short versus long-term stability of Biochar using recently produced and aged charcoal samples coming from archaeological sites. Specific investigations will also be made to assess Biochar decomposition using CO2-efflux measurements from 13C labelled Biochar. Three large-scale field experiments will be made in Italy, France and UK to analyse “realistic scale” application of Biochar. Upscaling will be considered by scenario analyses that will both consider the potential C-sequestration actually achievable at the european scale and the climate warming balance associated to carbon sequestration and potential changes in the mean surface albedo, due to massive use of Biochar as soil amendant. A number of stakeholders will be involved to review project’s activities. For this the EuroChar Stakeholder Committee will be created and met periodically during annual project meetings. Dissemination activities will be implemented to make project’s results available to a wider audience and the media.

**Partners:**

| | | |
|---|---|---|
| 1 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 2 | UNIVERSITE PIERRE ET MARIE CURIE - PARIS 6 | FR |
| 3 | MARTIN-LUTHER-UNIVERSITAET HALLE-WITTENBERG | DE |
| 4 | UNIVERSITY OF SOUTHAMPTON | UK |
| 5 | CS Carbon Solutions Deutschland GmbH | DE |
| 6 | LIBERA UNIVERSITA DI BOLZANO | IT |
| 7 | Advanced Gasification Technology | IT |
| 8 | IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE | UK |

**Activity Code:** ENV.2010.3.1.3-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Advanced Technologies for the Production of Cement and Clean Aggregates from Construction and Demolition Waste

**Proposed EC Grant:** 3.346.843 €

**Abstract:**

The recycling of end-of-life concrete into new concrete is one of the most interesting options for reducing worldwide natural resources use and emissions associated with the building materials sector. The production of the cement used in concrete, for example, is responsible for at least 5% of worldwide CO2 emissions. On-site reuse of clean silica aggregate from old concrete saves natural resources and reduces transport and dust, while the re-use of the calcium-rich cement paste has the potential to cut carbon dioxide emissions in the production of new cement by a factor of two. In order to achieve this goal, a new system approach is studied in which automatic quality control assesses and maintains high standards of concrete demolition waste from the earliest stage of recycling, and novel breaker/sorting technology concentrates silica and calcium effectively into separate fractions at low cost (Figure 1.1). Finally, the smaller calcium-rich fraction, which is typically also rich in fine organic residues, is converted into new binding agents by thermal processing, and mixed with the aggregate into new mortar. Next to technological advances, certification and design guidelines are developed to use the recycle concrete in a responsible and optimal way. The project aims to develop three innovative technologies for recycling end-of-life concrete, integrate them with state-of-the-art demolition and building processes and procedures, and test the new system approach on two Dutch concrete towers involving 70,000 tons of concrete. A special feature of this large case study is a new type of government contract which links the recycling of the towers to the re-use of the recycled materials in new buildings. The results of the project will be used to determine which kinds of strategies and policies are most effective to facilitate an efficient transition towards optimal value recovery from Construction and Demolition Waste and sustainable building.

**Partners:**

| | | |
|---|---|---|
| 1 | TECHNISCHE UNIVERSITEIT DELFT | NL |
| 2 | UNIVERSITA DEGLI STUDI DI ROMA LA SAPIENZA | IT |
| 3 | AKADEMIA GORNICZO-HUTNICZA IM. STANISLAWA STASZICA W KRAKOWIE | PL |
| 4 | FOUNDATION FOR RESEARCH AND TECHNOLOGY HELLAS | EL |
| 5 | BARCELONA SUPERCOMPUTING CENTER - CENTRO NACIONAL DE SUPERCOMPUTACION | ES |
| 6 | UNIVERSITEIT LEIDEN | NL |
| 7 | DANMARKS TEKNISKE UNIVERSITET | DK |
| 8 | STRUKTON CIVIEL BV | NL |
| 9 | Theo Pouw BV | NL |
| 10 | HEIDELBERGCEMENT AG | DE |
| 11 | Holcim Group Support Ltd | CH |
| 12 | DV SRL | IT |
| 13 | LASER 2000 BENELUX CV | NL |
| 14 | Inashco R&D B.V | NL |

**Activity Code:** ENV.2010.3.1.3-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Innovative Strategies for High-Grade Material Recovery from Construction and Demolition Waste

**Proposed EC Grant:** 3.362.408 €

**Abstract:**

The main goal of the IRCOW project is to develop and validate upgraded technological solutions to achieve an efficient material recovery from C&D waste by considering a life cycle perspective.The innovation beyond the state-of-the-art will focus on:1.Developing new approaches and models aimed at raising the rate of reuse components.2.Developing and adapting recycling technology with the overall purpose of improving the quality of C&D recycled materials: recycled aggregates, wood, plastics, granular gypsum from mixed streams and emerging waste materials.3.Developing high grade construction products by using C&D recycled materials; not only those related to the stony fraction, but also the other fractions where there is currently a strong knowledge gap.4.Demonstrating results under real conditions with the aim of providing potential stakeholders with information on the global performance.5.Setting the basis for specific European policies on C&D waste aiming at fostering a high and efficient level of material recovery.To accomplish IRCOW objectives, the project is structured into 7 work packages and 5 in-field case studies. Three of the work packages focus on the development of new management schemes, separation technologies and products that are needed to significantly increase the reuse and recycling rates of C&W waste in the EU. The outcomes of the three technological work packages will be assessed and validated from an economic, environmental and toxicological point of view, by using both Life Cycle Assessment tools and case studies throughout Europe.The involvement of industrial stakeholders (both industrial companies and associations from the construction and recycling sector), and national and regional authorities ensures the relevance and applicability of the project results. Moreover, the stakeholders will be involved in deriving recommendations for changes in policies aiming to remove obsta

**Partners:**

| | | |
|---|---|---|
| 1 | FUNDACION TECNALIA RESEARCH & INNOVATION | ES |
| 2 | VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V. | BE |
| 3 | IVL SVENSKA MILJOEINSTITUTET AB | SE |
| 4 | INSTYTUT EKOLOGII TERENOW UPRZEMYSLOWIONYCH | PL |
| 5 | ACCIONA INFRAESTRUCTURAS S.A. | ES |
| 6 | D'APPOLONIA SPA | IT |
| 7 | TITECH GMBH | DE |
| 8 | DERRIBOS PETRALANDA SL | ES |
| 9 | INGENIEURBUERO TRINIUS GMBH | DE |
| 10 | Conenor Oy | FI |
| 11 | ATON-HT SPOLKA AKCYJNA | PL |
| 12 | BRIJSSE MINERALS & RECYCLING BVBA | BE |
| 13 | JACOBS NV | BE |

**Activity Code:** ENV.2010.3.1.1-2 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Marketable sludge derivatives from sustainable processing of wastewater in a highly integrated treatment plant

**Proposed EC Grant:** 3.456.872 €

**Abstract:**

This project researches, develops and demonstrates a toolkit of novel processes together with market development for advanced sludge-derived products and integration methodologies that can be applied to a range of wastewater treatment plants based on a typical municipal scenario. Supporting economic and life cycle assessment of the resulting gains in energy efficiency and conversion of renewable carbon, together with an implementation strategy based on a product mix with optimal value, will inform step changes that contribute to achieving more secure and sustainable sludge treatment and management practices in Europe while reducing pressure on natural resources and reliance on manufactured fertilisers. Addressing key sludge management issues in the context of EU climate change mitigation and energy policies, the project concentrates on novel processes for sludge volume reduction, more efficient treatment and downstream processing for high quality sludge derivatives together with application protocols and assessment of the pathogen risk and long term soil impact for greater public confidence. Using an integrated approach with emphasis on the whole wastewater treatment system, the project promises innovative system solutions that have the potential to achieve up 20% annual carbon savings for the water industry by 2020 and ultimately could deliver up to 15,791,131 tCO2e pa savings for Europe. Composing of 14 partners including 7 SMEs from industry, academia and Government establishments, the Consortium is a balanced mix of highly qualified and committed individuals that are well-placed to tackle the technical challenges, disseminate the results and to exploit the €17.5 billion market for new environmental equipment that will be opened up by the project.

**Partners:**

| | | |
|---|---|---|
| 1 | UNITED UTILITIES WATER PLC | UK |
| 2 | Nijhuis Water Technology b.v. | NL |
| 3 | WATERLEAU GROUP NV | BE |
| 4 | TEAGASC - AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY | IE |
| 5 | HIPSITEC SA | ES |
| 6 | UNIVERSIDAD DE OVIEDO | ES |
| 7 | COMPANIA PARA LA GESTION DE RESIDUOS SOLIDOS EN ASTURIAS SA | ES |
| 8 | CRANFIELD UNIVERSITY | UK |
| 9 | HARPER ADAMS UNIVERSITY COLLEGE | UK |
| 10 | THE AGRICULTURE AND HORTICULTURE DEVELOPMENT BOARD (AHDB) | UK |
| 11 | CARRS AGRICULTURE LIMITED | UK |
| 12 | Sustainable Resource Solutions Limited | UK |
| 13 | VALSAVE ENGINEERED SOLUTIONS LIMITED | UK |
| 15 | DEMETER TECHNOLOGY LIMITED | UK |

**Activity Code:** ENV.2010.3.1.4-1 **Funding Scheme:** CSA **Duration (Months):** 30

**Title:** Boosting Best Available Techniques in the Mediterranean Partner Countries

**Proposed EC Grant:** 943.365 €

**Abstract:**

BAT4MED is a 30-month project, whose main objective is to ensure a higher level of environmental protection of the Mediterranean region, minimising the negative impacts associated to the activity key industrial sectors.To that aim, the possibilities for and impact of diffusion of the EU Integrated Pollution Prevention and Control approach to the Mediterranean Partner Countries (MPC) will be assessed and the implementation of Best Available Techniques in the national environmental programmes will be promoted and supported. BAT4MED aims to help implement the EU Technologies Action Plan by supporting the transfer and uptake of environmental technologies in developing countries. Industrial pollution processes account for a considerable share of the overall pollution in the Mediterranean region. Though awareness of environmental issues related to industrial pollution has notably grown in the last decades, pollution monitoring shows that the positive results have hardly been achieved. The goal of the project justifies its transnational dimension, since pollution in the Mediterranean has a global dimension and cannot be tackled separately by each single country.The project brings together 8 organisations from 6 different countries,4 organisations from 3 EU Member States (Spain,Belgium,Italy),3 from 3 MPC (Egypt,Tunisia,Morocco) and 1 international organisation based in Egypt to build mutual understanding through established networking in industrial pollution prevention and control. Firstly, BAT4MED will analyse the industrial context in the MPC to select the most promising sectors with the highest environmental benefit potential.Secondly, a methodology for BAT assessment will be designed and applied and BAT will be selected for each identified sector taking into account local conditions. Lastly, an analysis of potential convergence of MPC policies with the EU-approach will be carried out. The project has an ambitious set of awareness creation & dissemination activities.

**Partners:**

| | | |
|---|---|---|
| 1 | INSTITUTO ANDALUZ DE TECNOLOGIA. | ES |
| 2 | VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V. | BE |
| 3 | SCUOLA SUPERIORE DI STUDI UNIVERSITARI E DI PERFEZIONAMENTO SANT'ANNA | IT |
| 4 | AGENCIA DE RESIDUS DE CATALUNYA | ES |
| 5 | EGYPTIAN ENVIRONMENTAL AFFAIRS AGENCY | EG |
| 6 | CENTRE INTERNATIONAL DES TECHNOLOGIES DE L'ENVIRONNEMENT DE TUNIS | TN |
| 7 | ASSOCIATION DU CENTRE MAROCAIN DE PRODUCTION PROPRE | MA |
| 8 | CENTRE FOR ENVIRONMENT AND DEVELOPMENT FOR THE ARAB REGION AND EUROPE | EG |

**Activity Code:** ENV.2010.3.1.5-2 **Funding Scheme:** CP **Duration (Months):** 42

**Title:** An Integrated Framework of Methods, Technologies, Tools and Policies for Improvement of Brownfield Regeneration in Europe

**Proposed EC Grant:** 3.443.502 €

**Abstract:**

Brownfield regeneration is essential for sustainable land management in European Member States. Currently, the success in brownfield regeneration is unsatisfying in terms of financial and eco-efficiency or social acceptance. Many useful and innovative technologies site clean-up as well as methods to support decision making processes exist, but they are only rarely applied using their full potential. An immense diversification of tools with little connection to each other as well as a lack of consideration of regional and cultural specificities deters end-users from application. Sometimes the non-visibility of tools is the reason that problem owners, managers, local authorities and other stakeholders do not regenerate brownfields using the best technology available. Additionally, emerging challenges, such as the urgent demand for soil remediation and the reuse of on-site infrastructures, call for the development of new and integrated solutions.This project will overcome existing barriers to brownfield regeneration by developing and providing customised problem- and target-oriented packages of approaches, technologies and tools. As a unique asset, these packages deliberately include the cultural and administrative characteristics and their regionally distinctive features. By providing a customisable toolbox specifically addressing the diverse processes that have to be dealt with during the course of a regeneration project, end-users will be enabled to find best practice based solutions. Improvement of existing means to support brownfield regeneration will be further accomplished by filling methodological core topics such as intelligent remediation in terms of technological advancements with regard to phytoremediation and partial source removal technologies. The project will deliver a tailored training and dissemination programme as part of an information centre that will transfer existing and emerging knowledge to the scientific community and end-users.

**Partners:**

| | | |
|---|---|---|
| 1 | HELMHOLTZ-ZENTRUM FUER UMWELTFORSCHUNG GMBH - UFZ | DE |
| 2 | EBERHARD KARLS UNIVERSITAET TUEBINGEN | DE |
| 3 | Institute of Geonics of the AS CR, v.v.i. | CZ |
| 4 | UNIVERSITA CA' FOSCARI VENEZIA | IT |
| 5 | UNIVERSITATEA TEHNICA DE CONSTRUCTII BUCURESTI | RO |
| 6 | DANMARKS TEKNISKE UNIVERSITET | DK |
| 8 | AGENTIA NATIONALA PENTRU PROTECTIAMEDIULUI | RO |
| 9 | INSTYTUT EKOLOGII TERENOW UPRZEMYSLOWIONYCH | PL |
| 10 | SOLGEO AG | CH |
| 11 | GEO-LOG GMBH | DE |
| 12 | KUHNE MANFRED | DE |
| 13 | ZABAR GROUP HOLDING SARL | LU |
| 14 | UNIVERSITE DE FRANCHE-COMTE | FR |
| 15 | JENA-GEOS-INGENIEURBURO GMBH | DE |
| 16 | GESA GESELLSCHAFT ZUR ENTWICKLUNG UND SANIERUNG VON ALTSTANDORTEN MBH | DE |

**Activity Code:** ENV.2010.3.1.1-4 **Funding Scheme:** CP **Duration (Months):** 60

**Title:** Water Harvesting for Rainfed Africa: investing in dryland agriculture for growth and resilience

**Proposed EC Grant:** 1.999.312 €

**Abstract:**

WAHARA will take a transdisciplinary approach to develop innovative, locally adapted water harvesting solutions with wider relevance for rainfed Africa. Water harvesting technologies play a key role in bringing about an urgently needed increase in agricultural productivity, and to improve food and water security in rural areas. Water harvesting technologies enhance water buffering capacity, contributing to the resilience of African drylands to climate variability and climate change, as well as to socio-economic changes such as population growth and urbanisation. To ensure the continental relevance of project results, research will concentrate on four geographically dispersed study sites in Tunisia, Burkina Faso, Ethiopia and Zambia, covering diverse socio-economic conditions and a range from arid to sub-humid climates. The project emphasizes: i) participatory technology design, i.e. selecting and adapting technologies that have synergies with existing farming systems and that are preferred by local stakeholders, yet tap from a global repertoire of innovative options; ii) sustainable impact, i.e. technologies that combine multiple uses of water, green and blue water management, and integrated water and nutrient management. Using models, water harvesting systems will be designed for maximum impact without compromising downstream water-users, contributing to sustainable regional development; iii) integration and adaptability, i.e. paying attention to the generic lessons to be learned from local experiences, and developing guidelines on how technologies can be adapted to different conditions; and iv) learning and action, i.e. a strategy will be developed to enable learning and action from successes achieved locally: a. within a region, to upscale from water harvesting technologies to water harvesting systems, and b. across regions, promoting knowledge exchange at continental scale.

**Partners:**

| | | |
|---|---|---|
| 1 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 2 | UNIVERSITY OF LEEDS | UK |
| 3 | METAMETA RESEARCH B.V. | NL |
| 4 | INSTITUT DES REGIONS ARIDES | TN |
| 5 | INSTITUT DE L'ENVIRONNEMENT ET DE RECHERCHES AGRICOLES | BF |
| 6 | MEKELLE UNIVERSITY | ET |
| 7 | GOLDEN VALLEY AGRICULTURAL RESEARCH TRUST | ZM |
| 8 | WAGENINGEN UNIVERSITEIT | NL |
| 9 | AGROTECHNOLOGY CONSULT AFRICA BV | NL |

**Activity Code:** ENV.2010.3.1.1-3 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Capacity-Linked water supply and sanitation improvement for Africa's peri-urban and Rural Areas

**Proposed EC Grant:** 1.989.826 €

**Abstract:**

There are a large number of small communities and towns in Africa that suffer from severe problems with water supply and sanitation. Small communities in rural areas and peri-urban areas of small towns have comparable settlement structures in which reuse of water and use of sanitation products can be utilized. However, there is only limited local capacity to adopt, implement and operate integrated water supply and sanitation. CLARA's overall objective is to strengthen the local capacity in the water supply and sanitation sector.From a technological point of view, existing low cost technologies for decentralized water supply and sanitation systems shall be assessed and adapted for African conditions with the focus on reducing risks in use and reuse of water and sanitation products, and providing demand oriented water quality. Based on these technological improvements and the experiences from the FP6 projects ROSA and NETSSAF, a simplified planning tool for integrated water supply and sanitation systems for small communities and peri-urban areas shall be developed that incorporates the key factors for success, i.e. operation and maintenance issues and reuse potential, form the beginning of the planning process, and that can be tailored to available local capacities.This simplified integrated CLARA planning tool shall then be tested and evaluated in different geographical African regions to incorporate different economic, cultural and social boundary conditions. For the communities participating in the planning process, application documents will be prepared as a final output that serve as basis to ask for funding of their implementation plans for integrated water supply and sanitation.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITAET FUER BODENKULTUR WIEN | AT |
| 2 | VEREIN ZUR FOERDERUNG DES TECHNOLOGIETRANSFERS AN DER HOCHSCHULE BREMERHAVEN E.V. | DE |
| 3 | ECOSAN CLUB KG | AT |
| 4 | BIOAZUL | ES |
| 5 | CENTRE DE BIOTECHNOLOGIE DE SFAX - CBS | TN |
| 6 | EGERTON UNIVERSITY | KE |
| 7 | WATER RESEARCH COMMISSION | ZA |
| 8 | CENTRE REGIONAL POUR L'EAU POTABLE ET L'ASSAINISSEMENT A FAIBLE COUT | BF |
| 9 | OFFICE NATIONAL DE L'EAU POTABLE | MA |
| 10 | ARBAMINCH UNIVERSITY*AMU | ET |
| 11 | ARBAMINCH WATER SUPPLY AND SEWERAGE ENTERPRISE | ET |
| 12 | ARBA MINCH TOWN MUNICIPALITY | ET |
| 13 | ARBA MINCH TOWN EGNAN NEW MAYET COMPOST PRODUCTION YOUTH ASSOCIATION | ET |
| 14 | WUBET LE ARBA MINCH MICRO AND SMALL SCALE TRADE AND INDUSTRY ASSOCIATION | ET |
| 15 | ARBA MINCH HEALTH CENTER | ET |

**Activity Code:** ENV.2010.3.1.1-3 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Water, Sanitation and Hygiene Technologies

**Proposed EC Grant:** 1.587.848 €

**Abstract:**

The water and sanitation sector is not short of new and emerging technologies, but hardly any have been adopted into national strategies in Sub-Saharan Africa, nor have they been widely taken up by private enterprise. The contribution of new technologies to MDG targets appears therefore to have been minimal in the last 20 years. A key constraint to reaching the sector targets therefore appears to be the lack of systems to assess the potential of a technology and lack of ability to take new appropriate technologies to scale effectively. WASHTech seeks to address the problem through research on an innovatory process for assessing the potential and sustainability of a wide range of new technologies, and for designing successful strategies for scaling up.The overall development objective is for more effective investment in new technologies to achieve MDG targets. The project (WASHTECH) objective is to strengthen sector capacity to make effective investment in new technologies, through development of a framework which assesses the potential of new technologies introduced into innovative de-centralised systems.The project objective would be achieved through research producing two levels of outputs. The first level of outputs will consist of a widely applicable Technology Assessment Framework (TAF) and process that will provide a simple system and criteria for evaluating new technologies and their performance, identifying sustainability issues, and analysing approaches to introduction, innovation, diffusion and scaling up, including establishing of the required capacities in the three countries,: Burkina Faso, Ghana and Uganda. The second level of outputs depends on the TAF development and capacity building. They define strategies for innovation and scaling up, and the time-span and process needed to achieve successful up-take and sustainability.These outputs are both of direct use to the sector and are also an indication of the value and application of the framework

**Partners:**

| | | |
|---|---|---|
| 1 | STICHTING IRC INTERNATIONAL WATER AND SANITATION CENTRE | NL |
| 2 | CRANFIELD UNIVERSITY | UK |
| 3 | SKAT FOUNDATION | CH |
| 4 | WaterAid | UK |
| 5 | CENTRE REGIONAL POUR L'EAU POTABLE ET L'ASSAINISSEMENT A FAIBLE COUT | BF |
| 6 | Training, Research and Networking for Development LBG | GH |
| 7 | Kwame Nkrumah University of Science and Technology Kumasi | GH |
| 8 | Network for Water and Sanitation Uganda | UG |

**Activity Code:** ENV.2010.3.1.1-4 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Water Harvesting Technologies Revisited: Potentials for Innovations, Improvements and Upscaling in Sub-Saharan Africa

**Proposed EC Grant:** 1.999.930 €

**Abstract:**

The WHaTeR project aims to contribute to the development of appropriate water harvesting techniques (WHTs). These WHTs should be sustainable under dynamic global and regional pressure, and strengthen rainfed agriculture, improve rural livelihood and increase food production and security in Sub-Saharan Africa. In total 3 European and 5 African organisations will be involved; namely VU University Amsterdam (The Netherlands), Newcastle University (United Kingdom), Stockholm Resilience Centre (Sweden), University of Kwazulu Natal (South Africa), Sokoine University (Tanzania), Southern and Eastern Africa Rainwater Network (Kenya), National Institute for Environment and Agricultural Research (Burkina Faso) and Arba Minch University (Ethiopia). Project activities will be divided over 14 Work Packages. The first Work Package covers project management and the second comprises a situation analysis - through revisits to water harvesting sites in 15 African countries studied previously by participating organisations . The next four Work Packages focus on detailed research and technology development activities on cross-cutting themes (environmental sustainability; technology development; livelihood improvement; uptake and upscaling; and global and regional impact) and will be conducted together with four country-based Work Packages (in Burkina Faso, Ethiopia, South Africa and Tanzania). One Work Package will concentrate on stakeholder communication and outreaching activities, and the final Work Packages consists of synthesis and dissemination of project results, incldluing production of guidelines for WHTs. The project will spend an estimated 74% of the budget on RTD, 13% on other costs related to stakeholder workshops and outreaching and 13% on project management. The expected impacts of the project comprise technology support for farmers, development of stakeholder communication networks, innovative water harvesting systems, tools for impact assessment, upstream-downstream land use, and policy support for integrated water management and adaptation to climate change to promote EU and African strategies on strengthening rainfed agriculture, food security and livelihoods.

**Partners:**

| | | |
|---|---|---|
| 1 | VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG | NL |
| 2 | UNIVERSITY OF KWAZULU-NATAL | ZA |
| 3 | UNIVERSITY OF NEWCASTLE UPON TYNE | UK |
| 4 | Sokoine University of Agriculture | TZ |
| 5 | STOCKHOLMS UNIVERSITET | SE |
| 6 | INTERNATIONAL CENTRE FOR RESEARCH IN AGROFORESTRY | KE |
| 7 | INSTITUT DE L'ENVIRONNEMENT ET DE RECHERCHES AGRICOLES | BF |
| 8 | ARBAMINCH UNIVERSITY*AMU | ET |

**Activity Code:** ENV.2010.3.1.4-2 **Funding Scheme:** CSA **Duration (Months):** 48

**Title:** ERA-NET ON ECO-INNOVATION - Boosting eco-innovation through joint cooperation in research and dissemination

**Proposed EC Grant:** 1.999.963 €

**Abstract:**

Eco-innovations (EI), i.e. “green” technologies, processes, products and services have an increasing impact for the global competitiveness of European industry. To reach a worldwide leading position, it needs to boost the implementation of EI in industry, especially in SMEs. The ERA-Net on EI will support research and dissemination in the field of EI.The success of EI is determined by criteria that will be promoted through multi-level and systemic approach, considering the social, economic, political and technological context.To promote the development and implementation of EI in Europe, following activities will be performed: (1) Pooling of Europe’s most relevant research and innovation programmes; (2) Developing a networking platform for information exchange on activities related to EI research in Europe and broadening the network, and (3) Creating a common research funding platform.Supported by 25 partners, the ERA-Net is built on 4 work packages: Strategy & network development, leader SenterNovem (NL); Joint calls, leader ANR (FR); Other joint activities, leader MATIMOP-ISERD (IL); Management & Dissemination, leader Juelich (DE).The ERA-Net aims to support research, innovation and environmental policy makers with best practices for funding EI. Researchers will also profit from facilitated access to transnational research.The development of common metrics for the ex-ante assessment will help to take the whole life cycle of a project / programme into account. Activities for a better EI transfer from research to industry and market will be performed: e.g. assessing the role of information technology and of integrated concepts like ‘green technology parks’.The public awareness of the ERA-Net and EI will be promoted via target-group selected tools and active interaction with stakeholders and/or expert networks.

**Partners:**

| | | |
|---|---|---|
| 1 | FORSCHUNGSZENTRUM JUELICH GMBH | DE |
| 2 | BUNDESMINISTERIUM FUER BILDUNG UND FORSCHUNG | DE |
| 3 | AGENCE DE L'ENVIRONNEMENT ET DE LA MAITRISE DE L'ENERGIE | FR |
| 4 | AGENCE NATIONALE DE LA RECHERCHE | FR |
| 5 | Bundesamt fuer Umwelt | CH |
| 6 | DEUTSCHES ZENTRUM FUER LUFT - UND RAUMFAHRT EV | DE |
| 7 | ENVIRONMENTAL PROTECTION AGENCY OF IRELAND | IE |
| 8 | Finpiemonte S.p.A | IT |
| 9 | FONDS NATIONAL DE LA RECHERCHE | LU |
| 10 | FORSKNINGSRÅDET FÖR MILJÖ, AREELLA NÄRINGAR OCH SAMHÄLLSBYGGANDE | SE |
| 11 | SOCIEDAD PUBLICA GESTION AMBIENTAL IHOBE S.A. | ES |
| 12 | AGENTSCHAP VOOR INNOVATIE DOOR WETENSCHAP EN TECHNOLOGIE | BE |
| 13 | KOMMUNALKREDIT PUBLIC CONSULTING GMBH | AT |
| 14 | MATIMOP, ISRAELI INDUSTRY CENTER FOR RESEARCH & DEVELOPMENT | IL |
| 15 | MINISTERIO DE CIENCIA E INNOVACION | ES |
| 16 | MINISTRY OF EDUCATION, YOUTH AND SCIENCE | BG |
| 17 | DANISH MINISTRY OF THE ENVIRONMENT | DK |
| 18 | MINISTRSTVO ZA VISOKO SOLSTVO, ZNANOST IN TEHNOLOGIJO | SI |
| 19 | NARODOWE CENTRUM BADAN I ROZWOJU | PL |
| 20 | REGIONE PIEMONTE. | IT |
| 21 | MINISTERIE VAN ECONOMISCHE ZAKEN, LANDBOUW EN INNOVATIE | NL |
| 22 | TEKES-TEKNOLOGIAN JA INNOVAATIOIDEN KEHITTAEMISKESKUS | FI |
| 23 | The Technology Strategy Board | UK |
| 24 | TURKIYE BILIMSEL VE TEKNOLOJIK ARASTIRMA KURUMU | TR |
| 25 | MINISTERIE VAN INFRASTRUCTUUR EN MILIEU | NL |

**Activity Code:** ENV.2011.3.1.9-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Innovative biological products for soil pest control

**Proposed EC Grant:** 4.984.654 €

**Abstract:**

INBIOSOIL is a timely project that proposes novel eco-efficient environmentally friendly technologies substantially contributing to the reduced input of conventional chemical pesticides for the control of subterranean crop pests of global economic importance. This would be accomplished through the generation of new formulations of biological control agents (BCAs) based on entomopathogenic fungi and nematodes within integrated pest management strategies. The strategies exploit synergies between BCAs which result in higher pest mortality. The proposed strategies: (1) contribute to reduced pesticide inputs in sustainable agricultural-horticultural systems, (2) offer potential savings for growers, (3) promote biodiversity and (4) offer solutions for both organic and conventional growers, thus ensuring the competitiveness of European growers. INBIOSOIL also includes risk assessment studies which should accelerate registration of new BCA products. The goals will be accomplished through 5 complementary work packages carried out by 15 European partners. The experienced, multidisciplinary team includes researchers from academia and SMEs. The project meets the challenges of globalization, climate change, and new plant protection policies leading to the production of high-quality and safer crops; it is in accordance with the scope of the Eco-Innovation call FP7-ENV-2011-3.1.9.-1. INBIOSOIL contributes to implementation of EC regulation 1107/2009 and Directive 2009/128/EC which make it obligatory for EU Member States to implement principles of IPM with priority being given to non-chemical methods of integrated pest management. INBIOSOIL addresses direct and indirect impacts, as well as primary and secondary effects, and clearly demonstrates a substantial improvement of the sustainability performance of BCAs along the entire life cycle of the proposed solutions and considers rebound effects with respect to currently available state-of-the-art technologies or solutions.

**Partners:**

| | | |
|---|---|---|
| 1 | GEORG-AUGUST-UNIVERSITAET GOETTINGEN STIFTUNG OEFFENTLICHEN RECHTS | DE |
| 2 | FACHHOCHSCHULE BIELEFELD | DE |
| 3 | UNIVERSITAET INNSBRUCK | AT |
| 4 | SWANSEA UNIVERSITY | UK |
| 5 | KOBENHAVNS UNIVERSITET | DK |
| 6 | EIDGENOESSISCHES VOLKSWIRTSCHAFTSDEPARTEMENT | CH |
| 7 | UNIVERSIDAD DE CORDOBA | ES |
| 8 | TECHNISCHE UNIVERSITAET MUENCHEN | DE |
| 9 | TOXMINDS BVBA | BE |
| 10 | E-NEMA GESELLSCHAFT FUER BIOTECHNOLOGIE UND BIOLOGISCHEN PFLANZENSCHUTZ mbH | DE |
| 11 | FYTOVITA SPOL SRO | CZ |
| 12 | NEEM BIOTECH LTD | UK |
| 13 | KLASMANN-DEILMANN GMBH | DE |
| 14 | EWH BIOPRODUCTION APS | DK |
| 15 | TORUX SOFTWARE LIMITED | UK |

**Activity Code:** ENV.2011.3.1.9-1 **Funding Scheme:** CP **Duration (Months):** 42

**Title:** Cycling resources embedded in systems containing Light Emitting Diodes

**Proposed EC Grant:** 4.046.195 €

**Abstract:**

The project cycLED aims at optimising the flows of resources over all life-cycle phases of Light Emitting Diodes (LED) products. The energy saving potential for LEDs is significant, and the strategic importance of the LED technology is reflected in the current and upcoming market development. However, LED-based product systems contain many resources like indium, gallium or rare earth metals. Some of these substances are classified as critical raw materials at EU level. Therefore, if the current expansion of LED technologies is most welcomed from an economic and energy point of view, it requires optimising resource flows and addressing key societal issues. To strengthen the emerging LED market in Europe, cycLED focuses on improvement of the material flows and policy measures to remove barriers for LED technology dissemination. Innovation is needed to achieve an efficient management of the different materials used in LED systems, so that the growth of the LED-related markets is decoupled from resource depletion. A material flow analysis will first be conducted to obtain an overview of the most relevant materials contained in LED products, their origin and the situation regarding recycling. Further research will focus on the different life-cycle phases (production and manufacturing, assembling, use and material recycling) to provide overall solutions to improve the resource flows. These results will be combined to develop and implement solutions regarding product design for eco-innovation, adaptation of business models and overcoming of barriers to diffusion. Work packages dedicated to the development of indicators measuring the eco-innovation and to the dissemination of the results will accompany the research. The impacts of cycLED relate to resource savings, reduction of production costs, increase of competitiveness, creation of jobs and capacity building.

**Partners:**

| | | |
|---|---|---|
| 1 | FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V | DE |
| 2 | LEDINLIGHT LTD | UK |
| 3 | ONA PRODUCT SL | ES |
| 4 | ELPRO ELEKTRONIK PRODUKT RECYCLING GMBH | DE |
| 5 | BRAUN SCHALTGERATE UND SERVICE EK | DE |
| 6 | UMICORE NV | BE |
| 7 | ETAP NV | BE |
| 8 | PHILIPS LIGHTING B.V. | NL |
| 9 | THE NOTTINGHAM TRENT UNIVERSITY | UK |
| 10 | OPTOTRANSMITTER-UMWELTSCHUTZ-TECHNOLOGIE EV | DE |
| 11 | CARDIFF METROPOLITAN UNIVERSITY | UK |
| 12 | SIRRIS HET COLLECTIEF CENTRUM VAN TECHNOLOGISCHE INDUSTRIE VZW | BE |
| 13 | Institut Mines-Telecom | FR |

**Activity Code:** ENV.2011.3.1.9-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** ENzymatic DEcontamination TECHnology

**Proposed EC Grant:** 1.994.648 €

**Abstract:**

Human activities are associated with increasing amounts of waste that ultimately find their ways into European waters and have negative consequences on the environment. With the background of an aging population and increasing urbanization, wastewater treatment must specifically target pharmaceutical products (PPs) and endocrine disrupting chemicals (EDCs) so that these highly biologically-active compounds are eliminated from the water resource.If conventional treatment technologies are very efficient on a large number of compounds, some chemicals, such as pharmaceutical residues and endocrine disruptors, are recalcitrant and are not removed. The chronic exposure to these compounds is a topic of threat as the long term effects are so far unpredictable and undocumented. This issue has recently drawn the interest of many medical professionals, eco-toxicologists and environmental and health agencies.The global objective of the ENDETECH program is to develop a technology which aims at eliminating persistent pharmaceutical pollutants in wastewaters originating from drug manufacturing sites, households, hospitals and animal farms, thanks to an innovative ENzymatic DEcontamination TECHnology.The pharmaceutical pollutants targeted in priority during this project will be antibiotics, hormones & endocrine disruptors and anti-cancer drugs.The ENDETECH program is articulated around three main steps: (1) enzyme libraries will be screened to identify novel enzymes able to inactivate the selected pollutants; (2) the discovered enzymes will be immobilized on beads or membranes and subsequently (3) used in bioreactors to decontaminate waste effluents.The ENDETECH consortium includes all the needed and complementary skills for the project in the fields of enzyme screening, optimization and immobilization, bioreactor development & design and chemical & eco-toxicological analysis. The ENDETECH network is composed of 3 SMEs and 3 RTD organizations.

**Partners:**

| | | |
|---|---|---|
| 1 | DA VOLTERRA SAS | FR |
| 2 | C-LECTA GMBH | DE |
| 3 | CHIRALVISION BV | NL |
| 4 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 5 | Institut Català de Recerca de l'Aigua, Fundació Privada | ES |
| 6 | JOHANN WOLFGANG GOETHE UNIVERSITAET FRANKFURT AM MAIN | DE |

**Activity Code:** ENV.2011.3.1.9-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Recovery of Phosphorus from Sewage Sludge and Sewage Sludge Ashes with the thermo-reductive RecoPhos-Process

**Proposed EC Grant:** 3.421.190 €

**Abstract:**

Natural phosphate sources low in heavy metals are getting scarce. Containing about 15 mass-% of P2O5, sewage sludge ash can be considered a secondary phosphorus (P-) source. The P-content in the European sewage sludge could currently replace roughly 15% of the phosphate imports into the EU.Hence already for many years, almost decades, it has been tried to recover phosphorus from sewage, sludge and ashes in various ways of which none has yet been realised at industrial scale. The reason for this failure lies firstly in the wet chemical approach, meaning complex and little efficient processes with liquids hard to handle; and secondly in the use of liquid or dewatered sludge as well as waste water, which results in a further decrease in efficiency mostly because of high mass flow and matrix effects.The RecoPhos process is a thermal process using ash from sludge mono-incineration. The principle of the used so-called InduCarb process is similar to the one of the known Woehler process; dried sludge can be added as heat source or reducing agent as an option. The phosphate (amongst other constituents) is reduced on an inductively heated coke bed to white phosphorus, which is later condensed and thus separated from other gaseous reaction products; white phosphorous is the most valuable form of phosphorous and highly asked for by the industry. Further products are an iron alloy as well as a heavy metal mixture, both usable in steel industry; a silicate slag for the use in cement ovens as well as a high calorific gas.The RecoPhos process uses an innovative reactor (InduCarb) designed for the reductive recovery of steel work dusts. By the use of ashes the material flow is minimal; if only sludge is available, it can be also used as input, adding flexibility to the concept. If additives are needed, suitable industrial wastes can be used.The innovative RecoPhos process has never been realised before. It is planned to apply it for a patent .

**Partners:**

| | | |
|---|---|---|
| 1 | MONTANUNIVERSITAET LEOBEN | AT |
| 2 | UNIVERSITAET STUTTGART | DE |
| 3 | SGL CARBON GMBH | DE |
| 4 | MAL METALLBAU ANLAGENSERVICE - LEITUNGSBAU GMBH | AT |
| 5 | INERCO INGENIERIA, TECNOLOGIA Y CONSULTORIA SA | ES |
| 6 | INSPYRO NV | BE |
| 7 | HARIRI DANIEL - HARIRI CHEMICAL PROCESS ENGINEERING | CH |
| 8 | EDLINGER ALFRED/METALURGY & INORGANIC TECHNOLOGY MIT | AT |
| 9 | GESELLSCHAFT FUR CHEMISCHEN UND TECHNISCHEN UMWELTSCHUTZ MBH | DE |
| 10 | JELOGA ENGINEERING SARL | FR |

**Activity Code:** ENV.2011.3.1.9-4 **Funding Scheme:** CSA **Duration (Months):** 24

**Title:** EcoWeb a dynamic e-dissemination platform for EU eco-innovation research results

**Proposed EC Grant:** 975.535 €

**Abstract:**

Europe has a leading position in eco-innovation patents and emerging technologies. Although the EU achieves a remarkably high annual growth rate of 16% in eco-innovation, transfer to SMEs is rather low. Technology transfer to SMEs would be important to reduce EU's industrial pollution. According to OECD and EC reports, awareness for RTD results is low. There is a need to increase technology transfer at the EU level.A common platform at the European level will speed up promotion and transfer of existing technologies. The platform will focus on Framework Programmes results and other EC funding initiatives.In the proposed project, it will be developed a dynamic platform (EcoWeb) for enterprises, especially SMEs, to take up eco-innovation results from EU funded research. This will increase uptake of novel technologies, spur economic growth, and will result in an increase of SME interest in the FP.EcoWeb will bring companies close to relevant eco-innovation EU results through semantic-web-technology and existing eco-innovation networks and multipliers. Based on semantic-web-technology EcoWeb will collect and structure information whilst multipliers will disseminate results through existing channels. In particular EcoWeb will achieve:• collect and structure RTD results on eco-innovation;• match innovations to the technical needs of the SMEs.• bring innovations to SMEs instead of having the SMEs looking for them.

**Partners:**

| | | |
|---|---|---|
| 1 | Eutema Technology Management GmbH & Co KG | AT |
| 2 | SMART INFORMATION SYSTEMS GMBH | AT |
| 3 | OSTERREICHISCHE GESELLSCHAFT FUR UMWELT UND TECHNIK | AT |
| 4 | AGENZIA PER LA PROMOZIONE DELLA RICERCA EUROPEA | IT |
| 5 | ASSOCIATION POUR LA PROMOTION ET LE DEVELOPPEMENT INTERNATIONAL DES ECO-ENTREPRISES DE FRANCE - ASSOCIATION PEXE | FR |
| 6 | UNIVERSITAET DUISBURG-ESSEN | DE |
| 7 | B.A.U.M. CONSULT GMBH | DE |

**Activity Code:** ENV.2011.3.1.9-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** DEVELOPING A POOL OF NOVEL AND ECO-EFFICIENT APPLICATIONS OF ZEOLITE FOR THE AGRICULTURE SECTOR

**Proposed EC Grant:** 2.014.772 €

**Abstract:**

The agriculture sector is vital for food, feed and bio-fuel production, but at the same time it is a major cause of environmental pollution and natural resource depletion. Sustainable solutions are demanded that will enable agriculture to “produce more with less”: become more productive and less harmful to the environment and human health.ECO-ZEO aims at the development of a new pool of Green crop protection products delivering a wide range of beneficial effects including reduced water consumption, increased crop yield, lower chemical input, crop protection and tolerance to abiotic stress and healthier conditions to workers in agriculture and agrochemical sectors.The ECO-ZEO products will rely on the innovative application of Zeolite 4A to the surface of leaves and fruits, adapted strategies for sustainable crop protection (such as chromatic masking, behavior interference and biocontrol), novel use of sustainable active ingredients and pigments, and new configurations of additives for enhanced performance of the coating. The developed crop protection solutions will be lab- and field trialed for four crops: apple, tomato, table grape and orange. The best performing solutions will be validated through demonstration with European farmers.Sustainability, eco-efficiency and Life-cycle analyses will be performed throughout the project. Achieving both environmental and economic sustainability is one of the main added values of ECO-ZEO.ECO-ZEO will be achieved by means of a new innovation process in agricultural green products based on the alliance of Academia, Agro-Biotech SMEs and Industry. Firm plans for the full-scale exploitation of the developed products and technology will ensure this alliance will translate into market presence.The participation of SMEs is further enhanced by the allocation of 39% of EC Contribution to SMEs.

**Partners:**

| | | |
|---|---|---|
| 1 | INSTITUT DE RECERCA I TECNOLOGIA AGROALIMENTARIES. | ES |
| 2 | MINISTRY OF FOOD AGRICULTURE AND LIVESTOCK | TR |
| 3 | UNIVERSITEIT GENT | BE |
| 4 | TERRA HUMANA TISZTA TECHNOLOGIAKAT FEJLESZTO TERVEZO ES KIVITELEZO KFT | HU |
| 5 | CENTRO DE ASESORIA DOCTOR FERRER SL | ES |
| 6 | GALENIKA-FITOFARMACIJA AD | RS |
| 7 | FMC FORET SA | ES |
| 8 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 9 | C E M ANALYTICAL SERVICES LTD | UK |
| 10 | ASSEMBLEE DES REGIONS EUROPEENNES FRUITIERES LEGUMIERES ET HORTICOLES | FR |

**Activity Code:** ENV.2011.3.1.9-1 **Funding Scheme:** CP **Duration (Months):** 42

**Title:** NEW BIOCOATING FOR CORROSION INHIBITION IN METAL SURFACES

**Proposed EC Grant:** 2.906.137 €

**Abstract:**

The annual direct cost of corrosion estimated worldwide exceeds €1.32 trillion, which means approximately between 3 to 4% of the Gross Domestic Product (GDP) of industrialized countries. Among the different types of corrosion Microbial Influenced Corrosion (MIC) caused by fouling is estimated to be involved in at least 10% of the corrosion problems of structures reaching to 50% in the case of subterranean pipes. Existing antifouling solutions include biocides and solutions not environmentally friendly. Latest research has begun to focus on greener replacements, but up to now, with low environmental performance and durability ratios. This fact has caused an urgent demand for greener, non-toxic or low-toxicity (green Anti-Fouling agents) and longer lasting antifouling compounds and technologies. The main objective of the project is the development of an innovative biomimetic and eco-efficient environmental technology for inhibiting microbial induced corrosion (MIC) produced by biofouling through the integration of microorganisms in a sol-gel coating for metal surfaces of civil engineering structures in marine and terrestrial environments. The potential economic impact of the technology developed in the project could mean approximately 612 billion € in direct cost.The general objectives are expected to be achieved through the following WPs:WP1: Microorganisms and inhibitors to be included in the sol-gel matrixWP2: Synthesis of a sol-gel enriched matrix for corrosion inhibitionWP3: Environmental aspects of the biomimetic developed coatingWP4: DemonstrationWP5: DisseminationWP6: Business models and ExploitationWP7: Project Management

**Partners:**

| | | |
|---|---|---|
| 1 | ACCIONA INFRAESTRUCTURAS S.A. | ES |
| 2 | BIOPROSPERITY SYMBOULOI EPIKHEIRONEPE | EL |
| 3 | INGG. F.&.R. GIRARDI COSTRUZIONI CIVILI ED INDUSTRIALI S.P.A. | IT |
| 4 | GRUPPO CSA SPA | IT |
| 5 | INSTITUT ZA FIZIKALNO BIOLOGIJO D.O.O. | SI |
| 6 | ASOCIACION DE INVESTIGACION INBIOTEC, INSTITUTO DE BIOTECHNOLOGIA DE LEON | ES |
| 7 | SVILUPPO TECNOLOGIE E RICERCA PER L'EDILIZIA SISMICAMENTE SICURA ED ECOSOSTENIBILE SCARL | IT |
| 8 | TECHNISCHE UNIVERSITAET BERGAKADEMIE FREIBERG | DE |
| 9 | VAN LOON CHEMICAL INNOVATIONS BV | NL |

**Activity Code:** ENV.2011.3.1.9-2 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Meso-level eco-efficiency indicators to assess technologies and their uptake in water use sectors

**Proposed EC Grant:** 2.499.489 €

**Abstract:**

EcoWater will address the development of meso-level eco-efficiency indicators for technology assessment through a systems' approach. The effort will focus on enhancing the understanding of the interrelations of innovative technology uptake in water use systems, and their economic and environmental impacts. Research will address the selection of indicators appropriate for assessing system-wide eco-efficiency improvements, the integration of existing tools and assessment methods in a coherent modelling environment, and the analysis and characterisation of existing structures and policies. The development of an analytical framework is foreseen, to support: (i) Systemic environmental impact assessments, (ii) Economic assessments, (iii) Analysis of value chains and actor interactions, and (iv) Technology implementation and uptake scenarios. Eight Case Studies will be developed, in different systems and sectors of high economic relevance and environmental impact, addressing water use in agricultural, urban and industrial sectors. Two Case Studies will focus on shifts from rainfed to irrigated agriculture and innovations that can reduce water and energy footprints and production inputs. Two Case Studies will address sustainable and economically efficient water supply and wastewater management in urban areas. Four Case Studies will concern meso-level eco-efficiency improvements from innovative technologies in water systems for the textile industry, for energy production, for dairy production and in the automotive industry. The main outputs include a validated and tested methodological framework, an integrated toolbox for systems' eco-efficiency analysis, and policy recommendations for technology uptake and implementation. For ensuring wide dissemination and applicability, the project foresees activities to address different target audiences and to develop operational science-industry-policy links at the level of Case Studies and at wider EU and international scale.

**Partners:**

| | | |
|---|---|---|
| 1 | NATIONAL TECHNICAL UNIVERSITY OF ATHENS | EL |
| 2 | CENTRO INTERNAZIONALE DI ALTI STUDI AGRONOMICI MEDITERRANEI - ISTITUTO AGRONOMICO MEDITERRANEO DI BARI | IT |
| 3 | STICHTING DELTARES | NL |
| 4 | FACHHOCHSCHULE NORDWESTSCHWEIZ | CH |
| 5 | UNIVERSIDADE DO PORTO | PT |
| 6 | UNIVERSITY OF ARCHITECTURE, CIVIL ENGINEERING AND GEODESY | BG |
| 7 | THE OPEN UNIVERSITY | UK |
| 8 | DHI | DK |
| 9 | IVL SVENSKA MILJOEINSTITUTET AB | SE |
| 10 | MITA SAS DI SPAGARINO MICHELE E CO | IT |

**Activity Code:** ENV.2011.3.1.1-2 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Enhancement of natural water systems and treatment methods for safe and sustainable water supply in India

**Proposed EC Grant:** 3.499.620 €

**Abstract:**

Saph Pani addresses the improvement of natural water treatment systems such as river bank filtration (RBF), managed aquifer recharge (MAR) and wetlands in India building on a combination of local and international expertise. The project aims at enhancing water resources and water supply particularly in water stressed urban and peri-urban areas in different parts of the sub-continent. The objective is to strengthen the scientific understanding of the performance-determining processes occurring in the root, soil and aquifer zones of the relevant processes considering the removal and fate of important water quality parameters such as pathogenic microorganisms and respective indicators, organic substances and metals.Moreover the hydrologic characteristics (infiltration and storage capacity) and the eco-system function will be investigated along with the integral importance in the local or regional water resources management concept (e.g. by providing underground buffering of seasonal variations in supply and demand). The socio-economic value of the enhanced utilisation of the attenuation and storage capacity will be evaluated taking into account long-term sustainability issues and a comprehensive risk management.The project focuses on a set of case study areas in India covering various regional, climatic, and hydrogeological conditions as well as different treatment technologies. The site investigations will include hydrological and geochemical characterisation and, depending on the degree of site development, water quality monitoring or pre-feasibility studies for new treatment schemes. Besides the actual natural treatment component the investigation may encompass also appropriate pre- and post treatment steps to potabilise the water or avoid clogging of the sub-surface structures. The experimental and conceptual studies will be complemented by modelling activities which help to support the transferability of results.

**Partners:**

| | | |
|---|---|---|
| 1 | FACHHOCHSCHULE NORDWESTSCHWEIZ | CH |
| 2 | Uttarakhand Jal Sansthan | IN |
| 3 | NATIONAL INSTITUTE OF HYDROLOGY | IN |
| 4 | INDIAN INSTITUTE OF TECHNOLOGY ROORKEE | IN |
| 5 | VEOLIA WATER (INDIA) PVT LTD | IN |
| 6 | ANNA UNIVERSITY CHENNAI | IN |
| 7 | SPT CONSULTANCY SERVICES PARTNERSHIP | IN |
| 8 | MUNICIPAL CORPORATION OF RAIPUR | IN |
| 9 | ARUN GULATI | IN |
| 10 | COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH | IN |
| 11 | INDIAN INSTITUTE OF TECHNOLOGY BOMBAY | IN |
| 12 | DHI - (INDIA) WATER & ENVIRONMENT PVT LTD | IN |
| 13 | KOMPENTENTZZENTRUM WASSER BERLIN GEMEINNUTZIGE GMBH | DE |
| 14 | BUREAU DE RECHERCHES GEOLOGIQUES ET MINIERES | FR |
| 15 | Zentrum fur Umweltmanagement und Entscheidungstheorie | AT |
| 16 | Hochschule fuer Technik und Wirtschaft Dresden | DE |
| 17 | UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION -UNESCO | FR |
| 18 | INTERNATIONAL WATER MANAGEMENT INSTITUTE IWMI | LK |
| 19 | COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION | AU |
| 20 | FREIE UNIVERSITAET BERLIN | DE |

**Activity Code:** ENV.2011.3.1.9-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** New microbial carbonate precipitation technology for the production of high strength, economical and Ecological Cement

**Proposed EC Grant:** 1.598.296 €

**Abstract:**

About 5% of global carbon emissions originate from the manufacturing of cement.According to IEA,cement production generates an average world carbon emission of 0.81 kg CO2 per kg cement produced.Cement related emissions are expected to increase by 260% throughout the 1990‑2050period.As consequence,the global production of cement in 2030 is projected to grow to a level roughly 5 times higher than its level in 1990,with close to 5 billion tones worldwide.Emissions of the global cement sector alone are very likely to surpass the total amount of CO2 emissions of the EU before 2030.As well, Industrial waste is now global concern,causing environmental and economic harm.Industries are rapidly trying to find a solution,searching for optimal ways to manage waste and to change the most common practices as landfill or incineration.Industrial waste is very heavy burden for the environment,where a significant proportion of this industrial waste is attributable to construction and demolition waste.To mitigate these threats ECO-CEMENT will allow recovering valuable resources from industry,capturing CO2 and transforming both products into ecological cement that can be used in construction or novel environmental applications.Based on the nature's way of creating natural formations through bacterial contribution to carbonate precipitation,the main objective of ECO-CEMENT is to develop a novel bio-mimetic technology for enzyme-based microbial carbonate precipitation through the revalorization of industrial waste as raw materials,in order to produce eco-efficient environmental cement.The Bio-mimetic Technology will convert industrial waste,mainly cement waste and others by-products,into high strength,ecological cement using microbial carbonate precipitation via urea hydrolysis.Internal studies suggest that the combined use of industrial waste and the implementation of Eco-Cement technology can reduce GHGE from cement manufacturing by up to 11 % and 20 % reduction of construction waste.

**Partners:**

| | | |
|---|---|---|
| 1 | ESSENTIUM GRUPO SL | ES |
| 2 | FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V | DE |
| 3 | SOLINTEL M&P SL | ES |
| 4 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 5 | NEAPOLIS UNIVERSITY | CY |
| 6 | DELAP & WALLER ECOCO LIMITED | IE |

**Activity Code:** ENV.2011.3.1.9-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** New bio-inspired processes and products from renewable feedstocks

**Proposed EC Grant:** 3.532.584 €

**Abstract:**

Within the FP7 PEOPLE project (Blue4Glue), Fraunhofer Institute (IFAM) and Procter andGamble discovered a (PPO based) enzymatic process used by marine-organisms, which"produce" polymers in a much simpler way (less process steps) than industry does in classicalchemistry. BIO-MIMETIC aims to transfer this new scientific knowledge into a blueprint for anovel (pre-)industrial enzymatic-based bio-polymerization process. It involves research partners(IFAM and UNITOV) with experience in enzymatic transformation and bio-based syntheticpolymers, as well as expert SMEs such as Dyadic (enzymes), CIMV (biomass transformationinto bio-chemistry) and CULGI (computational modeling of bio-chemical processes) to developthe process that firstly transforms biomass (lignin) into new bio-based polymers (pseudopeptides). These will used to create respectively: 1) Bioconjugated copolymers, that will betested in detergents (by P&G) 2) Bio-cross-linked adhesive gels, to be experimented in antiageingcosmetics and in bio-textiles preparation (by an SME cosmetic producer MAVI).Potential environmental benefits are over 124 kton/yr less toxic solvents to produce chemicals,over 1 Billion kWh of energy savings (room temperature process) and a drastically reduced CO2footprint i.e. replace 8000 Mtons of petrochemical based deposition aides and in the futuresubstitute a large amount of phenol and phenolic derivatives, which are used to produce chemicalintermediates for a myriad of applications. BIO-MIMETIC will carry out LCA and LCC (cost)assessments over the value chain as input to business plan and will use a new SME LCA tool(cCALC) to develop an LCA showcase, which will come available for SMEs. The cCALC tooland showcase will be freely downloadable as part of the exploitation plan targeted at the marketuptake of project results in the emerging European market of bio-based products, projected togrow towards 250 billion Euro by 2020.

**Partners:**

| | | |
|---|---|---|
| 1 | PROCTER & GAMBLE TECHNICAL CENTRESLIMITED | UK |
| 2 | FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V | DE |
| 3 | UNIVERSITA DEGLI STUDI DI ROMA TOR VERGATA | IT |
| 4 | MAVI SUD S.R.L | IT |
| 5 | DYADIC NEDERLAND BV | NL |
| 6 | CULGI BV | NL |
| 7 | Compagnie Industrielle de la Matière Végétale | FR |
| 8 | PROCTER & GAMBLE EUROCOR N.V. | BE |
| 9 | CIAOTECH SRL | IT |
| 10 | THE UNIVERSITY OF MANCHESTER | UK |

**Activity Code:** ENV.2011.3.1.9-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** ENvironmental Optimization of IRrigAtion Management with the Combined uSe and Integration of High PrecisIon Satellite Data, Advanced Modeling, Process Control and Business Innovation

**Proposed EC Grant:** 2.085.965 €

**Abstract:**

The overall aim of ENORASIS is to develop an intelligent, integrated Decision Support System (ENORASIS Service Platform and Components) for environmentally optimised and, thus, sustainable irrigation management by farmers and water management organisations. ENORASIS system will actually target to motivate irrigation farmers to optimize the use of water, whereas it will also provide to (irrigation) water management organizations intelligent tools and services to effectively forecast and manage irrigation water resources, cover irrigation demand and charge customers (farmers) on the basis of an intelligent system of motives and incentives that exploits irrigation demand side fluctuations.To achieve so, ENORASIS will develop and integrate a bouquet of advanced technologies, methodologies and models in the fields of: (i) weather prediction systems that exploit satellite observations and advanced hydrology models; (ii) irrigation optimization techniques and (iii) smart card irrigation systems in order to arrive at a solution that will be easy to use for farmers and that will be flexible and robust enough for its use by irrigation water management organizations; and (iv) wireless sensor networks (functioning with solar energy) as key enabling technology for field measurements and monitoring conditions. Such an intelligent irrigation management and charging system is expected to have a major impact towards the adoption of more sustainable irrigation water management practices in agriculture and thus, increased environmental protection and costs savings for all stakeholders involved in agricultural economy.Finally, the ENORASIS project will be implemented over a period of 36 months by a multi-disciplinary and well-balanced consortium of 13 partners, including academic partners, research centres & institutes, SMEs as well as end-users (water management organisation).

**Partners:**

| | | |
|---|---|---|
| 1 | DRAXIS ENVIRONMENTAL S.A. | EL |
| 2 | RHEINISCHES INSTITUT FUER UMWELT-FORSCHUNG AN DER UNIVERSITAET ZU KOELN E.V. | DE |
| 3 | INSTYTUT UPRAWY NAWOZENIA I GLEBOZNAWSTWA, PANSTWOWY INSTYTUT BADAWCZY | PL |
| 4 | NOVELTIS SAS | FR |
| 5 | UNIVERZITET U NOVOM SADU FAKULTET TEHNICKIH NAUKA | RS |
| 6 | IMAXDI REAL INNOVATION, S.L. | ES |
| 7 | THE CYPRUS RESEARCH AND EDUCATIONAL FOUNDATION | CY |
| 8 | UNIVERSITY OF PATRAS | EL |
| 9 | SCUOLA UNIVERSITARIA PROFESSIONALE DELLA SVIZZERA ITALIANA (SUPSI) | CH |
| 10 | TEKNOSET BILGISAYAR YAZILIM VE DANISMANLIK HIZMETLERI SANAYIVE LIMITED SIRKETI | TR |
| 11 | UNISOFT ROMANIA SA | RO |
| 12 | INTERNATIONAL ENVIRONMENT AND QUALITY SERVICES NORTH GREECE LTD | EL |
| 13 | JAVNO VODOPRIVREDNO PREDUZECE VODE VOJVODINE NOVI SAD | RS |

**Activity Code:** ENV.2011.3.1.9-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Creating and testing a method for controlling the air quality based on a new biotechnological tool. Use of a devitalized moss clone as passive contaminant sensor

**Proposed EC Grant:** 3.492.022 €

**Abstract:**

The European Council Directive 96/62/EC about ambient air quality assessment and management, requires to States the periodical availability of information about air quality within their territories. Nevertheless, the available methods are expensive, which prevents they can be used in a large scale. Thus, at present it is necessary to have inexpensive and robust tools for monitoring air quality across Europe. The use of mosses, due to its high efficiency in the load of both particulate and gaseous forms of organic pollutants, inorganic and radioactive, may be an optimal choice. Until now they are used as biomonitors of air quality, but recently several investigators have realized the benefits of using devitalized mosses, because it allows disposing transplants in well defined initial conditions. This really leaves the field of biomonitoring, as the material is used dead, and approximates to the setup of a new biotechnological tool. Actually biotechnological techniques allow cultivating mosses in bioreactors, so it is possible to isolate a moss clone, to cultivate it and to produce a standard material (potentially patentable) which would be comparable to the use of resins or polymers for atmospheric quality control -mosses behave as pollutant exchange resins and their use as filters has been considered for decades. For these reasons we propose the implementation of a project having as main contents: 1) selection and culture of a moss clone; 2) characterization -molecular, physical, physical-chemical and multi-elemental- of the cultivated clone; 3) large-scale production of moss-bags for transplants; 4) comparison between the data collected using moss-bags and traditional techniques (i.e. bulk deposition collectors, particles samplers and gaseous samplers) to allow tool validation; 5) to do a methodological standardization to develop a protocol for using moss-bags; and 6) to develop ta method for identification of pollution focus.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSIDADE DE SANTIAGO DE COMPOSTELA | ES |
| 2 | ALBERT-LUDWIGS-UNIVERSITAET FREIBURG | DE |
| 3 | AMRA - ANALISI E MONITORAGGIO DEL R ISCHIO AMBIENTALE SCARL | IT |
| 4 | UNIVERSIDADE DA CORUNA | ES |
| 5 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 6 | BIOVIA CONSULTOR AMBIENTAL SL | ES |
| 7 | ORION SRL | IT |
| 8 | TECNO AMBIENTE SL | ES |
| 9 | T.E Laboratories Ltd | IE |
| 10 | Maderas Ornanda S.A. | ES |

**Activity Code:** ENV.2011.3.1.9-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Bioelectrochemical systems for metal recovery

**Proposed EC Grant:** 3.301.743 €

**Abstract:**

Global primary metal resources are rapidly dwindling and the mining and metallurgical industries are increasingly turning to lower grade minerals for metal extraction, typically increasing costs. Innovative environmental metal extraction techniques are required to increase mining sustainability, increase revenues and lower its impact on the environment. In this project, bioelectrochemical technology is proposed as an entirely new method for metal processing with the aim to produce marketable metal-containing (intermediate) products with low environmental impact compared to state-of-the art technologies.In bioelectrochemical technology, microorganisms catalyse the reaction occurring on one or both electrodes of an electrolytic cell. Such cells are called Microbial Fuel Cells (MFCs) when power is produced and Microbial Electrolysis Cells (MECs) when power is required to drive the desired reaction. Recently, it has been shown that Cu2+ is reduced to metallic copper on the cathode of a MFC coupled to the biological oxidation of organic matter and with resulting electricity generation. The proof-of-principle MFC almost completely recovered the Cu2+ in its metallic form (decrease in concentration from 1 g/L to < 1 mg/L) and produced a maximum power density of 0.8 W/m2.Bioelectrochemical technology can be used for the base metals copper, nickel, iron, zinc, cobalt and lead, which are mined, processed and used in large quantities. These metals are ubiquitous in process- and waste streams from the mining and metallurgical industry and therefore application of bioelectrochemistry for these metals has a high impact.Compared to traditional techniques, the use of Bioelectrochemical technology allows high recovery efficiencies, increased metal selectivity and reduced use of energy with in some cases (e.g. copper reduction) electricity production.

**Partners:**

| | | |
|---|---|---|
| 1 | STICHTING WETSUS CENTRE OF EXCELLENCE FOR SUSTAINABLE WATER TECHNOLOGY | NL |
| 2 | MAST CARBON INTERNATIONAL LTD | UK |
| 3 | LINNEUNIVERSITETET | SE |
| 4 | TTY-SAATIO | FI |
| 5 | MAGNETO SPECIAL ANODES BV | NL |
| 6 | UNIVERSITAT JAUME I DE CASTELLON | ES |
| 7 | CENTRE DE RECHERCHE PUBLIC HENRI TUDOR | LU |

**Activity Code:** ENV.2011.3.1.9-3 **Funding Scheme:** CP **Duration (Months):** 42

**Title:** Environmental Macro Indicators of Innovation

**Proposed EC Grant:** 2.454.237 €

**Abstract:**

EMInInn aims at assessing the environmental impacts associated with innovation.In a first step EMInInn will assemble and set out coherently, on the one hand, macro-indicators and data of environmental impacts and, on the other hand, indicators and data to measure innovations. The definitions and delineations will be the basis for selecting appropriate analytical frameworks to operationalize assessments of environmental impacts associated with innovation on a macro scale.EMInInn will incorporate and integrate a number of advanced analytical approaches for the ex post assessment of the macro-environmental impacts of innovation. This methodology will be applied in different areas of technological innovation:•Energy sources and conversion technologies•Information and Communication Technologies•Transport•Built environment and buildings•Waste managementEMInInn aims at developing an analytical framework for assessing environmental impacts of established as well as emerging technologies. In selected cases options for scenarios to model burden-shifting and rebound effects will be explored.EMInInn will strengthen the science-policy link. An advisory board with experts from different governance levels will be to advise the EMInInn researchers how to link the research and dissemination with ongoing and upcoming policy initiatives and research. A number of workshops and publications will allow interaction with experts, stakeholders and policy-makers. In that context EMInInn will address EU policies, which affect three major fields of environmental impact:•resources and waste,•energy and climate, as well as•land-use and biodiversity.By improving environmental assessments of innovation as well as policy-oriented interactions and outputs, EMInInn will generate contributions for improving EU-policies for a transition towards a more sustainable Europe and thus contribute to the flagship initiatives for a Resource Efficient Europe and the Innovation Union.

**Partners:**

| | | |
|---|---|---|
| 1 | WUPPERTAL INSTITUT FUR KLIMA, UMWELT, ENERGIE GMBH. | DE |
| 2 | UNIVERSITY COLLEGE LONDON | UK |
| 3 | UNIVERSITEIT LEIDEN | NL |
| 4 | NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO | NL |
| 5 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 6 | IVL SVENSKA MILJOEINSTITUTET AB | SE |
| 7 | UNIVERSITEIT MAASTRICHT | NL |

**Activity Code:** ENV.2011.3.1.9-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Electrochemical WAter treatment system in the dairy industry with hydroGEN REcovery and electricity production

**Proposed EC Grant:** 4.632.809 €

**Abstract:**

The aim of the project is the development of a prototype of a water treatment system -based on the sequential combination of three technologies: electrocoagulation, electrooxidation and a technology for the recovery of generated hydrogen for energy saving and the reutilization of the resulting regenerated water for different applications - more efficient in terms of wastewater treatment and self-sustaining in terms of energy needs. The idea is to develop a wastewater treatment system aiming at closing the water cycle, by integrating energy and water management, where the electricity generated through the hydrogen conversion is used to keep the system working and the extracted residues from the waste water treatment are reused inside the food and dairy production process to cover different needs.Therefore, the project would develop a system with technologies that have still not been jointly developed together with hydrogen recovery. The hydrogen generation from EC or EO systems for electricity production to be completely used to feed the wastewater system has not yet been developed. Still lot of research is needed for the generation of hydrogen from these two water treatment technologiesIt can be stated as a strength that such kind of electrochemical and hydrogen valorisation technologies have not still been jointly considered. As far as we are concerned there is no previous work focused on the recovery of generated hydrogen from EC or EO systems for electricity production, neither in bench-scale nor in real-life. Indeed, the scientific literature does not show any study considering the conversion of this electrochemically generated hydrogen into energy.

**Partners:**

| | | |
|---|---|---|
| 1 | FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V | DE |
| 2 | ACONDICIONAMIENTO TARRASENSE ASSOCIACION | ES |
| 3 | HyGear BV | NL |
| 4 | AQON WATER SOLUTIONS GMBH | DE |
| 5 | KNOWLEDGE INNOVATION MARKET S.L. | ES |
| 6 | IDROPAN DELL ORTO DEPURATORI SRL | IT |
| 7 | PRODUCTES EL CANADELL SL | ES |
| 8 | C-TECH INNOVATION LIMITED | UK |
| 9 | ISA - Intelligent Sensing Anywhere S.A. | PT |
| 10 | Eilenburger Elektrolyse- und Umwelttechnik GmbH | DE |

**Activity Code:** ENV.2011.3.1.1-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Technologies for Water Recycling and Reuse in Latin American Context: Assessment, Decision Tools and Implementable Strategies under an Uncertain Future

**Proposed EC Grant:** 3.411.507 €

**Abstract:**

In order to be able to maximize the benefits from reuse and recycling technologies projects a larger systemic analysis of the environment is needed, an enlargement of the traditional narrow planning and management approaches, and a growing sensitivity to decision-making associated with multi-objective, multi-purpose actions and multi uses parameters. However, the problem is not centered on the lack of treatment techniques and technologies, but rather on how such schemes may become more efficient and implementable. COROADO will both develop new and adapt existing concepts and operational frameworks and produce a web-based toolbox for reuse and recycling technologies in the context of integrated water resources management, taking into account long-lasting changes, and at the same time addressing environmental and ecosystem integrity. Climate change and water scarcity in relation with the pertinent technologies will also be addressed. Thus, COROADO would focus on: a) Developing tools for analyzing reuse and recycling technologies and trade-offs b) Addressing non-linearity and resilience c) Promoting and organizing active participation of stakeholders and capacity building efforts. The web based Communication, Capacity Building and Research Tool will present a richer menu of options from assessment and planning to implementation, monitoring and evaluation The system will be designed so as to present critical information in an interesting and efficient manner, offering an engaging learning experience. The project will include deliberate efforts to ensure knowledge and capacity exchanges between the project sites, and among Latin American, European and other parts of the world facing similar conditions, by introducing exchanges based on research in the four study sites and generated outcomes with a strong emphasis in dissemination. The effort may develop an understanding of needed transitions of governance and policy systems in order to mainstream such water reuse and recycling technologies implementation, providing a continuous and appropriate set of guidelines, and manuals so that policy relevant standards may be applied by end users and policy makers and after the completion of COROADO, without any further support.

**Partners:**

| | | |
|---|---|---|
| 1 | AGRICULTURAL UNIVERSITY OF ATHENS | EL |
| 2 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 3 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 4 | UNIVERSIDADE DO PORTO | PT |
| 5 | NATIONAL TECHNICAL UNIVERSITY OF ATHENS | EL |
| 6 | UNIVERSIDADE DE SAO PAULO | BR |
| 7 | PONTIFICIA UNIVERSIDAD CATOLICA DE CHILE | CL |
| 8 | T.C. GEOMATIC LTD | CY |
| 9 | NORWEGIAN INSTITUTE FOR AGRICULTURAL AND ENVIRONMENTAL RESEARCH - BIOFORSK | NO |
| 10 | FACHHOCHSCHULE NORDWESTSCHWEIZ | CH |
| 11 | TECNOLOGIA DE CALIDAD SA DE CV | MX |
| 12 | UNIVERSIDAD NACIONAL DE CORDOBA | AR |
| 13 | SISTEMAS ESPECIALIZADOS PARA AGUA SA DE CV | MX |

**Activity Code:** ENV.2011.3.1.9-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Visible LIGHT Active PhotoCATalytic Concretes for Air pollution Treatment

**Proposed EC Grant:** 3.574.546 €

**Abstract:**

The goal of Light2CAT is to develop new, highly efficient visible-light-activated titanium dioxide for inclusion in concretes to be used in structures across the whole of Europe to improve ambient air quality independent, for the first time, of local climate conditions. The need to improve air quality in European Countries has been identified as a major requirement to be achieved within the next decade in the effort to control climate change, a key Europe 2020 strategy, and to improve human health. Despite vigorous efforts to reduce levels of hazardous substances in the air, targets remain a challenge. One of the most valid sustainable technologies explored so far is photocatalytic concrete. This technology is proven to reduce the amount of hazardous air pollutants up to 80 % . It also imparts self-cleaning properties to built structures which has a secondary effect of reducing harsh cleaning chemicals entering the water systems. However, the titanium oxide based photocatalytic building materials are activated by ultraviolet light so, to date, such environmental benefits are limited to countries with a high incidence of sunlight. The concept of this project is to extend the use of photocatalytic concretes to the whole of Europe by developing materials that can also be activated by visible light . The aim is to remove climate and seasonal considerations from the use of the materials and, through higher conversion efficiencies of the catalytic components, to reduce production costs facilitating further take up of the technology within existing markets. The results of the project are initially focused on use within the transport infrastructure where the greatest impact is expected. The consortium is well conceived to achieve the results, comprising research centres leading research in these materials and industry partners including SMEs able to develop, demonstrate and market the new materials in the sector.

**Partners:**

| | | |
|---|---|---|
| 1 | TEKNOLOGISK INSTITUT | DK |
| 2 | DANSK AUTO-VAERN AS | DK |
| 3 | PREVALESA SL | ES |
| 4 | STARKA BETONGINDUSTRIER KB | SE |
| 5 | INNOVA SPA | IT |
| 6 | CEMENTA AB | SE |
| 7 | TIOXIDE EUROPE LTD | UK |
| 8 | THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN | UK |
| 9 | ASOCIACION DE INVESTIGACION DE LAS INDUSTRIAS DE LA CONSTRUCCION | ES |
| 10 | KOBENHAVNS KOMMUNE | DK |
| 11 | AYUNTAMIENTO DE VALENCIA | ES |
| 12 | Danish Road Directorate | DK |

**Activity Code:** ENV.2011.3.1.9-4 **Funding Scheme:** CSA **Duration (Months):** 24

**Title:** Professional promotion of eco-innovative research results through a new media integrated platform for SMEs, research and the public

**Proposed EC Grant:** 998.921 €

**Abstract:**

Public funded research needs to fully benefit society. This is especially true for environmental and climate research where successful market uptake is particularly urgent. However, the market uptake for public environmental R&D results remains a challenge. The main barriers have been identified by the partners for DG Research (2006) as fragmentation of information, inward communication of researchers, lack of market knowledge and innovation management skills and public funding gaps.ECO-PRO seeks to remove some of these barriers and to accelerate market take-up by maximising the potential use value of R&D results through an e-dissemination process addressing their usefulness, usability and applicability for an eco innovation community.To achieve this general objective, ECO-PRO will develop three lines of complementary e-dissemniation activities:Gathering, selecting, classifying and packaging in an useable manner the most useful and exploitable results (at least 100) from FP6 and FP7 in a virtual library;Designing and operating an interactive platform including useful, usable and acceptable knowledge modules and tools supporting the market take-up of R&D results: EU funding guide and helpdesk, webinars, VNRs, e-technology brokering tool, etc.(Net-) working throughout the project with eco-innovation actors as well as kick-starting and maintaining a dedicated open community involving more than 2,000 eco-innovation stakeholders in an interactive ECO-PRO platform.The ECO-PRO platform will be useful for potential technology users (good and clear information) as well as for R&D teams (the best way to present the results to the market).Greenovate and youris are 2 European non-for-profit networks with focus on eco-innovation. Their core business is knowledge exploitation, dissemination and audiovisual science communication. Their competences, networks and experience will ensure that ECO-PRO succeeds beyond the end of EC funding.

**Partners:**

| | | |
|---|---|---|
| 1 | Greenovate! Europe | BE |
| 2 | YOURIS.COM | BE |

**Activity Code:** ENV.2011.3.1.9-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Sustainability Data Exchange Hub

**Proposed EC Grant:** 3.622.244 €

**Abstract:**

The present proposal contributes to improved eco efficiency in the global value chain in the electronics and automotive industries. The starting point is the rising demand for better eco-efficient products and services, provoked by public opinion, and being incorporated into legislation world wide. One leader of this movement is the European Union, but other major economic regions around the world are joining up (e.g. US regarding GHG Emissions ). Customer driven requirements and company strategic aims (eg. reduction of C02 emission) go beyond the law and are becoming integral to company policies.For global the electronic and automotive industries, eco efficient products within an efficient sustainability strategy combine to be a decisive point, ruling future developments on the market.Large OEM companies have internalized this global trend and passed the requirements on to their suppliers. Due to these complicated and dynamic requirements, suppliers are frequently overwhelmed. The lack of data and insufficient integration into operational internal processes lead to the rejection of these requirements. Therefore, until, now management of sustainability strategies across the supply chain has not been solved.SustainHub will provide a systematic and efficient approach to collect sustainability data for products and manufacturing processes through the supply chain and integrate these into the internal systems and processes of the companies. Target industries are electronic and automotive production sector. These are both essential pillars of the European economy, representing in the EU27, no less than 6 million employees and a €347 billion combined production value. Therefore, a better management of supply chain data and sustainability data will improve the eco efficiency performance of product design and production, but also preserve the European competitive position.

**Partners:**

| | | |
|---|---|---|
| 1 | FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V | DE |
| 2 | CORESOURCE AB | SE |
| 3 | INTERTEK SEMKO AB | SE |
| 4 | RAPID-I GMBH | DE |
| 5 | Board of Innovation BVBA | BE |
| 6 | UNIVERSITAET ULM | DE |
| 7 | DENKSTATT GMBH | AT |
| 8 | IPOINT-SYSTEMS GMBH | DE |
| 9 | UNIVERSITAET GRAZ | AT |
| 10 | MICROELECTRONICA SA | RO |
| 11 | JOHNSON CONTROLS GMBH | DE |
| 12 | AGFA HEALTHCARE N.V. | BE |
| 13 | CONTINENTAL TEVES AG & CO. OHG | DE |
| 14 | ASSOCIAZIONE INTERNAZIONALE DELLA DISTRIBUZIONE ELETTRONICA | CH |
| 15 | CONSORZIO DI SERVIZI AD ASSOCIAZIONI ED IMPRESE HI-TECH SCRL | IT |

**Activity Code:** EeB.ENV.2011.3.1.5-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Integrated air quality sensor for energy efficient environment control

**Proposed EC Grant:** 2.465.354 €

**Abstract:**

Space heating accounts for more than 50% of the energy consumption of public & residential buildings, and reduction of this energy demand is a key strategy in the move to low energy/low carbon buildings. The careful management of air flow within a building forms part of this strategy through the control of inlet fresh air and exhaust air, maximising air re-circulation, and minimising the amount of fresh air which is often drawn in through a heat exchanger. However, there is a high risk that the air quality is reduced. Continued exposure to environments with poor air quality is a major public health concern in developed and developing countries. It is estimated that the pollutants responsible for poor air quality cause nearly 2.5 million premature deaths per year world-wide. Significantly, around 1.5 million of these deaths are due to polluted indoor air, and it is suggested that poor indoor air quality may pose a significant health risk to more than half of the world's population. Perhaps surprisingly, remedial action to improve air quality is often easy to implement. Relatively simple measures such as increased air flow through ventilation systems, or a greater proportion of fresh air to re-circulating air are sufficient to improve air quality. Low-energy air purification and detoxification technologies are available which will reduce the concentration of specific pollutants. Similarly, filtration systems (e.g. electrostatic filters) can be switched in to reduce the level of the particulate matter in the air (the principle pollutant responsible for poor health). The INTASENSE concept is to integrate a number of micro- and nano-sensing technologies onto a common detection platform with shared air-handling and pre-conditioning infrastructure to produce a low-cost miniaturised system that can comprehensively measure air quality, and identify the nature and form of pollutants. INTASENSE is a 3-year project which brings together 8 organisations from 5 countries.

**Partners:**

| | | |
|---|---|---|
| 1 | C-TECH INNOVATION LIMITED | UK |
| 2 | CENTRO DE ESTUDIOS E INVESTIGACIONES TECNICAS | ES |
| 3 | TECHNISCHE UNIVERSITAET ILMENAU | DE |
| 4 | CSEM CENTRE SUISSE D'ELECTRONIQUE ET DE MICROTECHNIQUE SA - RECHERCHE ET DEVELOPPEMENT | CH |
| 5 | Gooch & Housego (Torquay) Limited | UK |
| 6 | U.C. TECHNOLOGIES BV | NL |
| 7 | LANCASTER UNIVERSITY | UK |
| 8 | ADVANTIC SISTEMAS Y SERVICIOS | ES |

**Activity Code:** EeB.ENV.2011.3.1.5-2 **Funding Scheme:** CSA **Duration (Months):** 12

**Title:** Operational Guidance for performing Life Cycle Assessment Studies of the Energy efficient Buildings Initiative

**Proposed EC Grant:** 495.128 €

**Abstract:**

The overall goal of the call “EeB.ENV.2011.3.1.5-2” is to develop a specific guidance document for application to Energy Efficient Buildings and related training material with courses for practitioners in industry and research. This is to be based on and in line with the International Reference Life Cycle Data System (ILCD) Handbook, co-developed by the European Commission's JRC-IES.The concept for this guidance document is based on two core elements: an extensive list of elements that need to be taken into account when dealing with Life Cycle Assessment (LCA) within the Energy-efficient Buildings Initiative (EeB –PPP) and the solution approaches how to address different issues and an extensive guidance including examples and operational instructions on how to conduct adequate, high-quality LCA studies.To assure acceptance and applicability, a strong and active involvement of all relevant stakeholders is foreseen.The EeBGuide will be prepared in line with the ILCD Handbook and with respect to activities such as:•CEN TC 350 standardization work on the sustainability of construction works,•Harmonization activities of the Sustainable Buildings Alliance concerning the carbon footprint of buildings incl. activities on sustainable construction,•Existing and upcoming EPD programmes with their definitions and specifications.The balanced project consortium features specifically experienced research, consultancy and industry partners and the EC: FRAUNHOFER, PE INT, CSTB, ESCI, BRE and ChS.The expected outcomes of EeBGuide include:•A guidance document - based on the ILCD handbook - that is scientifically sound, accepted by practitioners and quality assured (reviewed),•Exemplary LCA case studies, including recommendations on how to implement adequate building LCA tools,•Broad dissemination among LCA practitioners and industry, &•A website, as a central information hub on the operational guidance on LCA within the Energy-efficient Buildings Initiative.

**Partners:**

| | | |
|---|---|---|
| 1 | FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V | DE |
| 2 | PE INTERNATIONAL AG | DE |
| 3 | CENTRE SCIENTIFIQUE ET TECHNIQUE DU BATIMENT | FR |
| 4 | ESCOLA SUPERIOR DE COMERC INTERNACIONAL | ES |
| 5 | BRE GLOBAL LIMITED | UK |
| 6 | SJOSTROM PER CHRISTER | SE |

**Activity Code:** EeB.ENV.2011.3.1.5-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Cost-Effective Tools for Better Indoor Environment in Retrofitted Energy Efficient Buildings

**Proposed EC Grant:** 2.499.834 €

**Abstract:**

The refurbishing to an energy efficient standard leads to tight buildings (whole envelope: windows, walls, etc.) and affects the indoor climate. In case of refurbishing the inhabitants or users are not adapted to this new situation. Therefore the air exchange rates could be lower than required if no mechanical ventilation is installed or the system performance is not optimised. Then, in trying to increase the energy performance of buildings, the indoor environment quality is often degraded due to the lack of exchange with the outdoor environment.People in Europe spend more than 90 % of their time indoors (living, working, and transportation). In more than 40 % of the enclosed spaces, people suffer from health- and comfortable related complains and illness. Already in 1984 the WHO reported an “increased frequency in buildings with indoor climate problems”. The complexity of the problem and the fact of building related symptom clusters were later described as “Sick Building Syndrome”.The main objective of the project is to develop innovative solutions for better monitoring the indoor environment quality and to investigate active and passive systems for improving it. The focus lies on cost-effective solutions to ensure a wide application of the developed systems. The project is based on three main objectives:- Development of monitoring systems (wireless and/or partly wired) to detect insufficient comfort and health parameter. It is foreseen to develop a modular version for allowing normal end users making a quick check of the indoor air quality.- Development of control systems for indoor environments which could be based on passive elements like cost effective photo catalytic materials or PCMs and active systems which control the air flow rates based on the monitoring data.- Modelling of indoor environments for the assessment and validation of monitoring data and to optimise with respect to energy efficiency the control parameters and systems.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITAET STUTTGART | DE |
| 2 | DELAP & WALLER ECOCO LIMITED | IE |
| 3 | S&B INDUSTRIAL MINERALS MINING OUARRYING INDUSTRIAL COMMERCIAL TOURISTSHIPPING TECHNICAL COMPANY SA | EL |
| 4 | SOLINTEL M&P SL | ES |
| 5 | UNIVERSITA POLITECNICA DELLE MARCHE | IT |
| 6 | R.E.D. SRL | IT |
| 7 | TTI-Technologie-Transfer-Initiative GmbH | DE |
| 8 | FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V | DE |
| 9 | InfraTec GmbH Infrarotsensorik und Messtechnik | DE |
| 10 | COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES | FR |
| 11 | STAM SRL | IT |
| 12 | Schwenk Putztechnik GmbH & Co. KG | DE |
| 13 | CONSORZIO PER LO SVILUPPO E IL TRASFERIMENTO DI TECNOLOGIE E PER LA REALIZZAZIONE DI SERVIZI NEL SETTOREDEL RECUPERO EDILIZIO | IT |
| 14 | FCC CONSTRUCCION SA | ES |

**Activity Code:** ENV.2012.6.3-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Zero-impact innovative technology in forest plant production

**Proposed EC Grant:** 3.438.252 €

**Abstract:**

The UN General Assembly has proclaimed 2011 as the International Year of Forests, since they play a crucial role in regulating the global climate and are also a vital resource for many countriesBy the European side, the Commission Green Paper “On forest protection and information in the EU: preparing forests for climate change” [COM(2010)66] underlines that forests serve multiple and interrelated social, economic and environmental functions, often at the same time and place”; forests are one of the main natural resources in the world.Zephyr aims to introduce an innovative technology build on pre-cultivation of forest regeneration materials in a zero-impact and cost friendly production unit, not affected by outdoor climate and with LED lights providing an optimal spectrum for the photosynthesis. Light intensity, photo-period and further parameters will be automatically regulated by a control system that receives data from several sensors, while the energy will be provided by solar panelsThe project will integrate these technologies into a functional system for large scale production of pre-cultivated forest regeneration materials adapted to transplanting and further growth at forest nurseries all over EuropeThe new integrated technology will make a drastic change to state-of-the-art in forest nursery production for reforestation purposes: apart from being more resource-efficient, it will also contribute to the environmental protection through: biodiversity defending, water recycling, strong reduction of fertilizers and avoidance of pesticides.Moreover, it will allow a CERTIFIED and STANDARDISED production of reforestation materials, with a noticeable increasing of the efficiency of the reforestation operations.Zephyr will focus on the interplay between several different innovative technologies, models and procedures. The exploitation of the results will strongly improve the competitiveness of the participating SMEs

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITA DEGLI STUDI DELLA TUSCIA | IT |
| 2 | DEMOCRITUS UNIVERSITY OF THRACE | EL |
| 3 | CO.MET.ART. SAS DI MENTA ADRIANO, MENTA STEFANO & C. | IT |
| 4 | VALOYA OY | FI |
| 5 | ROBOSOFT SA | FR |
| 6 | VIVAI TORSANLORENZO SOCIETA AGRICOLA SEMPLICE DI MARGHERITI MARIO EC | IT |
| 7 | FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V | DE |
| 8 | ACREO AB. | SE |
| 9 | HOGSKOLAN DALARNA | SE |
| 10 | VELTHA IVZW | BE |
| 11 | UNIVERSITA DEGLI STUDI DELL'INSUBRIA | IT |
| 12 | ADVANTIC SISTEMAS Y SERVICIOS | ES |
| 13 | SOCIEDADE DE GESTAO AMBIENTAL E CONSERVACAO DA NATUREZA - AZORINA SA | PT |
| 14 | EXERGY LTD | UK |

**Activity Code:** ENV.2012.6.3-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** RESOURCE EFFICIENT AND SAFE FOOD PRODUCTION AND PROCESSING

**Proposed EC Grant:** 4.335.900 €

**Abstract:**

RESFOOD adresses on the most important topics in the food chain food towards resource efficient and safe food production and processing, leading to maximised resource productivity and recycling and re-use of valuable materials by research and demonstration of the proposed green solutions: Increased output with reduced input.Many natural resources (e.g. minerals, water, soil, biomass, land and fuels (energy) are used to grow and process food products, but in many cases their usage is highly inefficient, due to the lack of technological solutions and knowledge in combination with uncertainties about health and safety issues. Another important challenge in the food chain management is the large amount of wasted food. RESFOOD will overcome the main bottlenecks and barriers leading to an Resource Efficient Food Chain by:• Developing innovative technologies for re-use of Nutrients, Energy, Water and Biomass, reducing input, maximizing resource productivity and minimizing waste• Develop new methods for improving the disinfection processes for vegetables ensuring appropriate monitoring of health and safety risks. • Validate the solutions in five on site pilot demonstrations, also including Life Cycle Assessment In the RESFOOD resource efficiency concept the focus is a cascade approach: Look first for the most efficient solutions with the lowest effort, like direct re-use of warm and cold water (and energy) nutrients and biomass, followed by more complex solutions like withdrawal of useful products and energy from the water and the recovery of high valuable components from food waste (biomass).This will lead to 30 to 75 % reduction of water, energy and nutrients use, 25 to 80 % less emissions to surface- and ground water, 20-30 % reduction of the use of fertilizer products and overall 20 to 30 % more crop per resource input, combined with better controlling and reducing food health and safety risks.

**Partners:**

| | | |
|---|---|---|
| 1 | NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO | NL |
| 2 | Centro Nacional de Tecnología y Seguridad Alimentaria (CNTA) - Laboratorio del Ebro | ES |
| 3 | TECHNION - ISRAEL INSTITUTE OF TECHNOLOGY. | IL |
| 4 | VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V. | BE |
| 5 | ASOCIACION PARA EL DESARROLLO DEL SISTEMA PRODUCTIVO VINCULADO A LA AGRICULTURA ONUBENSE | ES |
| 6 | VEGA MAYOR SL | ES |
| 7 | Vezet B.V. | NL |
| 9 | LOGISTICON WATER TREATMENT B.V. | NL |
| 10 | VERMICON AKTIENGESELLSCHAFT | DE |
| 11 | StePac | IL |
| 12 | UNIRESEARCH BV | NL |
| 13 | Kronen GmbH | DE |
| 14 | MINERVA CONSULTING & COMMUNICATION | BE |
| 16 | Provalor BV | NL |
| 17 | TURKIYE BILIMSEL VE TEKNOLOJIK ARASTIRMA KURUMU | TR |
| 18 | DEMOKWEKERIJ BV | NL |

**Activity Code:** ENV.2012.6.6-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Natural Water Systems and Treatment Technologies to cope with Water Shortages in Urbanised Areas in India

**Proposed EC Grant:** 1.445.824 €

**Abstract:**

The here proposed NAwATech Europe proposal is closely interconnected with the partner project NaWaTech India. In order to reach the maximal impact the two projects have formed one common work plan for both projects, targeting the same objectives, will present their results at the same web-site and formed a joint management team. Providing adequate water supply and sanitation, particularly in urban areas, is a challenging task for governments throughout the world. This task is made even more difficult due to predicted dramatic global changes. In order to cope with water shortages in urban areas, there is a need for a paradigm shift from conventional end-of-pipe water management to an integrated approach. This integrated approach should include several actions such as: (i) interventions over the entire urban water cycle; (ii) optimisation of water use by reusing wastewater and preventing pollution of freshwater source; (iii) prioritisation of small-scale natural and technical systems, which are flexible, cost-effective and require low operation and maintenance. Natural water systems, such as manmade wetlands and sub-soil filtration and storage via soil aquifer treatment and bank filtration, are such systems. NaWaTech stands for natural water systems and treatment technologies to cope with water shortages in urbanised areas in India. The concept is based on optimised use of different urban water flows by treating each of these flows via a modular natural system taking into account the different nature and degree of pollution of the different water sources. Thus, it will cost-effectively improve the water quality of urban surface water and restore depleting groundwater sources. Due to the multi-barrier approach, these systems will also be able to treat heavily polluted water (i.e. wastewater) in order to reuse them and to supplement traditional sources to cope with water shortages today and in the future.

**Partners:**

| | | |
|---|---|---|
| 1 | VEREIN ZUR FOERDERUNG DES TECHNOLOGIETRANSFERS AN DER HOCHSCHULE BREMERHAVEN E.V. | DE |
| 2 | SEECON INTERNATIONAL GMBH | CH |
| 3 | UNIVERSITAET FUER BODENKULTUR WIEN | AT |
| 4 | UNIVERSITAT POLITECNICA DE CATALUNYA | ES |
| 5 | BIOAZUL | ES |
| 6 | IRIDRA SRL | IT |
| 7 | Kretschmer und Tauscher GbR | DE |

**Activity Code:** ENV.2012.6.5-2 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Demonstration of promising technologies to address emerging pollutants in water and waste water

**Proposed EC Grant:** 2.998.332 €

**Abstract:**

The water and waste water sector is facing tremendous challenges to assure safe, cost-effective and sustainable water supply and sanitation services. DEMEAU promotes the uptake of knowledge, prototypes and practices from previous EU research enabling the water cycle sector to face emerging pollutants and thus securing water and waste water services and public health. The project exploits four groups of promising technologies from previous EU research: Managed Aquifer Recharge (MAR), hybrid ceramic membrane filtration, hybrid advanced oxidation processes, bioassays. Exploitation takes place through action research with universities, research institutions, innovative SME's, launching water utilities and policy makers. Essential in the DEMEAU approach is the cooperation with water utilities that have committed to act as launching customer for the selected technologies. Existing and improved performance assessment methodologies will be used to benchmark the novel technologies against existing ones. This is to demonstrate the suitability and cost-effectiveness of the demonstrated technologies. Demonstration sites at launching utilities act as transfer points for the technologies and will generate market opportunities for the SME's involved. To foster a broader impact and market penetration of the technologies, DEMEAU seeks cooperation with relevant policy makers, regulators and standardization bodies on Member State and European level in order to address barriers and promoters for the implementation. A considerable percentage (41%) of the total requested EC contribution is allocated to SME's.

**Partners:**

| | | |
|---|---|---|
| 1 | KWR WATER B.V. | NL |
| 2 | KOMPENTENTZZENTRUM WASSER BERLIN GEMEINNUTZIGE GMBH | DE |
| 3 | FACHHOCHSCHULE NORDWESTSCHWEIZ | CH |
| 4 | EIDGENOESSISCHE ANSTALT FUR WASSERVERSORGUNG ABWASSERREINIGUNG UND GEWAESSERSCHUTZ | CH |
| 5 | VEOLIA ENVIRONNEMENT RECHERCHE ET INNOVATION SNC | FR |
| 6 | CETAQUA, CENTRO TECNOLOGICO DEL AGUA, FUNDACIÓN PRIVADA | ES |
| 7 | IWW RHEINISCH WESTFALISCHES INSTITUT FUR WASSERFORSCHUNG GEMEINNUTZIGE GMBH | DE |
| 8 | ECOLOGIC INSTITUT gemeinnützige GmbH | DE |
| 9 | aquatune - Dr. Gebhardt & Co. GmbH | DE |
| 10 | ROOD WIT BLAUW WATER SERVICES BV | NL |
| 11 | VAN REMMEN UV TECHNIEK BV | NL |
| 12 | AMPHOS 21 CONSULTING SL | ES |
| 13 | HYDOR Consult GmbH | DE |
| 14 | CORDOUAN TECHNOLOGIES SAS | FR |
| 15 | SIGRIST-PHOTOMETER AG | CH |
| 16 | BioDetection Systems B.V. | NL |
| 17 | Quantis Sàrl | CH |

**Activity Code:** ENV.2012.6.3-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Cradle to cradle sustainable pv modules

**Proposed EC Grant:** 4.491.627 €

**Abstract:**

Even though solar power is pollution-free during use, production of solar (PV) modules consumes extensive energy and natural resources. Recycling is hardly considered during module production, and therefore cumbersome and inefficient. The fast growth of the PV-industry entails similarly fast growth in resource consumption with growing production capacity: currently modest amounts can become very high. Hence, Cu-PV aims to minimise the use of critical resources like energy (by reducing silicon consumption and improving conversion efficiency), silver and lead, while simultaneously maximising recycling possibilities: introducing design for recycling in this sector, and collaborating over the value chain for improvements in recycling.Current PV manufacturing puts limitations on reduction of costs and environmental footprint: screen-printed Ag-based metallisation prohibits progress towards phasing out lead and silver consumption and reducing silicon and energy consumption, while module materials prohibit efficient recycling of modules. Cu-PV will develop new metallisation methods based on ink jetting of Ag, Ni, Cu seed layers in WP2 that are plated afterwards with Ni, Cu in WP3, which results in >99% reduction of Ag consumption, enables replacement of silver, and as non-contact metallisation methods enables the use of thin wafers.The solar cell process before metallisation needs to be adjusted (WP1) to be compatible with this metallisation: back contact solar cell design will allow thin wafers and high efficiencies, resulting in 50% Si and 30% PV System energy consumption reduction. The module assembly and interconnection of cells will need to be optimised for the new cell metallisation. Back-contact interconnection will allow completely abandoning the use of lead (WP4), and will be designed, developed, and tested, for recycling (WP5). WP5 will in particular develop and demonstrate alternatives for the current practice of destruction of PV modules at end of life.

**Partners:**

| | | |
|---|---|---|
| 1 | STICHTING ENERGIEONDERZOEK CENTRUM NEDERLAND | NL |
| 2 | INTERUNIVERSITAIR MICRO-ELECTRONICA CENTRUM VZW | BE |
| 3 | MECO EQUIPMENT ENGINEERS BV | NL |
| 4 | XJET LTD | IL |
| 5 | SILIKEN S.A. | ES |
| 6 | TECHNICAL PLATING SOCIEDAD LIMITADA | ES |
| 7 | Eurotron BV | NL |
| 8 | EURPOEAN ASSOCIATION FOR THE RECOVERY OF PHOTOVOLTAIC MODULES | BE |

**Activity Code:** ENV.2012.6.5-2 **Funding Scheme:** CP **Duration (Months):** 30

**Title:** Operational Radar For Every drill string Under the Street

**Proposed EC Grant:** 2.536.767 €

**Abstract:**

Horizontal directional drilling (HDD) offers significant benefits for urban environments by minimising the disruption caused by street works. Use of the technique demands an accurate knowledge of underground utility assets and other obstructions in the drill path.This proposal is to progress the prototype HDD bore-head radar technology developed under the project ORFEUS to a commercial stage. ORFEUS ("Optimised Radar to Find Every Utility in the Street") was a 6th Framework collaborative research project. One of its aims was to design a prototype innovative ground probing radar (GPR) based real-time obstacle detection system to increase the safety margins of HDD to allow its use in the widest possible range of conditions. A successful outcome was a working, rigorously tested, prototype "bore-head GPR". Most of the objectives of ORFEUS were fulfilled, with results in crucial areas giving confidence to carry out further development to produce a commercial system.Unresolved technical issues requiring further work are associated with the optimum antenna configuration and electrical/mechanical interface to the disposable drill head; identification and validation of the most effective bore-head GPR data processing algorithms; validation of performance, and ruggedisation of the data communication link; validation of performance, and ruggedisation of the connector systems.Extensive testing and validation, as well as supporting the demonstration and exploitation of the final product, is proposed. The crucial testing and evaluation phase will assess the risks, confirm environmental benefits and increase end users' (public authorities and industry) confidence, awareness and uptake of this new technology.Technology transfer, training and standardisation, in cooperation with European standards organisations, will also be a significant element of the project.

**Partners:**

| | | |
|---|---|---|
| 1 | OSYS Technology Ltd | UK |
| 2 | I.D.S. - INGEGNERIA DEI SISTEMI - S.P.A. | IT |
| 3 | NJM European Economic & Management Consultants Ltd | UK |
| 4 | GDF SUEZ | FR |
| 5 | TRACTO-TECHNIK GmbH&Co.KG | DE |
| 6 | VILKOGRAD d.o.o. | SI |
| 7 | Wellington Associates | UK |
| 8 | EXERGIA ENERGY AND ENVIRONMENT CONSULTANTS AE | EL |
| 9 | Florence Engineering srl | IT |
| 10 | DUBLIN CITY COUNCIL | IE |
| 11 | GMC Civil and Mechanical Engineering Limited | IE |
| 12 | J & P GEO SARL | FR |

**Activity Code:** ENV.2012.6.3-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Development and verification of an innovative full life sustainable approach to the valorisation of municipal solid waste into industrial feedstocks.

**Proposed EC Grant:** 3.495.426 €

**Abstract:**

Management and segregation of municipal solid waste (MSW) has been increasingly imposed on individuals, with highly variable impacts. Waste2Go will valorise this heterogeneous material that has significant socio-economic costs. It will involve the innovative transformation of over 55% of MSW, the biogenic fraction, into renewable chemicals, advancing beyond current approaches to bio-refining which employ crop derived feedstocks. A cascade approach will be adopted to maximise value. Annually >180 million tonnes of MSW are discarded in the EU27, (in excess of 1kg per citizen every day). Waste2Go will develop technologies to improve waste management and increase value (social, economic & environmental). This will be validated as Best Available Technology (BAT) by recognised LCA experts. It will extend beyond the state-of-the-art in enzyme based technologies for fine-tuned biomass processing and combine them with intelligent techniques for MSW fractionation and downstream processing. It will unlock economic value from MSW and reduce its serious environmental impacts. MSW will become a sustainable source of raw materials for the chemical industry, replacing fossil sources. It will advance leading EU expertise in:1) Enzyme research, on rapid and controlled substrate digestion;2) Bioprocess engineering and;3) Advanced purification techniques, to maximise value.This project will improve the competitiveness of SMEs in the waste management sector; a sector with the highest proportion of SMEs and the lowest proportion of valued added of any EU industrial sector, although worth over €100 billion p.a. and employing over 1.2 million people.The consortium involves five SMEs, two research institutes and one multinational company providing market pull. The EU chemical industry is the world's largest, with sales of €526 billion, a trade surplus of €47 billion and employing over 1.15 million people.

**Partners:**

| | | |
|---|---|---|
| 1 | Centre for Process Innovation Limited | UK |
| 2 | UNIVERSITETET FOR MILJO OG BIOVITENSKAP | NO |
| 3 | GRAPHITE RESOURCES (KNIGHTSBRIDGE) LTD | UK |
| 4 | FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V | DE |
| 5 | GEONARDO ENVIRONMENTAL TECHNOLOGIES LTD | HU |
| 6 | FEYECON DEVELOPMENT & IMPLEMENTATION BV | NL |
| 7 | CHEMOXY INTERNATIONAL LIMITED | UK |
| 8 | AKZO NOBEL FUNCTIONAL CHEMICALS BV | NL |

**Activity Code:** ENV.2012.6.3-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Development of Resource-efficient and Advanced underGrOund techNologies

**Proposed EC Grant:** 3.243.659 €

**Abstract:**

Increased global competition, economic requirements in order to act budget-conscious as well as current (and future) environmental regulations have caused/will cause the need for new underground construction technologies in order to guarantee resource-efficiency within the tunnelling processes. The before mentioned situation also calls for a paradigm shift from only landfilling with excavation material in a direction to re-use the excavated material by nearly 100% as valuable new raw material in other industrial processes and sectors.Therefore the overall goal of DRAGON is to develop new work flows and new techniques in order to guarantee a) a fast detection of useable materials; b) an immediate separation of high value materials already within the underground construction site and c) the recycling of that material on the backup system of the tunnel boring machines.Based on that research results a number of different prototypes will be developed and tested throughout the project duration.Another important impact of DRAGON is that the LCA (life cycle analysis) is going to provide scientific evidence that the re-use of excavated tunnelling material will result in more resource-efficient and more closed-loop related systems (even in industry-related economy) in Europe. A complex project such as DRAGON can only be addressed by joint and concerted actions of outstanding experts: DRAGON`s scientific partner MUL belongs to Europe`s leading tunnelling experts; the 4 participating SME partners are highly specialised companies which are active in environmental niche markets; HK as market leader of mechanized tunnelling systems guarantees the market power and brings in the corresponding market knowledge whereas PORR as end user partner will mostly benefit from the newly developed equipment and the way to save costs either by commercializing valuable excavation materials or by re-using excavation material as its own raw material.

**Partners:**

| | | |
|---|---|---|
| 1 | MONTANUNIVERSITAET LEOBEN | AT |
| 3 | Herrenknecht AG | DE |
| 4 | DIMECO S.A. | RO |
| 6 | PE NORTH WEST EUROPE LTD | UK |

**Activity Code:** ENV.2012.6.3-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** ECO-efficient management of WAter in the MAnufacturing industry

**Proposed EC Grant:** 3.869.999 €

**Abstract:**

The ECOWAMA Project proposes a new eco-efficient closed cycle management model for the treatment of effluents of the metal and plastic surface processing industry (STM). Such STM waste water is extensively contaminated with oils and greases, organic loading, a salt fraction and especially with heavy metals (e.g. nickel, copper, zinc and others). Hence STM enterprises have high interest on efficient, cost-effective and sustainable treatment of their effluents. ECOWAMA's approach combines wastewater treatment with recovery of ultrapure water, highly valuable metals and energy. Therefore an environmental friendly, effective and innovative system will be developed including Electrocoagulation, Electrooxidation and Electrowinning technologies. Additionally hydrogen produced during Electrocoagulation/Electrooxidation processes will be used to deal as feed for fuel cells to generate electricity which reduces the energy demand of the whole process. Pre- and post-treatment will be carried out to remove oils/greases and conductivity. The heavy metals will be separated from the waste water stream through an electro-precipitation process. After metal dissolution from precipitation sludge a novel electrowinning process using novel electrodes, optimised geometry and process management will reduce the dissolved metal ions to a solid aggregate state with high purity. The outcome of this is a valuable raw material that can be easily sold or reused for STM operations. Due to the extremely high level of prices for metals at the global market ECOWAMA's participants and post-project clients will have strong economic benefits beside the positive environmental impacts of the process.

**Partners:**

| | | |
|---|---|---|
| 1 | FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V | DE |
| 2 | ACONDICIONAMIENTO TARRASENSE ASSOCIACION | ES |
| 3 | E.R.S. - Steuerungstechnik - GmbH & Co. KG | DE |
| 4 | DIMECO S.A. | RO |
| 5 | CYCLUS BCN S.L. | ES |
| 6 | ASSOCIATION POUR LA RECHERCHE ET LE DEVELOPPEMENT DES METHODES ET PROCESSUS INDUSTRIELS - ARMINES | FR |
| 7 | KNOWLEDGE INNOVATION MARKET S.L. | ES |
| 8 | Eilenburger Elektrolyse- und Umwelttechnik GmbH | DE |
| 9 | Coastwatch Europe | IE |
| 10 | AQON WATER SOLUTIONS GMBH | DE |
| 11 | StePac | IL |

**Activity Code:** ENV.2012.6.3-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Nanotechnological Application in WAter DESalination

**Proposed EC Grant:** 3.274.701 €

**Abstract:**

The main objective of the NAWADES project is to study, design, produce, and test new water desalination filter technology from four points of view:1. the structure of multi-layer membrane filter, including UV light distributed by glass fibers inside the membrane stack2. the materials used to build the filter, including fouling and scaling monitoring3. the coating treatments applied to the surface of the filter using plasma and nano-TiO2 fibers4. the filtration process with integrated removal of bio-fouling.The new filter technology shall provide long-life and antifouling filters to be used in Reverse Osmosis (RO) water desalinisation processes with a higher efficiency and life-time, less energy consumption (lower pressure), and less maintenance (lower cost).

**Partners:**

| | | |
|---|---|---|
| 1 | FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V | DE |
| 2 | CYCLUS BCN S.L. | ES |
| 3 | ACONDICIONAMIENTO TARRASENSE ASSOCIACION | ES |
| 4 | SICO Technology GmbH | AT |
| 5 | VIRTUALPIE LTD | UK |
| 6 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 8 | KNOWLEDGE INNOVATION MARKET S.L. | ES |
| 9 | EXERGY LTD | UK |
| 10 | Eilenburger Elektrolyse- und Umwelttechnik GmbH | DE |
| 11 | IVL SVENSKA MILJOEINSTITUTET AB | SE |

**Activity Code:** ENV.2012.6.5-2 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** The FUture of FUlly integrated human exposure assessment of chemicals: Ensuring the long-term viability and technology transfer of the EU-FUNded 2-FUN tools as standardised solution

**Proposed EC Grant:** 2.278.102 €

**Abstract:**

The assessment of risks to human health from chemicals is of major concern for policy and industry and ultimately benefits all citizens. In this process, exposure assessment is generally considered to be the weakest point, as currently available tools show major flaws:(a) lack of integrated approach for assessment of combined stressors (i.e. a number of potential pollutants);(b) widespread use of 'worst-case' scenarios leading to over-conservative results;(c) lack of uncertainty/sensitivity tools that allow identifying the important exposure drivers.To overcome these drawbacks, the FP6 project 2-FUN produced prototype software containing a library of models for exposure assessment, coupling environmental multimedia and pharmacokinetic models. The objective of the 4FUN project is to further improve and standardise the 2-FUN tool and guarantee its long term technical and economic viability.Stakeholder requirements will be identified and an analysis of the strengths, weaknesses, opportunities and threats (SWOT) of existing exposure assessment tools (including 2-FUN) will be conducted. The 2-FUN tool will be subject to a rigorous standardisation which includes verification, benchmarking, documentation and demonstration. To demonstrate the reliability of modelling estimations and the feasibility of building complex realistic scenarios, case studies based on actual datasets will be performed. Improved and standardised 2-FUN software will be delivered, together with supporting documentation and training courses. Finally, based on detailed market research a sustainable business model will be developed.Improved exposure assessment due to the project will(a) reinforce competitiveness by avoiding overregulation;(b) prevent excessive adverse human health effects due to underregulation;(c) contribute to the promotion of sustainable products/technologies;(d) lead to homogeneous integration of exposure health concerns across the policy spectrum at the Community level.

**Partners:**

| | | |
|---|---|---|
| 1 | AEIFORIA s.r.l. | IT |
| 2 | ELECTRICITE DE FRANCE S.A. | FR |
| 3 | Facilia AB | SE |
| 4 | INSTITUT NATIONAL DE L ENVIRONNEMENT ET DES RISQUES INERIS | FR |
| 5 | VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V. | BE |
| 6 | ARCHE | BE |
| 7 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 8 | CONSORZIO VENEZIA RICERCHE | IT |
| 9 | BearingPoint | CH |
| 10 | Enviresearch Ltd | UK |
| 11 | GRUPA ZA RAZVOJ EKOLOSKE SVESTI - GRES ASSOCIATION | RS |
| 12 | Austrian Standards Institute | AT |
| 13 | EURELATIONS AG | CH |

**Activity Code:** ENV.2012.6.3-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Transforming urban and agricultural residues into high performance biomaterials for green construction

**Proposed EC Grant:** 3.199.730 €

**Abstract:**

INNOBITE project will transform urban and agricultural residues into high performing resource efficient products for the construction sector. The project finds support in two innovative ideas: (1) adding value to the inorganic fraction of wheat straw and (2) obtaining cellulose nanofibres out of highly recycled paper. Once isolated via environmentally friendly processes, these two renewable compounds will be used as high-performance additives for the development of a new series of bio-composites The incorporation of those natural components will improve current solutions in two construction applications: panels for indoor structures (interior walls, ceiling, flooring…) and profiles (decking, fencing…) by, respectively, increasing the resistance-to-weight ratio and improving the surface hardness and water absorbency. Other commercial bio-plastics as well as the two major fractions of what straw, cellulose and lignin, will be also incorporated into such materials (cellulose after chemical modification and lignin after being polymerised into both thermosetting and thermoplastic resins), and the resulting products will be finally tested for biodegradability. In the same way as wood, which is at the same time biodegradable and exceptional building material, the use of plant-derived products will increase the biodegradability of the biomaterials without compromising their structural quality. The project will destine more than 10% of the total budget to maximize the effectiveness of the exploitation activities, which will include thorough analysis of the cost effectiveness and environmental credentials of the products/processes developed and of new possible business lines and new business models. Also, the validation of developed technologies under the Environmental Technology Verification programme is expected to have a big impact on the exploitation.

**Partners:**

| | | |
|---|---|---|
| 1 | FUNDACION TECNALIA RESEARCH & INNOVATION | ES |
| 2 | TEKNOLOGIAN TUTKIMUSKESKUS VTT | FI |
| 3 | EIDGENOESSISCHE MATERIALPRUEFUNGS- UND FORSCHUNGSANSTALT | CH |
| 4 | Compagnie Industrielle de la Matière Végétale | FR |
| 5 | ADVANCE COMPOSITE FIBERS SL | ES |
| 6 | EXERGY LTD | UK |
| 7 | VERTECH GROUP SARL | FR |
| 8 | TECNARO GESELLSCHAFT ZUR INDUSTRIELLEN ANWENDUNG NACHWACHSENDER ROHSTOFFE MBH | DE |
| 9 | ECOPULP FINLAND OY | FI |

**Activity Code:** ENV.2012.6.6-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Energy-efficient, community-based water- and wastewater-treatment systems for deployment in India

**Proposed EC Grant:** 1.717.434 €

**Abstract:**

The overall aim of ECO-India is to design and develop innovative cost-effective solutions for community- based water- and wastewater-treatment systems. These systems will be deployed at pilot sites in arsenic-affected water-stressed regions in India. The two consortia, Indian (DST) and European (FP7), will establish pilot schemes for: catchment area and reservoir management; surface water supply schemes; arsenic removal (including monitoring using UFZ's field-tested Arsolux arsenic sensor); disinfection treatment for potable water based on Trustwater's EC-certified mixed-oxidant generation systems; online monitoring of water quality; water distribution network, together with online/offline water quality monitoring programmes; sewerage and wastewater treatment. In addition, prototype energy-efficient modules for water deionisation and heavy metal removal will be developed. A feasibility study will be performed to assess the potential for energy harvesting from sludge.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITY COLLEGE CORK, NATIONAL UNIVERSITY OF IRELAND, CORK | IE |
| 2 | TRUSTWATER LIMITED | IE |
| 3 | ADELPHI RESEARCH GGMBH | DE |
| 4 | DANMARKS TEKNISKE UNIVERSITET | DK |
| 5 | HELMHOLTZ-ZENTRUM FUER UMWELTFORSCHUNG GMBH - UFZ | DE |
| 6 | DRYDEN AQUA LTD | UK |
| 7 | A.G.M. COMMUNICATION & CONTROL LTD | IL |

**Activity Code:** ENV.2012.6.6-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Smart, Cost-effective Solutions for Water Treatment and Monitoring in Small Communities in India. Decision Support System Integration.

**Proposed EC Grant:** 2.675.373 €

**Abstract:**

Fresh water of sufficient quality for human consumption is becoming a scarce resource and its availability is a concerning issue in India whose growing wealth and population create increasing needs leading to higher water consumption while quality standards for drinking water are being enhanced. In this context the overall objective of Water4India consists in studying the different centralized and decentralized options for water treatment at community level in India taking into account resource availability, management, treatment solutions, water quality, economic, environmental and social factors. Water monitoring is of capital importance at each step of the process: different technologies will be considered in the frame of a Water Safety Plan. A Decision Support System (DSS) will be developed based on the previously stated information to assess policy makers take the appropriate decisions to solve the existing problem with drinking water.Water4India will deliver two forms of water availability assessment: the quality and quantity of available water and the resource management with information on current and expected water requirements. The quality of available water will be studied using Quantitative Microbial Risk Assessment.The DSS must find the optimal solution considering not only its cost but the overall sustainability of the process, paying particular attention to energy consumption and obtaining for this purpose, the friendliness of the proposed technologies and their adaptation to the social environment. The proposed technologies of the DSS will be applied in two places with different climatic and social situations that will constitute the pilot sites validating the developed work. Finally,a dissemination and best practice step will be carried out in order to define how the results of the project will be communicated to users and guarantee large scale implementation results which can be widely deployed into EU-India water technological business network.

**Partners:**

| | | |
|---|---|---|
| 1 | SOLINTEL M&P SL | ES |
| 2 | FACHHOCHSCHULE NORDWESTSCHWEIZ | CH |
| 3 | RHEINISCH-WESTFAELISCHE TECHNISCHE HOCHSCHULE AACHEN | DE |
| 4 | KWR WATER B.V. | NL |
| 5 | CRANFIELD UNIVERSITY | UK |
| 6 | THE UNIVERSITY OF EXETER | UK |
| 7 | ADIN HOLDINGS LTD | IL |
| 8 | AMIAD WATER SYSTEMS LTD | IL |
| 9 | SOLARSPRING GMBH | DE |
| 10 | VERTECH GROUP SARL | FR |
| 11 | UNIVERSITY OF TECHNOLOGY SYDNEY | AU |

**Activity Code:** ENV.2012.6.6-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Safeguarding Water resources in INdia with Green and Sustainable technologies

**Proposed EC Grant:** 1.904.743 €

**Abstract:**

At a time with an urgent need to conserve water resources, efficient sanitation systems play a key role in sustainability. They can ensure that the vital resource Water is recovered from waste and can be re-used at the same time as protecting human health and the environment. The SWINGS project consortium will establish an optimal methodology for nutrient and energy recovery from wastewater (WW) at the same time as making the water safe for reuse, all in a manner conducible to rural communities in developing countries, with India as the concrete example. In particular, the SWINGS project will enlist already optimized municipal WW treatment concepts and combine "green" and sustainable technologies. The result will be enhances water recycling and re-use, decreased energy consumption, and production of useful by-products from the process as secondary resources. Thus, treated WW will be transformed to soil enrichment resource, to irrigation water, to aquaculture farm feed, via sustainable sanitation that safeguards the local drinking water supply in India.The starting point of the SWINGS project will be anaerobic digestion (AD) and constructed wetlands (CW) that will be configured with environmentally sustainable disinfection technologies, like water solar disinfection. Pilot plants will be designed and constructed in India that combine the treatment methods mentioned above, after which the new systems will be established in steady-state operation, and then, the AD-CW configurations optimized. Systems for disinfection of the effluent will be implemented and on-line monitoring of pathogen load attempted. Finally, life cycle assessment of several treatment configurations will be used to develop a decision support system for future selection of sustainable and efficient treatment technologies in developing countries like India. The project will publish articles and hold workshops in order to disseminate its results, especially to SMEs and to public authorities.

**Partners:**

| | | |
|---|---|---|
| 1 | ASOCIACION DE INVESTIGACION METALURGICA DEL NOROESTE | ES |
| 2 | AARHUS UNIVERSITET | DK |
| 2 | AARHUS UNIVERSITET | DK |
| 3 | UNIVERSITAT POLITECNICA DE CATALUNYA | ES |
| 4 | HELMHOLTZ-ZENTRUM FUER UMWELTFORSCHUNG GMBH - UFZ | DE |
| 5 | INSTITUT NATIONAL DE RECHERCHE EN SCIENCES ET TECHNOLOGIES POUR L'ENVIRONNEMENT ET L'AGRICULTURE | FR |
| 6 | AUTARCON GMBH | DE |
| 7 | KILIAN WATER APS | DK |
| 8 | LIMNOS PODJETJE ZA APLIKATIVNO EKOLOGIJO D.O.O. | SI |
| 9 | SOLARSPRING GMBH | DE |
| 10 | DHI | DK |

**Activity Code:** ENV.2012.6.3-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** A consumer oriented prototype – forming the nucleus of a novel Ecological Accounting System

**Proposed EC Grant:** 2.959.784 €

**Abstract:**

myEcoCost is a foundational methodology that defines a global collaborative network of resource accounting nodes. It provides a means of accounting for and expressing usage of natural resources for products, services and technologies, to inform all economic actors including SMEs and consumers, on environmentally relevant information. It is a novel, bottom up approach to measure resource efficiency, the results of which are applicable in corporate, industry and society wide contexts. It is an asynchronous, recursive, non-centralised data gathering and dissemination technique for a large scale stakeholder network.myEcoCost aims to support various environmental accounting and assessment practices applicable to various national and international environment policy objectives. It links business added value to a measurement of aggregated resource usage as accepted environmental pressure indicator which goes beyond single issue indicators such as carbon footprint. Using an Internet-based service-oriented architecture (SOA) relevant and timely data is passed from supplier to customer recursively through the whole value chain to produce “ecoCosts” for each product or service. The project will demonstrate how it is technically possible to provide timely and accurate resource efficiency statements.For this to happen a series of ICT infrastructure components will be arranged: A resource accounting framework to determine “ecoCosts”, an ICT delivery mechanism to transfer the measurement from supplier to customer, benchmark figures for companies and consumers linking to macro level policy objectives, and interfaces for industry and consumers to interpret the measurement to assist decision making.The project aims at researching and developing all key ICT and software elements to trial and demonstrate the resource accounting framework and infrastructure in a proof-of-concept prototype, involving various value chain actors, users, environmental data processors and policy makers.

**Partners:**

| | | |
|---|---|---|
| 1 | TriaGnoSys GmbH | DE |
| 2 | PLATFORM INDEPENDENT SYSTEMS LIMITED | UK |
| 3 | THE NOTTINGHAM TRENT UNIVERSITY | UK |
| 4 | Sten-Erik Björling | SE |
| 5 | WUPPERTAL INSTITUT FUR KLIMA, UMWELT, ENERGIE GMBH. | DE |
| 7 | Jonathan Smith | UK |
| 9 | GS 1 GERMANY GMBH | DE |

**Activity Code:** ENV.2012.6.3-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Bio-electrochemically-assisted recovery of valuable resources from urine

**Proposed EC Grant:** 2.912.116 €

**Abstract:**

The bio-electrochemically-assisted recovery of valuable resources from urine (ValueFromUrine) project will develop, optimize and evaluate an innovative bio-electrochemical system that allows for the recovery of phosphorus (P), ammonia (NH3) and electricity (E) or hydrogen from urine. The innovative principle is that biological oxidation of organics (present in urine) at a bio-anode drives both the transport of ammonium over a membrane (which allows the recovery of NH3) and the production of alkalinity (which can be utilized for the precipitation of P-salts).Toilets and urinals that collect urine separately from other wastewater streams, are increasingly being installed in newly constructed utility buildings or during renovation of old buildings. Unlike any state-of-the art technology, the ValueFromUrine technology not only has the potential to recover over 95% of the P and NH3 from urine, but also to produce chemicals (NaOH, KOH) and energy. The ValueFromUrine consortium is made up of complementary knowledge institutes, SMEs and industry partner, each of them leading in one or more relevant fields (electrochemistry, membrane technology, microbiology, micro-pollutants and decentralized wastewater treatment). Moreover, all commercial partners have experience in the validation of new technologies. The participating SMEs have a key function in the consortium, which is reflected by the fact that 41% of the requested funding will go to the SMEs for research and technology development.

**Partners:**

| | | |
|---|---|---|
| 1 | STICHTING WETSUS CENTRE OF EXCELLENCE FOR SUSTAINABLE WATER TECHNOLOGY | NL |
| 2 | CENTRE DE RECHERCHE PUBLIC HENRI TUDOR | LU |
| 3 | UNIVERSIDADE DO MINHO | PT |
| 4 | MAGNETO SPECIAL ANODES BV | NL |
| 5 | DeSaH B.V. | NL |
| 6 | MAST CARBON INTERNATIONAL LTD | UK |
| 7 | Abengoa Water | ES |

**Activity Code:** ENV.2012.6.5-2 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Innovative Hydrometallurgical Processes to recover Metals from WEEE including lamps and batteries - Demonstration

**Proposed EC Grant:** 2.671.250 €

**Abstract:**

The recycling business is traditionally dominated by SMEs. In the last 5 years a general trend in the electronics recycling sector to bigger companies is very visible. Multinational, multi-sector companies are buying several smaller recyclers every year.Hence the previous project HydroWEEE (03/2009–02/2012) dealt with the recovery of rare and precious metals from WEEE. The idea has been to develop a mobile plant using hydrometallurgical processes to extract metals like yttrium, indium, lithium, cobalt, zinc, copper, gold, silver, nickel, lead, tin in a high purity. By making this plant mobile several SMEs can benefit from the same plant. By making the processes universal several fractions (lamps, CRTs, LCDs, printed circuit boards and Li-batteries) can be treated in the same mobile plant in batches. This reduces the minimum quantities and necessary investments. In addition these innovative HydroWEEE processes produce pure enough materials that can be directly used for electroplating and other applications.The objective of HydroWEEE Demo is to build 2 industrial, real-life demonstration plants (1 stationary and 1 mobile) in order to test the performance and prove the viability of the processes from an integrated point of view (technical, economical, operational, social) including the assessment of its risks (incl. health) and benefits to the society and the environment as well as remove the barriers for a wide market uptake.Finally the previously developed processes of extracting yttrium, indium, lithium, cobalt, zinc, copper, gold, silver, nickel, lead, tin will be improved and new processes to recover additional metals which are still in this fractions (Cerium, Platinum, Palladium, Europium, Lanthanum, Terbium, …) as well as the integrated treatment of solid and liquid wastes will be developed.Summarized HydroWEEE Demo will boost European competitiveness by applying novel processes for improved resource efficiency by extracting rare and precious metals.

**Partners:**

| | | |
|---|---|---|
| 1 | Kopacek KEG | AT |
| 2 | RELIGHT SRL | IT |
| 3 | ECO RECYCLING S.R.L. | IT |
| 4 | Greentronics | RO |
| 5 | COMPANY FOR MANAGEMENT AND ECOLOGICAL RESEARCHES SE TRADE DOO BELGRADE | RS |
| 6 | INSTITUT MIHAJLO PUPIN | RS |
| 7 | UNIVERSITA DEGLI STUDI DELL'AQUILA | IT |
| 8 | UNIVERSITA DEGLI STUDI DI ROMA LA SAPIENZA | IT |
| 9 | UNIVERSITA POLITECNICA DELLE MARCHE | IT |

**Activity Code:** ENV.2012.6.3-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Increasing Industrial Resource Efficiency in European Mariculture

**Proposed EC Grant:** 4.206.435 €

**Abstract:**

The proposal IDREEM will create smarter greener growth for one of Europe's most important industrial sectors: the aquaculture industry. It will achieve this through taking waste streams that are at present lost to the environment (as pollution) and converting them into secondary raw materials for the production of high value organisms such as seaweed and shellfish. To do this IDREEM will develop, demonstrate and benchmark (against existing production techniques) innovative production technology for the European aquaculture industry.Aquaculture is now a major component of global food security and is the fast growing food production sector globally. However the European industry is stagnating. The industry is facing real questions of economic and environmental sustainability. IDREEM will address these questions by working with a range of SME aquaculture producers across Europe to develop deploy and quantitatively assess the new production technology. Using an integrated approach defining the environmental, economic and social impact of the new production technology, life cycle assessment and life cycle costing will be used to quantify and demonstrate the economic and environmental benefits. Along with this process a combined environmental and economic modelling platform will be used to provide an evidence based decision making framework for aquaculture producers, regulators and policy makers.Throughout the project a dedicated impact coordinator will ensure that the project is fully engaged with the wide range of stakeholders, inviting their participation from the beginning and throughout the project (specifically in the form of a project advisory committee) and ensuring that results are fed back into that community. This will ensure that there is a rapid up take of the new production technology across the European sector, creating opportunity and support for a range of new SME producers, processors and up the value chain

**Partners:**

| | | |
|---|---|---|
| 1 | THE SCOTTISH ASSOCIATION FOR MARINE SCIENCE | UK |
| 2 | VIKING FISH FARMS LIMITED | UK |
| 3 | THE SCOTTISH SALMON COMPANY LIMITED | UK |
| 4 | SUF - FISH LTD | IL |
| 5 | GILDESKAL FORSKNINGSSTASJON AS | NO |
| 6 | DAITHI O'MURCHU MARINE RESEARCH STATION LTD | IE |
| 7 | SEAWAVE FISHERIES LTD | CY |
| 8 | AQUA SOCIETA AGRICOLA SRL | IT |
| 9 | Marine & Environmental Research (MER) Lab Ltd | CY |
| 10 | Longline Environment Ltd | UK |
| 11 | UNIVERSITY OF HAIFA | IL |
| 12 | NORWEGIAN INSTITUTE FOR AGRICULTURAL AND ENVIRONMENTAL RESEARCH - BIOFORSK | NO |
| 13 | UNIVERSITA DEGLI STUDI DI GENOVA | IT |
| 14 | UNIVERSITEIT LEIDEN | NL |
| 15 | ETA - ENERGIA, TRASPORTI, AGRICOLTURA SRL | IT |

**Activity Code:** ENV.2012.6.3-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** INNOVATIVE POPLAR LOW DENSITY STRUCTURAL PANEL

**Proposed EC Grant:** 2.995.855 €

**Abstract:**

The I-PAN project aims to design a breakthrough wood-made lightweight panel, adopting 50% of its volume recycled wood and for the remaining 50% poplar wood by using the upper part of the tree that is commonly underused. To this purpose, a novel manufacturing process is designed and innovation to existing resins is defined in order to require less energy during the drying and pressing process, minimizing VOC emission and reducing the overall cost of production.In order to reach this goal, the following specific objectives are addressed :1)Save energy in key production steps and thus highly reduce CO2 emissions2)Research on suitable existing glue to be employed in the manufacturing phase, in order to reduce the use of toxic or harmful solvents and contaminants to be inhaled or to contaminate the air.3)recycling 50% of the wood and without wasting the upper parts of the poplars, thus highly reducing the pressure on primary raw materials.

**Partners:**

| | | |
|---|---|---|
| 4 | DIMECO S.A. | RO |
| 7 | FUNDACION PARA EL PROGRESO DEL SOFT COMPUTING | ES |
| 8 | UNIVERSITA DEGLI STUDI DI MILANO | IT |
| 9 | CHIMAR HELLAS AE | EL |

**Activity Code:** ENV.2012.6.3-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** An innovative bio-economy solution to valorise livestock manure into a range of stabilised soil improving materials for environmental sustainability and economic benefit for European agriculture

**Proposed EC Grant:** 3.843.074 €

**Abstract:**

BioEcoSIM comprises R&D and demonstration of an integrated approach and business model that has wide EU27 applicability in the agriculture sector. The new European Bio-economy Strategy aims to increase the use of bio-based raw materials. Thus, large quantities of fertilisers will be required. Therefore, this project targets to produce sustainable soil improving products that can be easily handled, transported, and applied. BioEcoSIM will valorise livestock manure as an important example of valuable bio-waste into 1) pathogen-free, P-rich organic soil amendment (P-rich biochar), 2) slow releasing mineral fertilisers and 3) reclaimed water. By doing this, we will i) reduce negative environmental impacts (eutrophication of water bodies, and NH3 and N2O emissions) in intensive livestock regions, ii) help to decrease NH3 produced by the energy-intensive Haber-Bosch process, (iii) mitigate EU's dependency on the depleting mineral sources for P-fertilisers, (iv) increase water efficiency use in agriculture and (v) support European Strategies and Directives, while generating economic benefits in the agriculture and bio-economy sector.The project will combine three innovative technologies 1) superheated steam drying and non-catalytic pyrolysis to convert carbon in manure into P-rich biochar and syngas, 2) electrolytic precipitation of struvite and calcium phosphate and 3) selective separation and recovery of NH3 by gas-permeable membrane. Energy required in-process will be generated through combustion of syngas, thus reducing the pressure on finite fossil fuel. Water reclaimed from manure will be utilised for livestock production and/or irrigation. The sustainability of this approach will be validated against standards ISO14040 and ISO14044. Implementation of the R&D results will help fulfil the need for economically viable and environmentally benign practices in European agriculture to move towards a more resource-efficient and circular economy.

**Partners:**

| | | |
|---|---|---|
| 1 | FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V | DE |
| 2 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 3 | CENTRE DE RECERCA I INNOVACIO DE CATALUNYA S.A. | ES |
| 4 | UNIVERSITAET HOHENHEIM | DE |
| 6 | ACONDICIONAMIENTO TARRASENSE ASSOCIACION | ES |
| 9 | Coastwatch Europe | IE |
| 11 | Initial Projects Limited | UK |
| 12 | GELTZ UMWELTTECHNOLOGIE GMBH | DE |
| 14 | ASB Grünland Helmut Aurenz GmbH | DE |
| 15 | HECKMANN MASCHINENBAU UND VERFAHRENSTECHNIK GMBH | DE |

**Activity Code:** ENV.2012.6.5-2 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Sustainable sewage sludge management fostering phosphorus recovery and energy efficiency

**Proposed EC Grant:** 2.888.560 €

**Abstract:**

Phosphorus is one essential element of life, which can neither be produced synthetically nor substituted by any other substance. Its importance as plant nutrient is emphasized by the huge amount of 975 000 tons of phosphorus annually imported into Europe to sustain good harvests. While phosphorus is a limited fossil element, its extensive recovery from “secondary deposits” is of paramount importance and follows the principles of the European Roadmap for Resource Recovery. Municipal wastewater represents a relevant phosphorus reserve and has the potential to cover about 20% of the demand. Technology concepts have been developed in recent European projects to tap into this local resource. While the traditional application of sewage sludge in agriculture is increasingly refused by stakeholders, this path has to be further secured to protect the environment and human health. In addition, technological alternatives to recycle phosphorus are available and need yet to be deployed on to the market. The P-REX project builds on the outputs of previous European research projects and will perform the first holistic full-scale evaluation of technical phosphorus recovery techniques using municipal sludge or ashes in comparison with phosphorus recycling by land application of sewage sludge. The technical, operational and economic data as well as a comprehensive ecotoxicological and plant-availability assessments will provide the basis of comprehensive life cycle and life cost assessments of phosphorus recovery processes. Complementing a market analysis, a guidance document for policy makers and end users will show the best phosphorus recovery options depending on regional conditions and illustrated by selected case studies. The results of the project will be extensively disseminated in international workshops and regional events in order to facilitate local implementations. P-REX will provide an essential milestone for our future development into a recycling society.

**Partners:**

| | | |
|---|---|---|
| 1 | KOMPENTENTZZENTRUM WASSER BERLIN GEMEINNUTZIGE GMBH | DE |
| 2 | FACHHOCHSCHULE NORDWESTSCHWEIZ | CH |
| 3 | BUNDESANSTALT FUER MATERIALFORSCHUNG UND -PRUEFUNG | DE |
| 4 | Verein zur Foerderung agrar- und stadtoekologischer Projekte e.V. (A.S.P.) | DE |
| 5 | VEOLIA EAU | FR |
| 6 | Outotec (Finland) Oy | FI |
| 7 | AGRO PLUS Handelsunternehmen eU | AT |
| 8 | BSH Umweltservice AG | CH |
| 9 | ingitec GmbH | DE |
| 10 | LimCo International GmbH | DE |
| 11 | PROMAN MANAGEMENT GMBH | AT |
| 12 | ASIO spol. s r.o. | CZ |
| 13 | SOLINTEL M&P SL | ES |
| 14 | P.C.S. Pollution Control Service GmbH | DE |
| 15 | PFI Planungsgemeinschaft GbR | DE |

**Activity Code:** ENV.2012.6.6-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Supporting consolidation, replication and up-scaling of sustainable wastewater treatment and reuse technologies for India

**Proposed EC Grant:** 2.980.004 €

**Abstract:**

The poor condition of sanitation and wastewater management in India (as in many Asian countries) is well documented and has recently led the Asian Development Bank to call for a revolution in wastewater management across Asia. Conventional, centralized approaches have failed in many areas and will hardly be able to solve potential problems in rural, hilly and rapidly developing urban areas in India. Instead, innovative, decentralised systems aiming at various benefits are needed. A main benefit in the context of SARASWATI is the reuse of treated wastewater for different purposes. Other benefits include reuse of energy and nutrients, which are also important. Despite the overall poor condition of wastewater treatment across South Asia, India has already considerable experience with such decentralised approaches. Over the last decade, hundreds of decentralised wastewater treatment plants of different technology types have been installed all over India. However, not all are functioning well and several also failed, due to various reasons. Also, there is no consolidated evaluation and review of all those existing plants available. As a result there is only very limited knowledge on the performance of those existing technologies available and a review and evaluation of those plants is very timely in order to derive sound conclusions and recommendations for future wastewater management strategies in India. SARASWATI will perform such a comprehensive and independent evaluation and hence provide key suggestions for the improvement of existing technologies. In addition, SARASWATI aims at deploying selected proven EU technologies with a potential for solving grave water challenges in India (water pollution due to discharge of untreated wastewater and storm-water, water scarcity and groundwater depletion, unhygienic sludge handling practices due to lack of suitable technologies). Water challenged sites have been identified in 5 Indian States comprising almost all regions.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITAET FUER BODENKULTUR WIEN | AT |
| 2 | BUREAU DE RECHERCHES GEOLOGIQUES ET MINIERES | FR |
| 3 | FUNDACION CENTRO DE LAS NUEVAS TECNOLOGIAS DEL AGUAdel Agua | ES |
| 4 | CENTRO DE ESTUDIOS E INVESTIGACIONES TECNICAS | ES |
| 5 | THE UNIVERSITY OF EXETER | UK |
| 6 | Zentrum fur Umweltmanagement und Entscheidungstheorie | AT |
| 7 | A3i | FR |
| 8 | SIMBIENTE - ENGENHARIA E GESTAO AMBIENTAL LDA | PT |
| 9 | Hydrok (uk) ltd | UK |
| 10 | Chris Shirley - Smith | UK |

**Activity Code:** ENV.2012.6.3-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Liquid and gas Fischer-Tropsch fuel production from olive industry waste: fuel from waste

**Proposed EC Grant:** 2.607.188 €

**Abstract:**

The overall aim of the project is to use agricultural waste, mainly residues from olive farming and olive oil production, for the generation of ready-to-use fuels, namely synthetic natural gas (SNG) and diesel, which would be primarily used for energy production for oil manufacturing and as transportation fuel for olive farming. The optimization of the project and the possible addition of different agricultural or solid urban residues will lead to the obtaining of surplus fuels, which will be sold for common uses, since the production will meet the standards for natural gas and diesel respectively.The production of these fuels will be based on a synthetic procedure: the Fischer-Tropsch process. All the steps from raw residue to fuel will be considered in this project, including physical and chemical treatments. The main synthetic procedures will be Fischer-Tropsch synthesis, which will produce the liquid fuel, and methanation, which will produce the SNG. The most important advance beyond the state-of-the-art will be the development of a novel catalyst for the Fischer-Tropsch process which will enhance the overall performance of the process from the current values. Apart from that, innovations will be sought in the pretreatment steps, with special interest in the development of membrane purification methods that would facilitate the gas purification required for the overall procedure.The overall expected impacts are fuel production, which would reduce the overall greenhouse gas emissions from the olive industry and introduce an alternative to the use of conventional (fossil) fuels, reduction of waste treatment requirements, application of technology beyond the state-of-the-art, employment creation and technology exportation.

**Partners:**

| | | |
|---|---|---|
| 1 | VERTECH GROUP SARL | FR |
| 2 | KUNGLIGA TEKNISKA HOEGSKOLAN | SE |
| 4 | SOLINTEL M&P SL | ES |
| 5 | FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V | DE |
| 6 | EXERGY LTD | UK |
| 7 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 8 | EIFER EUROPAISCHES INSTITUT FUR ENERGIEFORSCHUNG EDF-KIT EWIV | DE |

**Activity Code:** ENV.2007.3.2.1.1. **Funding Scheme:** CP **Duration (Months):** 42

**Title:** Strategy for the preservation of plastic artefacts in museum collections

**Proposed EC Grant:** 2.099.656 €

**Abstract:**

During the twentieth century artists have used plastics and synthetics to create important pieces that are recognized nowadays as masterpieces. Unfortunately some plastics are degrading faster than had been expected and their preservation constitutes a challenge. Their is a lack of knowledge and agreement about the way we can exhibit, clean and store them in order to lower their deterioration speed. The focus of this project will be on art museum collections created with synthetic polymers (typically cellulose nitrate and acetates, poly (vinyl chloride), poly (methyl metacrylate) with a special interest into polyurethanes objects or coatings) and will focus on three dimensional objects as these frequently exhibit physical degradation. The objective is to develop a European wide accepted strategy that improves preservation and maintenance of plastic objects in museum collections. Based on scientific studies and experiences gathered from partners, it is proposed to evaluate and establish recommended practices and risk associated for exhibiting, cleaning and storing these artefacts.

**Partners:**

| | | |
|---|---|---|
| 1 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 3 | VICTORIA AND ALBERT MUSEUM | UK |
| 4 | NATIONALMUSEET | DK |
| 5 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 6 | INSTITUUT COLLECTIE NEDERLAND | NL |
| 7 | USTAV POLYMEROV - SLOVENSKA AKADEMIA VIED | SK |
| 9 | ATELIER REGIONAL DE CONSERVATION NUCLEART - ARC NUCLEART | FR |
| 10 | SOLMATES BV | NL |
| 11 | MORANA RTD DOO | SI |
| 12 | UNIVERSITY COLLEGE LONDON | UK |
| 13 | THE J. PAUL GETTY TRUST | US |

**Activity Code:** ENV.2007.3.2.1.1. **Funding Scheme:** CP **Duration (Months):** 39

**Title:** Technologies and Tools to prioritize assessment and diagnosis of air pollution impact on immovable and movable Cultural Heritage

**Proposed EC Grant:** 1.649.982 €

**Abstract:**

Most buildings of cultural/historical interest are located in urban environments. They undergo a number of different external forcings, which need to be addressed separately. It is important to consider local-scale variations of the urban environment, such as changes in pollutants, temperature field, relative humidity cycles, wind field, urban heat island effect etc. The most important challenge at the present time is to understand the different types of damage to cultural heritage that environmental changes will cause. In fact, the available scenarios of multi-pollutants trends in Europe and the world indicate that the effects of industrial, civil and transport emissions on corrosion and soiling will constitute a serious threat to cultural heritage. Such effects require improved methods of quantification to arrive at a more accurate damage assessment, diagnosis and monitoring of the movable and immovable cultural heritage. The high costs of preventive conservation and maintenance of the built cultural environment urgently impose the prioritization of air pollution monitoring in order to ensure a sustainable protection. For the purpose of attaining these goals, ad hoc devices and tools are necessary to identify and monitor the changing damage processes affecting immovable and moveable cultural heritage. This will be reached with TeACH developing its objectives. Among these, the main ones are: identify the multi-pollutants and prioritize the principal ones; Identify ways of improving the more reliable and efficient among existing technologies and tools, developing new devices and tools, particularly a new a compact and economical kit of instruments;deliver guidelines for the future prioritization of air pollution and disseminate the results.

**Partners:**

| | | |
|---|---|---|
| 1 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 2 | ISTITUTO COOPERATIVO PER L'INNOVAZIONE SCRL | IT |
| 3 | TECNO-PENTA SAS DI MAURA BELLIO | IT |
| 4 | FUNDACION TECNALIA RESEARCH & INNOVATION | ES |
| 5 | ACCIONA INFRAESTRUCTURAS S.A. | ES |
| 6 | UNIVERSITEIT ANTWERPEN | BE |
| 7 | NORSK INSTITUTT FOR LUFTFORSKNING | NO |
| 12 | UNIVERSITY COLLEGE LONDON | UK |
| 13 | METROPOLITANKAPITEL DER HOHEN DOMKIRCHE KOLN DOMBAUVERWALTUNG | DE |
| 14 | MUZEUM NARODOWIE W KRAKOWIE | PL |

**Activity Code:** ENV.2007.3.2.1.1. **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Smart Monitoring of Historic Structures

**Proposed EC Grant:** 1.404.993 €

**Abstract:**

Historic structures are often of extraordinary architecture, design or material. The conservation of such structures for next European generations is one of the main future tasks. To conserve historic structures it is more and more required to understand the deterioration processes mainly caused by the environment. In certain cases continuous monitoring systems have been installed to obtain information about the deterioration processes. However, most of these monitoring systems were just weather or air pollution data acquisition systems and use only basic models for data analysis. The real influence of the environment to the structure or the structural material is often unaccounted for. That means that the structural resistance is just calculated from the measurements and not determined by sufficient sensors. Another aspect is the fact that most monitoring systems require cabling, which is neither aesthetically appealing nor in some cases applicable due to the needed fastening techniques.The proposed project aims at the development of competitive tools for practitioners which goes beyond the mere accumulation of data. Smart monitoring systems using wireless sensor networks, new miniature sensor technologies (e.g. MEMS) for minimally invasive installation as well as smart data processing will be developed. It will provide help in the sense of warnings (e.g. increase of damaging factors) and recommendations for action (e.g. ventilation or heating on/off, etc.) using data fusion and interpretation that is implemented within the monitoring system. The development will consist of small smart wireless and robust sensors and networks, with sensors for monitoring of e.g. temperature, humidity, air velocity, strain and crack opening, acoustic emissions, vibration, inclination, chemical attack, ambient and UV light, with built-in deterioration and material models, data pre-processing, and alarm functions to inform responsible persons about changes of the object status.Comparative tests will be conducted to validate the models as well as the monitoring data from several case studies. The results of the project will be summarized in a toolbox and a guideline, which will be disseminated at special trainings organized for restorers, owner of cultural heritage and public authorities.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITAET STUTTGART | DE |
| 2 | AuRA Bärbel Dieruff Karl Fiedler GbR | DE |
| 3 | UNIVERSITAET STUTTGART | DE |
| 4 | ACCADEMIA EUROPEA PER LA RICERCA APPLICATA ED IL PERFEZIONAMENTO PROFESSIONALE BOLZANO (ACCADEMIA EUROPEA BOLZANO) | IT |
| 5 | ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA | IT |
| 6 | STIFTUNG PREUSSISCHER KULTURBESITZ | DE |
| 7 | INSTYTUT KATALIZY I FIZYKOCHEMII POWIERZCHNI, POLSKA AKADEMIA NAUK | PL |
| 8 | Käferhaus GmbH | AT |
| 9 | TTI-Technologie-Transfer-Initiative GmbH | DE |
| 10 | METALMOBILE S.R.L. | IT |
| 11 | ARTEMIS SRL | IT |
| 12 | CENTRO DI PROGRETTAZIONE, DESIGN E TECHNOLOGIE DEI MATERIALI | IT |
| 13 | RIWAQ- CENTRE FOR ARCHITECTURAL CONSERVATION | PS |
| 15 | Department of Antiquities | JO |
| 16 | SVEUCILISTE U ZAGREBU GRADEVINSKI FAKULTET | HR |

**Activity Code:** ENV.2007.3.2.2.2. **Funding Scheme:** CSA **Duration (Months):** 16

**Title:** Cultural Heritage Research Meets Practice

**Proposed EC Grant:** 164.909 €

**Abstract:**

Organization of the 8th EC Conference on Cultural Heritage Research in Ljubljana in 2008 is proposed. Its main objectives are in accordance with the ones addressed in the Call: to foster exploitation and spin off of EU research results, through the demonstration of new technologies, tools and devices developed by the SMEs and industry in close cooperation with the scientists and for the benefit of the end-users, conservators and restorers, managers and owners of the cultural patrimony. The objectives will be reached by the oral presentations, posters, demonstration activities and training workshops, focusing on the presentation of the research results relating to the movable and immovable cultural heritage, landscapes and archaeology, policy impact assessment, technology and knowledge transfer, including education and life-long learning in the field of cultural heritage. Special attention will be devoted to the integration of the EC funded research with the other supporting schemes, in particular COST and Eureka, as well as pooling of expertise of the key players in the field, such as ECTP-FACH, ICOM-CC, ICOMOS, EUROPA NOSTRA, and others. Dissemination activities will heavily rely on the IT technologies and will include pre-conference proceedings with extended abstracts, a web page and post conference prints containing the conference statement, invited talks (from the opening ceremony and the programme sessions) and rapports from the sessions. Special attention will be dedicated to communication of the results to the public, which will be achieved by dedicated web-pages, well prepared press releases and targeted public relations.

**Partners:**

| | | |
|---|---|---|
| 1 | NARODNA IN UNIVERZITETNA KNJIZNICA | SI |
| 3 | UNIVERZA V LJUBLJANI | SI |

**Activity Code:** ENV.2007.3.2.2.1. **Funding Scheme:** CSA **Duration (Months):** 36

**Title:** European network on Research Programme applied to the Protection of Tangible Cultural Heritage

**Proposed EC Grant:** 1.989.994 €

**Abstract:**

NET-HERITAGE is the first significant initiative ever attempting to coordinate national RTD programmes of European countries and support European RTD Programmes in the field of research applied to Protection for Tangible Cultural Heritage. It aims to exert a massive, positive impact through the following objectives: - provide an integrated picture of the state of the art of cultural heritage research in EUMember States and at the European level; -overcome the lack of a coordinated research structure in this specific and multidisciplinary sector, with programmes fostering integration between art-history-conservation-maintenance-restoration areas and architectural-chemical-physics-engineering areas; - limit fragmentation within and among national research programmes, identifying common strategic priorities for research and programmes; - create effective actions to stimulate the exploitation of research results, and underpin cooperation between researchers and cultural heritage institutions for the application of identified solutions; - face problems due to insufficient and dispersed funding, in terms of local level and size of funding, compared to other research sectors; - favour exchange between national and European work programmes, to avoid a single top-down approach. NET-HERITAGE intends to achieve the following main outcomes: - coordinating actions within the EU partnership; - favouring protection of moveable and immoveable tangible cultural heritage; - expanding the potential of the cultural heritage research sector; - enhancing dissemination of research results and news in the field of protection of tangible cultural heritage; - increasing the visibility of the socio-economic importance of this sector; - supporting educational and training programmes and activities in the sector; - developing a common framework of policies for improving cultural heritage protection; - favouring common actions to promote Cultural Heritage research outside EU

**Partners:**

| | | |
|---|---|---|
| 1 | MINISTERO PER I BENI E LE ATTIVITA CULTURALI | IT |
| 2 | MINISTERO DELL'UNIVERSITA E DELLA RICERCA | IT |
| 3 | SERVICE PUBLIC FEDERAL DE PROGRAMMATION POLITIQUE SCIENTIFIQUE | BE |
| 4 | MINISTRY OF EDUCATION, YOUTH AND SCIENCE | BG |
| 5 | MINISTERE DE LA CULTURE ET DE LA COMMUNICATION | FR |
| 6 | DEUTSCHE BUNDESSTIFTUNG UMWELT | DE |
| 7 | HELLENIC MINISTRY OF CULTURE AND TOURISM | EL |
| 8 | FORNLEIFAVERND RIKISINS | IS |
| 9 | LATVIJAS REPUBLIKAS KULTURAS MINISTRIJA | LV |
| 10 | HERITAGE MALTA | MT |
| 11 | MINISTERSTWO KULTURY I DZIEDZICTWA NARODOWEGO | PL |
| 12 | AUTORITATEA NATIONALA PENTRU CERCETARE STIINTIFICA | RO |
| 13 | MINISTRSTVO ZA KULTURO REPUBLIKE SLOVENIJE | SI |
| 14 | MINISTERIO DE CIENCIA E INNOVACION | ES |
| 15 | THE ARTS AND HUMANITIES RESEARCH COUNCIL | UK |
| 16 | Unitatea Executiva pentru Finantarea Invatamantului Superior, a Cercetarii, Dezvoltarii si Inovarii | RO |

**Activity Code:** ENV.2008.3.2.1.2. **Funding Scheme:** CSA **Duration (Months):** 24

**Title:** Strategies for the protection of shipwrecks in the Baltic Sea against forthcoming attack by wood degrading marine borers. A synthesis and information project based on the effects of climatic changes.

**Proposed EC Grant:** 754.812 €

**Abstract:**

Today the Baltic sea is a brackish marine environment, enclosing a unique well preserved historical collection of wooden shipwrecks and settlements. These objects and constructions are protected from aggressive marine borer due to the low salinity in the waters, and therefore it is one of the few localities in the world where historical shipwrecks are found so intact and available for historical research. There are however strong indications, showed by the EU- MOSS project, that the marine borer Teredo spp is spreading into this area. If we are not able to protect the cultural heritage, these objects will be lost within a relatively short time due to the aggressiveness of the marine borers. A strategy to handle this alarming scenario, is to provide the museums and conservators responsible for long term preservation of cultural heritage, with tools for predicting the spread of marine borers, and efficient methods for protection of the wreck, when the degradation is established. The WreckProtect project will therefore develop two guidelines synthesised on currently available information: 1. The prediction of marine borer attack in marine waters 2. The protection of wrecks in situ These guidelines will be applicable to other European marine waters outside the Baltic. The WreckProtect project is consequently a cross-disciplinary coordination action involving partners with expertise within geographical information systems, marine archaeology, marine biology, wood microbiology and conservation. These experts will through meetings and networking exchange knowledge and synthesise it into practical tools and methods in the form of guidelines that will be disseminated in a joint action for the European managers of underwater cultural heritage. A seminar, workshop and training course on practical in situ preservation of shipwreck will be organised during the project, and the guidelines will be published in international scientific journals and a monograph.

**Partners:**

| | | |
|---|---|---|
| 1 | SP SVERIGES TEKNISKA FORSKNINGSINSTITUT AB* | SE |
| 2 | NATIONALMUSEET | DK |
| 3 | MINISTERIE VAN ONDERWIJS, CULTUUR EN WETENSCHAP | NL |
| 4 | The Geological Survey of Denmark and Greenland | DK |
| 5 | GOETEBORGS UNIVERSITET | SE |
| 6 | VIKINGESKIBSMUSEET I ROSKILDE | DK |

**Activity Code:** ENV.2008.3.2.2.1. **Funding Scheme:** CP **Duration (Months):** 38

**Title:** Protection of cultural heritage by real-time corrosion monitoring

**Proposed EC Grant:** 765.595 €

**Abstract:**

There are many factors affecting air corrosivity, but it is only the temperature and sometimes the relative humidity that are controlled and monitored in indoor premises where valuable and culturally significant objects are stored or displayed. Additional anti-corrosion measures are usually applied only when often-irreplaceable historical objects have already been affected. Information on the actual corrosivity of the atmosphere is crucial to effective corrosion protection and there is a strong need for professionals active in the protection of cultural heritage to have a tool enabling real-time assessment of the air corrosivity. In a project financed within FP6, prototypes of loggers for continuous measurement of the corrosion rate of selected technical metals in atmospheric conditions were developed. The electronic unit measures and records changes in the electrical resistance of a thin metal track applied on an insulating substrate. The developed concept offers several important advantages, such as on-line and real-time monitoring, small size, easy replaceable metal sensors, remote data access, and automatic data delivery via e-mail. The main objectives of the present project that will allow for the application of the logger in the cultural heritage sphere are: (1) To develop new sensors such as silver, lead, and metal alloys simulating more closely historical materials. (2) To improve currently available sensors by decreasing the metal layer thickness to 50–500 nm to provide higher sensitivity. (3) To improve the electronic part of the logger with new measurement ranges, a universal communication interface, and better water-tightness. (4) To adapt the electronic logger and software for single measurements on sensors exposed separately. (5) To develop software that provides user-friendly data handling and makes data interpretation simple by referring to available standards or recommendations.

**Partners:**

| | | |
|---|---|---|
| 1 | INSTITUT DE LA CORROSION SAS | FR |
| 2 | VYSOKA SKOLA CHEMICKO-TECHNOLOGICKA V PRAZE | CZ |
| 3 | FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V | DE |
| 8 | NATIONALMUSEET | DK |
| 9 | NKE SA | FR |
| 10 | Schweizerisches Nationalmuseum | CH |
| 12 | CENTRE DE RECHERCHE ET DE RESTAURATION DES MUSEES DE FRANCE | FR |

**Activity Code:** ENV.2008.3.2.2.1. **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Roman Cements for Architectural Restoration to New High Standards

**Proposed EC Grant:** 1.514.816 €

**Abstract:**

Highly hydraulic binders, known as natural or Roman cements, were key materials to cover façades of buildings of the European Historicism and Art Nouveau (19th/early 20th century), a period of rapid urban growth in Europe. The maintenance, restoration and reconstruction of historic Roman cement façades form therefore an important issue in Europe's efforts to preserve its architectural heritage. Therefore, the ROCARE project is proposed to provide conditions for the industrial development and commercialisation of Roman cements which is an innovative, promising technology developed at the level of a pilot-scale prototype in the recent research project of the 5th Framework Programme ROCEM, 2003-2006. The increasing awareness of the conservation profession and their interest in the product call now for further actions encompassed by the proposed ROCARE-project, which aim at filling gaps in knowledge and reducing the entry barriers of the novel technology to the market. They include (a) scaling up of the RC technology to a competitive level by optimising the process technologies at various conditions of production, (b) laboratory tests and studies to fully understand cement hydration and property development, as well as optimum conditions of mortar processing and handling in the conservation practice, and (c) broad dissemination measures to enlarge the market potential of the technology. The proposed project is designed for three-year duration and will be jointly conducted by 15 partners from industry, SMEs and research centres in 7 countries. It will allow the prototype developed in the earlier project to establish itself on the European market of building construction.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITAT FUR ANGEWANDTE KUNST WIEN | AT |
| 2 | INSTYTUT KATALIZY I FIZYKOCHEMII POWIERZCHNI, POLSKA AKADEMIA NAUK | PL |
| 3 | UNIVERSITY OF BRADFORD | UK |
| 4 | CAS Composite Anode Systems GmbH | AT |
| 5 | ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE | CH |
| 6 | Cercle des partenaires du patrimoine-Laboratoire de recherche des monuments historiques | FR |
| 8 | UNIVERZITA PARDUBICE | CZ |
| 9 | Remmers Fachplanung | DE |
| 10 | Mag. Christian Gurtner | AT |
| 11 | TPA Gesellschaft fuer Qualitaetssicherung und Innovation | AT |
| 12 | Wietersdorfer & Peggauer Zementwerke GmbH | AT |
| 14 | FORDERUNG DER BAUDENKMALPFLEGE VEREIN | AT |
| 15 | RENOVA Sp. z o.o. | PL |
| 16 | Instytut Szkła, Ceramiki, Materiałów Ogniotrwałych i Budowlanych/ The Institute of Glass, Ceramics, Refractory and Construction Materials | PL |

**Activity Code:** ENV.2008.3.2.1.1. **Funding Scheme:** CP **Duration (Months):** 60

**Title:** Damage risk assessment, economic impact and mitigation strategies for sustainable preservation of cultural heritage in the times of climate change

**Proposed EC Grant:** 4.964.866 €

**Abstract:**

Climate change is one of the most critical global challenges of our time which also threatens cultural heritage. As a non-renewable important resource to the European identity, sustainable adaptation strategies are required for long term preservation. For this purpose and for the first time ever, the CLIMATE FOR CULTURE project will couple completely new high resolution (10x10km) climate change evolution scenarios with whole building simulation models to identify the risks for specific regions. The innovation lies in the elaboration of a more reliable damage assessment by connecting the future climate data with whole building simulation models and new damage assessment functions. In situ measurements at UNESCO sites throughout Europe will allow a much more precise and integrated assessment of the real damage impact of climate change on cultural heritage. Appropriate sustainable mitigation/adaptation strategies, also from previous projects, are further developed and applied on the basis of these findings simultaneously. All these results will be incorporated into an assessment of the economic impacts. In order to ensure an efficient use of resources, this project will build on the results of already concluded EU research projects (Noah's Ark). Techniques from FP5/6 projects will be reassessed for their applicability in future scenarios at different regions in Europe and Mediterranean to fully meet sustainability criteria. The proposed project will thus be able to estimate more systematically the damage potential of climate change on European cultural heritage. The team consists of 27 multidisciplinary partners from all over Europe and Egypt including the world's leading institutes in climate modelling and whole building simulation. The final achievement of the project will be a macro-economic impact report on cultural heritage in the times of climate change akin to the STERN report which would be a truly European contribution to future IPCC Reports.

**Partners:**

| | | |
|---|---|---|
| 1 | FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V | DE |
| 2 | CESKE VYSOKE UCENI TECHNICKE V PRAZE | CZ |
| 3 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 4 | SVEUCILISTE U ZAGREBU GRADEVINSKI FAKULTET | HR |
| 5 | FOUNDATION FOR RESEARCH AND TECHNOLOGY HELLAS | EL |
| 6 | MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. | DE |
| 7 | TECHNISCHE UNIVERSITAET MUENCHEN | DE |
| 8 | TECHNISCHE UNIVERSITEIT EINDHOVEN | NL |
| 9 | UNIVERZA V LJUBLJANI | SI |
| 10 | GRADBENI INSTITUT ZRMK DOO | SI |
| 11 | HOGSKOLAN PA GOTLAND | SE |
| 12 | Andreas Weiß freelance conservator restorer | DE |
| 13 | RADON JAN - ENGINEERING CONSULTING & SOFTWARE DEVELOPMENT | PL |
| 14 | Krah&Grote Measurement Solution | DE |
| 15 | Käferhaus GmbH | AT |
| 16 | Haftcourt Limited | SE |
| 17 | ACCIONA INFRAESTRUCTURAS S.A. | ES |
| 18 | Bayerische Staatsministerium der Finanzen | DE |
| 19 | Doerner Institut, Bayerische Staatsgemäldesammlungen | DE |
| 20 | THE NATIONAL TRUST FOR PLACES OF HISTORIC INTEREST OR NATURAL BEAUTY | UK |
| 21 | KYBERTEC S.R.O. | CZ |
| 22 | THE GLASGOW CALEDONIAN UNIVERSITY | UK |
| 23 | CENTER FOR DOCUMENTATION OF CULTURAL AND NATURAL HERITAGE CULTNAT | EG |
| 24 | Jonathan Ashley-Smith | UK |
| 27 | Institut national du patrimoine | FR |
| 28 | LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE | UK |
| 29 | FONDAZIONE SALVATORE MAUGERI CLINICA DEL LAVORO E DELLA RIABILITAZIONE | IT |

**Activity Code:** ENV.2008.3.2.1.2. **Funding Scheme:** CSA **Duration (Months):** 36

**Title:** European Cultural Heritage Identity Card

**Proposed EC Grant:** 998.461 €

**Abstract:**

The aim of the project is to set-up a system of the »Cultural Heritage Identity Card« (CHIC), which will introduce a systematic collection and storage of data on the immovable heritage objects across European and neighboring countries. The main objective is to develop and test the guidelines needed for the efficient compilation of the data pertinent to each monument under observation. The system of CHIC will support sustainable maintenance, preventive conservation and rehabilitation of historic sites and monuments. It will assist the application of newly developed strategies, which are designed to evaluate the efficiency and user-friendliness of the approach used for screening the time-varying alteration of heritage buildings caused by human interventions and environmental impacts. The partners of the project will promote and assist the introduction of the CHIC system in their countries and further facilitate its use in the neighbouring countries through their links with governmental authorities responsible for the cultural heritage protection and preservation. The development of the project will be achieved through the activities of four core work packages that will be supported by the coordinative and dissemination work packages. The main tasks of project will be to:• review and document current methodologies and tools for data collection and assessment,• develop criteria and indicators for risk assessment,• develop guidelines for the future development of methods and tools for collection and storing of the data required for the evaluation of time-varying changes of heritage assets, and• consolidate recommendations and strategies adjusted to the particular needs and heritage preservation strategies in different European and neighboring countries.The consortium will consist of 12 partners from 11 countries, which are Slovenia, Austria, Belgium, Croatia, Czech Republic, Germany, Greece, Israel, Italy, Poland, and Spain and it will coordinate the activities at the national and international levels. The Advisory Committee will lead the Advisory Network, which will assist the establishment and maintenance rapport with the local authorities responsible for safeguarding of CHIC and with other stakeholders involved in heritage protection. In the scope of this project we will create a web portal eu-chic.eu that will remain active at least until 2017.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERZA V LJUBLJANI | SI |
| 2 | SCHLOSS SCHOENBRUNN KULTUR | AT |
| 3 | CENTRE SCIENTIFIQUE ET TECHNIQUE DE LA CONSTRUCTION | BE |
| 4 | Zagora-Zagorje d.o.o. | HR |
| 5 | USTAV TEORETICKE A APLIKOVANE MECHANIKY AVCR | CZ |
| 7 | FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V | DE |
| 8 | NATIONAL TECHNICAL UNIVERSITY OF ATHENS | EL |
| 9 | TECHNION - ISRAEL INSTITUTE OF TECHNOLOGY. | IL |
| 10 | ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA | IT |
| 11 | UNIVERSITA DEGLI STUDI DI FERRARA | IT |
| 12 | INSTYTUT PODSTAWOWYCH PROBLEMOW TECHNIKI POLSKIEJ AKADEMII NAUK | PL |
| 13 | FUNDACION TECNALIA RESEARCH & INNOVATION | ES |

**Activity Code:** ENV.2009.3.2.1.2 **Funding Scheme:** CP **Duration (Months):** 39

**Title:** Fire Detection and Management through a Multi-Sensor Network for the Protection of Cultural Heritage Areas from the Risk of Fire and Extreme Weather Conditions

**Proposed EC Grant:** 2.697.092 €

**Abstract:**

The proposed project aims to develop an automatic early warning system to remotely monitor areas of archaeological and cultural interest from the risk of fire and extreme weather conditions. Since these areas have been treasured and tended for very long periods of time, they are usually surrounded by old and valuable vegetation or situated close to forest regions, which exposes them to an increased risk of fire. Additionally, extreme weather conditions (such as storms and floods) pose great risks for these sites. The proposed system will take advantage of recent advances in multi-sensor surveillance technologies, using a wireless sensor network capable of monitoring different modalities (e.g. temperature) andoptical and infrared cameras, as well as local weather stations on the deployment site. The signals collected from these sensors will be transmitted to a monitoring center, which will employ intelligent computer vision and pattern recognition algorithms as well as data fusion techniques to automatically analyze sensor information. The proposed system will be capable of generating automatic warning signals for local authorities whenever a dangerous situation arises. Detecting the starting position of a fire is only the first step in fire fighting. After detecting a wildfire, the main focus should be the estimation of the propagation direction and speed in order to help forest fire management. FIRESENSE will provide real-time information about the evolution of fire using wireless sensor network data. Furthermore, it will estimate the propagation of the fire based on the fuel model of the area and other important parameters such as wind speed, slope, and aspect of the ground surface. Finally, a 3-D Geographic Information System (GIS) environment will provide visualisation of the predicted fire propagation.Demonstrator deployments will be operated in selected sites in Greece, Turkey, Tunisia and Italy.

**Partners:**

| | | |
|---|---|---|
| 1 | CENTRE FOR RESEARCH AND TECHNOLOGY HELLAS | EL |
| 2 | Bilkent Üniversitesi | TR |
| 3 | Ecole Supérieure des Communications de Tunis | TN |
| 4 | Xenics nv | BE |
| 5 | STICHTING CENTRUM VOOR WISKUNDE EN INFORMATICA | NL |
| 6 | MARAC ELECTRONICS, S.A. | EL |
| 7 | BOGAZICI UNIVERSITESI | TR |
| 9 | HELLENIC MINISTRY OF CULTURE AND TOURISM | EL |
| 10 | TITAN BINA ELEKTRONIK SISTEMLERI TEKNOLOJI SANAYI VE TICARET LIMITED SIRKETI | TR |
| 11 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |

**Activity Code:** ENV.2009.3.2.1.1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** NEW INTEGRATED KNOWLEDGE BASED APPROACHES TO THE PROTECTION OF CULTURAL HERITAGE FROM EARTHQUAKE-INDUCED RISK

**Proposed EC Grant:** 2.736.114 €

**Abstract:**

The project tackles the problem of earthquake-impact on Cultural Heritage assets starting from basic consideration that efficient protection, with substantial guarantee of compatibility and low-intrusivity, can only be achieved with 'minimum intervention' approach. This requires that potentialities of existing materials and components are as much as possible exploited in terms of strength and energy dissipation, and candidate interventions are validated and optimized on specific, real application conditions. At the project start, earthquake-induced failure mechanisms, construction types and materials, intervention and assessment techniques will be cross-correlated with the aim of developing new integrated methodologies with a systemic approach. Traditional materials will be enhanced by innovative industrial processes (e.g., nano-limes or micro-silica for injection), and new high-performance (e.g. dissipative) elements will be developed. Novel collaborative combinations of them will be tested on structural components (walls, pillars, floors, vaults) and on structural connections (wall-, floor- and roof-to-wall), which converge the behaviour of single strengthened elements into the global structural response. The envisaged techniques will be also validated on model buildings and substructures. Advanced numerical studies will allow parameterizing the results and deriving simple and optimized design procedures. Early warning techniques for intelligent interventions and advanced monitoring techniques for knowledge based assessment and progressive implementation of interventions will be also developed. This bottom-up approach will bring to new integrated materials, technologies and tools for systemic improvement of seismic behaviour of CH assets. The new solutions will be condensed into guidelines for end-users. The large participation of research centres, SME, and end-user from various countries, including ICPC and MPC, ensures increased impact of the research.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITA DEGLI STUDI DI PADOVA | IT |
| 2 | BUNDESANSTALT FUER MATERIALFORSCHUNG UND -PRUEFUNG | DE |
| 3 | USTAV TEORETICKE A APLIKOVANE MECHANIKY AVCR | CZ |
| 4 | NATIONAL TECHNICAL UNIVERSITY OF ATHENS | EL |
| 5 | POLITECNICO DI MILANO | IT |
| 6 | UNIVERSIDADE DO MINHO | PT |
| 7 | UNIVERSITAT POLITECNICA DE CATALUNYA | ES |
| 8 | UNIVERSITY OF BATH | UK |
| 9 | GAZI UNIVERSITESI | TR |
| 10 | Ecole Nationale d'Architecture | MA |
| 11 | CAIRO UNIVERSITY | EG |
| 12 | Israel Antiquities Authority | IL |
| 13 | Bozza Legnami S.r.l. | IT |
| 14 | Cintec International Ltd. | UK |
| 15 | Interprojekt d.o.o. | BA |
| 16 | S&B INDUSTRIAL MINERALS MINING OUARRYING INDUSTRIAL COMMERCIAL TOURISTSHIPPING TECHNICAL COMPANY SA | EL |
| 17 | Ziegert Seiler Ingenieure GmbH | DE |
| 18 | MONUMENTA - CONSERVACAO E RESTAURODO PATRIMONIO ARQUITECTONICO LDA* | PT |

**Activity Code:** ENV.2009.3.2.1.1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Performance-based approach to the earthquake protection of cultural heritage in European and Mediterranean countries

**Proposed EC Grant:** 2.237.475 €

**Abstract:**

PERPETUATE intends to develop European Guidelines for evaluation and mitigation of seismic risk to cultural heritage assets, with innovative techniques for the seismic strengthening of historical buildings and the preservation of artworks (frescos, stucco-works, statues, battlements, banisters, …). The main deliverable of the project will be made by a main document, which outlines the safety and conservation conceptual approach and the overall methodology, and other specific documents, describing the different components of the risk analysis. Two different problems are considered: a) assessment of a single cultural heritage asset (hazard analysis; soil foundation problems; investigations for the building knowledge; seismic analysis; SHM and strengthening interventions); b) policy initiatives for seismic risk mitigation (simplified vulnerability and risk analysis at territorial scale). Other important deliverables will come out from the application and validation of the methodology in several case studies (the Citadel of Algiers and the historical centre of Rhodes, both in the UNESCO list of the World Cultural Heritage, the St.Maria Paganica Cathedral and the Branconio Palace in L'Aquila – Abruzzo Region, the St. Pardo Cathedral in Larino –Molise Region, the Cathedral St. Nicholas in Ljubljana –Slovenia). The call asks for the development of "integrated methodologies and innovative tools" for "protection .. of the main cultural heritage assets as regards the impact of earthquakes" and makes expressly reference to the contribution for improved regulation and standards. The recommendations recently issued by the Italian Ministry of Culture represent the framework for the development of European Guidelines, applicable in the European and the other Mediterranean countries. The methodology proposed in PERPETUATE will use a displacement-based approach for the vulnerability evaluation and the design of interventions; the use of safety verification in terms of displacement, rather than strength, orients to new strengthening techniques and helps in the comprehension of the interaction between structural elements and unmovable artistic assets.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITA DEGLI STUDI DI GENOVA | IT |
| 2 | AGENZIA NAZIONALE PER LE NUOVE TECNOLOGIE,L'ENERGIA E LO SVILUPPO ECONOMICO SOSTENIBILE | IT |
| 3 | BUREAU DE RECHERCHES GEOLOGIQUES ET MINIERES | FR |
| 4 | ARISTOTELIO PANEPISTIMIO THESSALONIKIS | EL |
| 5 | NATIONAL TECHNICAL UNIVERSITY OF ATHENS | EL |
| 6 | UNIVERZA V LJUBLJANI | SI |
| 7 | UNIVERSITY OF BATH | UK |
| 8 | UNIVERSITE DES SCIENCES ET LA TECHNOLOGIE HOUARI BOUMEDIENE | DZ |
| 9 | GRADBENI INSTITUT ZRMK DOO | SI |
| 10 | IL CENACOLO SRL | IT |
| 11 | PROIND SRL PRODOTTI INDUSTRIALI | IT |

**Activity Code:** EeB.ENV.2010.3.2.4-1 **Funding Scheme:** CP **Duration (Months):** 42

**Title:** Efficient ENergy for EU Cultural Heritage

**Proposed EC Grant:** 4.990.475 €

**Abstract:**

The project 3ENCULT bridges the gap between conservation of historic buildings and climate protection, which is not an antagonism at all: historic buildings will only survive if maintained as living space. Energy efficient retrofit is useful for structural protection as well as for comfort reasons - comfort for users and “comfort” for heritage collections.The joint task of conservation and energy efficient retrofit is highly interdisciplinary. The 3ENCULT consortium consists of scientists and stakeholders, especially on the level of SMEs, from the fields of diagnostics, conservation, building physics, sustainability, architecture and lighting up to cybernetics, thus guaranteeing both, the development of sustainable solutions and the impact on European economy.Eight case studies will demonstrate and verify solutions that are applicable to the majority of European built heritage in urban areas. Building owners and local historic preservation agencies are integrated in local case study teams.3ENCULT will demonstrate the feasibility of “Factor 4” to “Factor 10” reduction in energy demand, depending on the case and the heritage value. The main objectives are the development of passive and active solutions for conservation and energy efficient retrofit including available products as well as new developments by involved SMEs, the definition of diagnosis and monitoring instruments, the long term monitoring (also for IEQ controlling) and the planning and evaluation tools and concepts supporting the implementation, the quality assurance and control of success of the energy retrofit measures. Guidelines will be disseminated to the scientific and public community.Finally, position papers will be issued suggesting possible integrations and/or implementations of the present regulation framework for improving energy efficiency of historic buildings in urban areas and in particular EPBD and Environmental Impact Assessment as well as Aalborg Commitments and Leipzig Charter.

**Partners:**

| | | |
|---|---|---|
| 1 | ACCADEMIA EUROPEA PER LA RICERCA APPLICATA ED IL PERFEZIONAMENTO PROFESSIONALE BOLZANO (ACCADEMIA EUROPEA BOLZANO) | IT |
| 2 | KUNSTAKADEMIETS ARKITEKTSKOLE | DK |
| 3 | INSTITUT FUR DIAGNOSTIK UND KONSERVIERUNG VON DENKMALEN IN SACHSEN UNDSACHSEN-ANHALT EV | DE |
| 4 | UNIVERSITAET INNSBRUCK | AT |
| 5 | OVE ARUP & PARTNERS INTERNATIONAL LIMITED | UK |
| 6 | TECHNISCHE UNIVERSITAET DARMSTADT | DE |
| 7 | FUNDACION CARTIF | ES |
| 8 | BARTENBACH LICHTLABOR GMBH | AT |
| 9 | TECHNISCHE UNIVERSITAET DRESDEN | DE |
| 10 | COMUNE DI BOLOGNA | IT |
| 11 | WOLFGANG FEIST | DE |
| 12 | NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO | NL |
| 13 | ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA | IT |
| 14 | ARTEMIS SRL | IT |
| 15 | GELBISON ELECTRONICS S.R.L. | IT |
| 16 | GRUPO UNISOLAR S.A. | ES |
| 17 | MENUISERIE ANDRE SARL | FR |
| 18 | REMMERS BAUSTOFFTECHNIK GMBH | DE |
| 19 | ATREA SRO | CZ |
| 20 | YOURIS.COM | BE |
| 21 | ICLEI EUROPEAN SECRETARIAT GMBH (ICLEI EUROPASEKRETARIAT GMBH)* | DE |
| 22 | FEDERATIE VAN VERENIGINGEN VOOR VERWARMING EN LUCHTBEHANDELING IN EUROPA VERENIGING | NL |

**Activity Code:** ENV.2010.3.2.1-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Measurement, Effect Assessment and Mitigation of Pollutant Impact on Movable Cultural Assets. – Innovative Research for Market Transfer.

**Proposed EC Grant:** 2.499.768 €

**Abstract:**

The MEMORI proposal will provide the conservation market with innovative measurement technology, improved pollution effects knowledge and evaluation and control methods for the reduction of gaseous pollutant impact on movable cultural assets, - facilitating increased and safe use of protective enclosures for cultural heritage (CH) objects located indoors in new or rebuilt buildings for collections, to satisfy demands for energy saving to mitigate climate change. MEMORI will develop a small novel portable instrument for easy combined (oxidising + acidic impacts) environmental dosimetry in situ with adapted software and web page for results presentation and interpretation. MEMORI will do extensive laboratory and non-destructive field analysis of impact of indoor environments on a range of organic CH materials for the assessment of environmental quality for movable cultural assets, especially focusing on objects protected inside diverse types of enclosures. MEMORI will perform varied realistic experiments and studies of methods for mitigation of the pollution impact on CH objects in enclosures such as; use of absorbing media of different types; pollution barrier films; low emitting construction materials, and anoxic conditions. MEMORI seeks to achieve its goals by engagement of SMEs that combine expertise in marketing and consulting of conservation equipment with practical conservation experience for the benefit of conservators and stakeholders, supporting their effort to assure optimal conservation conditions for their collections. MEMORI also has significant participation of SMEs in its work with technological instruments development and presentation systems for the End users, and in the studies of mitigation methods for application with protective enclosures and accessories that these SMEs market. The basis for MEMORI is the scientific and technological excellence of research and innovation within a high quality consortium with high quality management.

**Partners:**

| | | |
|---|---|---|
| 1 | NORSK INSTITUTT FOR LUFTFORSKNING | NO |
| 2 | FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V | DE |
| 3 | KULTUR UND ARBEIT EV | DE |
| 4 | UNIVERSITA DI PISA | IT |
| 5 | UNIVERSITEIT GENT | BE |
| 6 | DET KONGELIGE DANSKE KUNSTAKADEMIS KONSERVATOSKOLEN | DK |
| 7 | UNIVERSITAET FUER BODENKULTUR WIEN | AT |
| 8 | UNIVERSITATEA DE ARTE GEORGE ENESCU | RO |
| 9 | HISTORIC BUILDINGS AND MONUMENTS COMMISSION FOR ENGLAND | UK |
| 10 | BIRKBECK COLLEGE - UNIVERSITY OF LONDON | UK |
| 11 | SIT Transportes Internacionales S.L. | ES |
| 12 | THE BOARD OF TRUSTEES OF THE TATE GALLERY | UK |
| 13 | DUBLIN CITY UNIVERSITY | IE |
| 15 | NILU INNOVATION AS | NO |

**Activity Code:** ENV.2010.3.2.1-1 **Funding Scheme:** CP **Duration (Months):** 30

**Title:** SYstem for Digitization and Diagnosis in ART Applications

**Proposed EC Grant:** 1.649.997 €

**Abstract:**

Cultural heritage monitoring comprehends a sum of technologies, protocols and studies which need to be modernized and automated to reduce costs and process time. Current spectroscopy permits the study and characterisation of the surface of artworks by the inspection of specific spectral bands, by means of different techniques. As a consequence, the sets of results are often difficult or slow to link, compare or process in order to generate global information about the piece-in-study. In this way, a set of analysis processes must be performed over the artwork, involving piece moving, manipulation, transportation, etc, and therefore putting the artwork at risk of deterioration. The main target of SYDDARTA is to develop a pre-industrial prototype for diagnosing the deterioration on movable assets by the acquisition of 3D-hyperspectral imaging through scanning non-destructive techniques. Such images contain spectroscopic information of the piece to be analysed in different bands of the spectrum, giving chemical composition information of the different materials and layers in the actual 3D surface by means of a very narrow screening bandwidth and the use of volumetric digitisation. These analyses are carried out combining mapping, spectroscopic and image processing techniques, based on tunable filters and customised light sources. The expected prototype will be a new portable type of equipment to use in the preventive conservation and monitoring of movable cultural assets and will provide enormous data sets by non-destructive characterisation techniques. Moreover, the equipment will make use a specific database of materials and pigments monitoring that will be exploited as well. The merging of the technologies involved will be suitable for fast authentication and traceability of cultural assets and will improve the monitoring and conservation of artworks in general, as well as facilitating art digitisation sharing between the cultural organisations across Europe. In addition, the expected project results will not be specific to the art and heritage cultural sector, and may be applied to other fields of research, engineering or industry, for example, for biomedicine, manufacturing, food industry, chemistry or recycling. This means a wider market impact and a greater societal benefit inside and out the European Union.

**Partners:**

| | | |
|---|---|---|
| 1 | ASOCIACION INDUSTRIAL DE OPTICA, COLOR E IMAGEN | ES |
| 2 | FOUNDATION FOR RESEARCH AND TECHNOLOGY HELLAS | EL |
| 3 | TECHNISCHE UNIVERSITEIT DELFT | NL |
| 4 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 5 | Xenics nv | BE |
| 6 | VIALUX MESSTECHNIK + BILDVERARBEITUNG GMBH | DE |
| 7 | AVANTES BV | NL |
| 8 | GOOCH & HOUSEGO (UK) LIMITED | UK |
| 9 | SIGNINUM GESTAO DE PATRIMONIO CULTURAL LDA | PT |
| 10 | JAVNI ZAVOD REPUBLIKE SLOVENIJE ZA VARSTVO KULTURNE DEDISCINE | SI |
| 11 | Real Academia de Bellas Artes de San Fernando | ES |

**Activity Code:** ENV-2011.3.2.2-1 **Funding Scheme:** CSA **Duration (Months):** 36

**Title:** Coordination action in support of the implementation of a Joint Programming Initiative (JPI) on Cultural Heritage and Global Change : a new challenge for Europe

**Proposed EC Grant:** 1.999.830 €

**Abstract:**

Europe's cultural heritage is the world's most diverse and rich patrimony attracting millions of visitors every year to monuments, historical city centres, archaeological sites and museums. Moreover, heritage is an important component of individual and collective identity. In both its tangible, intangible and digital forms, it contributes to the cohesion of the European Union and plays a fundamental role in European integration by creating relations among citizens.The JPI on Cultural Heritage and Global Change: a new Challenge for Europe has recently defined a common vision which needs to be translated into a Strategic Research Agenda.A CA is needed to allow Member States and Associated Countries to implement the Joint Programming for jointly providing areas where public research programmes can respond to major societal challenges. This, in turn, will need to be implemented under an adequate management structure, with associated activities to both disseminate the objectives and initial achievements, and provide an evaluation framework for addressing its impact.JHEP intends to structure and support this JPI to implement the action programme for the area of research on cultural heritage in a changing world.The main objectives of JHEP are therefore:-Providing necessary administrative and logistical support to the meetings of the Governing Board, Executive Board, Scientific Committee and Advisory Board required for the development and implementation of the SRA and Action Programme.-definition of strategic and scientific priorities to develop the scientific research agenda-implementation of joint and coordinated research activities-extension of the partnership, cooperation at global levels and with international and NG organizations,-evaluation and monitoring of the joint activities,-engagement of stakeholders through a communication plan to ensure the translation of research outputs into practice and policy.

**Partners:**

| | | |
|---|---|---|
| 1 | MINISTERO PER I BENI E LE ATTIVITA CULTURALI | IT |
| 2 | THE ARTS AND HUMANITIES RESEARCH COUNCIL | UK |
| 3 | MINISTERIE VAN ONDERWIJS, CULTUUR EN WETENSCHAP | NL |
| 4 | RESEARCH PROMOTION FOUNDATION | CY |
| 5 | TURKIYE BILIMSEL VE TEKNOLOJIK ARASTIRMA KURUMU | TR |
| 6 | MINISTERE DE LA CULTURE ET DE LA COMMUNICATION | FR |
| 7 | AN COMHAIRLE OIDHREACHTA-THE HERITAGE COUNCIL HC | IE |
| 8 | SERVICE PUBLIC FEDERAL DE PROGRAMMATION POLITIQUE SCIENTIFIQUE | BE |
| 9 | MINISTERSTWO NAUKI I SZKOLNICTWA WYZSZEGO | PL |
| 10 | AUTORITATEA NATIONALA PENTRU CERCETARE STIINTIFICA | RO |
| 11 | MINISTRSTVO ZA VISOKO SOLSTVO, ZNANOST IN TEHNOLOGIJO | SI |
| 12 | MINISTERIO DE CIENCIA E INNOVACION | ES |

**Activity Code:** ENV-NMP.2011.2.2-5 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Plasma And Nano for New Age “soft” conservation

**Proposed EC Grant:** 2.136.495 €

**Abstract:**

The main objective is to develop a novel atmospheric plasma technique for surface cleaning and coating deposition as well as two innovative coatings: a self-diagnostic protective coating and a coating provided with identification marker.The project aims at integrating the new plasma cleaning/deposition technique and the new coatings in a “full-life” protocol spanning surface cleaning and pre-treatment, deposition of protective and identification coatings, and complete removal of coatings.The plasma technique is proposed for surface cleaning and coating removal as alternative or complementary to the other non-contact techniques such as laser. This technique is characterized by no thermal heating, selectivity, chemical reduction of oxides, applicability on all substrates and competitive costs.The self-diagnostic coatings provide a long-lasting solution with an added value of easy and instant diagnostic of coating functionality through a nano-technological approach, reducing monitoring costs and time with no impact on tourist accessibility.The identification marker coating allows using nanotechnologies to obtain a transparent authenticity proof and cataloguing label.The compatibility of the new materials with the substrates is guaranteed intrinsically by their integration in the “full-life” protocol because it ensures its complete reversibility. The protocol is applicable on all substrate materials principally as preventing conservation, in the project its validation is proposed on metal substrates (silver and bronze) and on mural paintings, limestone and sandstone.The project also aims at implementing a demonstrator of the entire “full-life” protocol, which will be used for training cultural operators in organised events and fairs.An added value is also the strong participation of SME’s as conservation operators and as technological companies, which ensures the possibility of scaling up and placing the new products on the market.

**Partners:**

| | | |
|---|---|---|
| 1 | VENETO NANOTECH SCPA | IT |
| 2 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 3 | STIFTUNG PREUSSISCHER KULTURBESITZ | DE |
| 4 | ARTESIS HOGESCHOOL ANTWERPEN | BE |
| 5 | NADIR SRL | IT |
| 6 | CENTER FOR RESTORATION OF ART WORKS OOD | BG |
| 7 | BOTEGA Z EOOD | BG |
| 8 | LORENZON COSTRUZIONI SRL | IT |
| 9 | CHEMSTREAM BVBA | BE |

**Activity Code:** ENV-NMP.2011.2.2-5 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** INTELLIGENT MOBILE MULTIPURPOSE ACCURATE THERMOELECTRICAL (IMAT) DEVICE FOR ART CONSERVATION

**Proposed EC Grant:** 1.807.545 €

**Abstract:**

The IMAT project aims to integrate the cutting edge research in nanotechnology with that of cultural heritage conservation for the development of new advanced conservation techniques and materials. A consortium of researchers representing expertise in the areas of art conservation, nanotechnology, and thermo-electrical engineering, has been assembled with the purpose of inventing an advanced precision heating technology and designing a series of portable, highly accurate flexible mild heating devices specifically for broad application in the field of art conservation, employing, but not limited to the new technology of carbon nanotubes (CNT).The new technology and product acknowledges and responds to a glaring omission in fundamental conservation instrumentation. The control over the application of heat often constitutes the core of success in structural treatment of diverse cultural heritage objects, yet sources currently available to conservators are unable to guarantee accuracy, control or uniformity, and therefore may compromise the favourable outcome of treatment.The lack of mobile high precision and accessible instrumentation impacts conservation treatment capacities and the long-term preservation of irreplaceable cultural heritage in the most direct way, since objects may be and are exposed to risk because of inadequate or unavailable instrumentation. This is particularly relevant to treatments that take place in the field, including emergency responses, that often must rely on inadequate tools. The heating table, long considered a basic piece of laboratory equipment for previous methodologies, is now out of sync with the current direction of conservation that favours minimally invasive treatments with respect to those of the past and requires enhanced mobility and versatility. The IMAT goals therefore will hit the core of this problem in many ways and the results will have a lasting impact on conservation methodology and beyond.The unique properties of carbon nanotube (CNT) materials will allow for the design of thin, lightweight, even transparent, stretchable and woven mild heaters with low power needs as an ultra-portable, versatile and efficient alternative for diverse thermal treatments. The development of the IMAT device and methodology will represent a unique opportunity to impact the field of conservation of heritage products in a significant manner, and the full extent of the potential for application will become evident only during the execution of the three-year project. Further application of the technology to fields outside of art conservation, such as art transportation, medical field, aeronautics, car industry, apparel industry and more will be investigated. The project was conceived with a research-based objective, focusing on the creation of the IMAT device in order to improve the quality, accessibility and cost effectiveness of a fundamental tool for art conservators in Europe and globally.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITA DEGLI STUDI DI FIRENZE | IT |
| 2 | FUTURE CARBON GMBH | DE |
| 3 | AMOROSI LAURA | IT |
| 4 | STICHTING RESTAURATIE ATELIER LIMBURG | NL |
| 5 | LORENZO CONTI | IT |
| 6 | NARDINI PRESS SRL | IT |
| 7 | C.T.S. SrL | IT |
| 8 | REUTHER VERPACKUNG GMBH & CO. KG | DE |
| 9 | ISTITUTO PER L'ARTE E IL RESTAURO SRL | IT |
| 10 | LIETUVOS DAILES MUZIEJUS | LT |
| 11 | TOMAS MARKEVICIUS | LT |

**Activity Code:** ENV-NMP.2011.3.2.1-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Nano-systems for the conservation of immoveable and moveablepolymaterial Cultural Heritage in a changing environment

**Proposed EC Grant:** 2.522.798 €

**Abstract:**

Government authorities, restoration architects and conservation scientists have always had to face the problem of deterioration of historic building materials, in particular stone, wood and glass; an issue that has become more and more urgent since climate change has worsened natural decay and the impact of atmospheric pollution. In addition in recent years socio-economic requirements have claimed for a more sustainable use of existing building heritage. On these premises, the NANOMATCH project will address this issue through the development of a class of innovative consolidants to be specifically designed to meet the requirements of the historic substrates and to identify high performance products to renovate the market dedicated to the conservation of the built heritage.Alkaline earth and semi-metal alkoxides precursors will be synthesized tuning their properties on the basis of the stone, wood and glass-substrate characteristics and the specific functionality to be addressed, leading to a new generation of nano-structured materials tailored specifically for historic materials in a climate change context, merging from the most recent advanced research in the fields of nanotechnologies and conservation science. The development of suitable products for treatment of historic materials will finally halt the current use of inappropriate commercial products, especially polymers, that were designed for completely other purposes than the conservation of cultural heritage and that, in the recent years, show the detrimental effects due to their fast deterioration, that hampers the treated material too.Central in the project is the synthesis of molecular precursors, nano-coating deposition and related properties assessment finalized to the production of innovative products to update the market of conservation products as a real alternative for unfitting traditional ones. The basis for their production and introduction on the market will be developed during the project.

**Partners:**

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|---|---|---|
| 1 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 2 | NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO | NL |
| 3 | FUNDACION TECNALIA RESEARCH & INNOVATION | ES |
| 4 | Cercle des partenaires du patrimoine-Laboratoire de recherche des monuments historiques | FR |
| 5 | FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V | DE |
| 6 | ASOCIACION DE INVESTIGACION DE LAS INDUSTRIAS DE LA CONSTRUCCION | ES |
| 7 | R.E.D. SRL | IT |
| 8 | NANOTEGO NANO TEKNOLOJIK URUNLER ARASTIRMA GELISTIRME KIMYA SANAYI VETICARET ANONIM SIRKETI | TR |
| 9 | BOFIMEX BOUWSTOFFEN BV | NL |
| 10 | METROPOLITANKAPITEL DER HOHEN DOMKIRCHE KOLN DOMBAUVERWALTUNG | DE |
| 11 | OPERA DI SANTA CROCE | IT |
| 12 | ESCHLIMANN ATELIER DE RESTAURATION-PEINTURE SAS | FR |
| 13 | TOP OBERFLACHEN GMBH | DE |
| 14 | DUCT SRL | RO |

**Activity Code:** EeB.ENV.2012.6.6-2 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** ENERGY EFFICIENCY FOR EU HISTORIC DISTRICTS SUSTAINABILITY

**Proposed EC Grant:** 4.988.422 €

**Abstract:**

Europe can become the leader in CO2 emission reduction by applying innovative solutions to its built cultural heritage. According to the European Recovery Plan one of the actions that needs to be taken to tackle the current crisis, is investing in energy efficiency. Historic urban buildings consume 4% of all energy and are responsible for 3% of CO2 emissions. Therefore, improving energy efficiency in historic buildings and historic districts is essential.Nevertheless, most of the current developments in energy efficiency address new construction without dealing with the unique problems of historic structures. A number of technologies and products have been developed, however many of the solutions are not acceptable for historic structures due to the necessity of preserving integrity and authenticity.Therefore, the main goal of EFFESUS is to develop and demonstrate, through case studies a methodology for assessing and selecting energy efficiency interventions, based on existing and new technologies that are compatible with heritage values. A Decision Support System will be a primary deliverable. The environment in historic buildings and urban districts is controlled differently from modern cities and accordingly the project will also develop a multi-scale data model for the management of energy. In addition, new non-invasive, reversible yet cost-effective technologies for significantly improving thermal properties will also be developed. Finally, existing regulations and building policies may not fit cultural heritage specificities so the EFFESUS project will also address these non-technical barriers.These outcomes will be achieved through 10 work packages, performed by an interdisciplinary consortium of 23 partners from 13 countries. Due to the attractiveness of this niche market, 36 % of the project budget is allocated to SME's, which will work together with large companies, research institutions and end users throughout the duration of the project.

**Partners:**

| | | |
|---|---|---|
| 1 | FUNDACION TECNALIA RESEARCH & INNOVATION | ES |
| 2 | FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V | DE |
| 3 | R.E.D. SRL | IT |
| 4 | OLOKLIROMENA PLIROFORIAKA SISTIMATA | EL |
| 5 | SNEKKERIET VERDAL AS | NO |
| 6 | SAMPAS NANOTEKNOLOJI ARASTIRMA GELISTIRME VE PAZARLAMA LIMITED SIRKETI | TR |
| 7 | D'APPOLONIA SPA | IT |
| 8 | CONSORCIO DE LA CIUDAD DE SANTIAGO DE COMPOSTELA | ES |
| 9 | ACCIONA INFRAESTRUCTURAS S.A. | ES |
| 10 | HOGSKOLAN PA GOTLAND | SE |
| 11 | ACCADEMIA EUROPEA PER LA RICERCA APPLICATA ED IL PERFEZIONAMENTO PROFESSIONALE BOLZANO (ACCADEMIA EUROPEA BOLZANO) | IT |
| 12 | DELAP & WALLER ECOCO LIMITED | IE |
| 13 | Active Space Technologies, Actividades Aeroespaciais S.A. | PT |
| 14 | RODWELL DENNIS GRAHAM | UK |
| 15 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 16 | UNIVERSITAET STUTTGART | DE |
| 17 | NORGES TEKNISK-NATURVITENSKAPELIGE UNIVERSITET NTNU | NO |
| 18 | BOFIMEX BOUWSTOFFEN BV | NL |
| 19 | SCOTTISH GOVERNMENT | UK |
| 20 | A. PROCTOR GROUP LIMITED | UK |
| 21 | HOR-BER BERUHAZASI TANACSADO ES TERVEZO MERNOKIRODA KFT | HU |
| 22 | GOUAS FRANCIS | FR |
| 23 | PROIGMENES EREVNITIKES & DIAHIRISTIKES EFARMOGES | EL |

**Activity Code:** ENV.2007.3.3.1.1. **Funding Scheme:** CP **Duration (Months):** 45

**Title:** MICROARRAYS FOR THE DETECTION OF TOXIC ALGAE

**Proposed EC Grant:** 2.234.850 €

**Abstract:**

Microalgae in marine and brackish waters of Europe regularly cause «harmful effects», considered from the human perspective, in that they threaten public health and cause economic damage to fisheries and tourism. Cyanobacteria cause similar problems in freshwaters. These episodes encompass a broad range of phenomena collectively referred to as «harmful algal blooms» (HABs). They include discoloration of waters by mass occurrences of microalgae (true algal blooms that may or may not be «harmful») to toxin-producing species that may be harmful even in low cell concentrations. A broad classification of HAB distinguishes three groups of toxic organisms. For adequate management of these phenomena, monitoring of microalgae is required. However, the effectiveness of monitoring programmes is limited by the fact that it is time consuming and morphology as determined by light microscopy may be insufficient to give definitive species and toxin attribution. Once cell numbers reach a threshold level, then shellfish are selected to toxin analysis by the mouse bioassay. The mouse bioassay is continued on a daily basis until no more toxin is detected. Molecular and biochemical methods are now available that offer rapid means of both species and toxin detection. In this project we will target rapid species identification using rRNA genes as the target. We include antibodies to specific toxins because even when cell numbers are very low, the toxins can be present and can be accumulated in the shellfish. Microarrays are the state of the art technology in molecular biology for the processing of bulk samples for detection of target RNA/DNA sequences.. The purpose of MIDTAL is to support the common fisheries policy to aid the national monitoring agencies by providing new rapid tools for the identification of toxic algae and their toxins so that they can comply with ECC directive 91/1491/CEE that can be converted to cell numbers and reduce the need for the mouse bioassay.

**Partners:**

| | | |
|---|---|---|
| 1 | MARINE BIOLOGICAL ASSOCIATION OF THE UNITED KINGDOM | UK |
| 2 | STAZIONE ZOOLOGICA ANTON DOHRN | IT |
| 3 | LINNEUNIVERSITETET | SE |
| 4 | INSTITUTO ESPANOL DE OCEANOGRAFIA | ES |
| 5 | NATIONAL UNIVERSITY OF IRELAND, GALWAY | IE |
| 6 | UNIVERSITETET I OSLO | NO |
| 7 | THE UNIVERSITY OF WESTMINSTER | UK |
| 8 | DHI | DK |
| 9 | INSTITUTO TECNOLOXICO PARA O CONTROL DOMEDIO MARINO DE GALICIA - INTECMAR | ES |
| 10 | THE UNIVERSITY OF RHODE ISLAND | US |
| 11 | QUEEN'S UNIVERSITY BELFAST | UK |

**Activity Code:** ENV.2007.3.3.1.1. **Funding Scheme:** CP **Duration (Months):** 48

**Title:** CAse studies on the Development and Application of in-Silico Techniques for Environmental hazard and Risk assessment

**Proposed EC Grant:** 2.692.034 €

**Abstract:**

Implementation of REACH requires demonstration of the safe manufacture and use of chemicals. REACH aims to achieve a proper balance between societal, economic and environmental objectives, and attempts to efficiently use the scarce and scattered information available on the majority of substances. Thereupon REACH aims to reduce animal testing by optimized use of in silico and in vitro information on related compounds. The REACH proposals advocate the use of non-animal testing methods, but guidance is needed on how these methods should be used. The procedures include alternative methods such as chemical and biological read-across, in vitro results, in vivo information on analogues, (Q)SARs, and exposure-based waiving. The concept of Intelligent Testing Strategies for regulatory endpoints has been outlined to facilitate the assessments. Intensive efforts are needed to translate the concept into a workable, consensually acceptable, and scientifically sound strategy. CADASTER aims at providing the practical guidance to integrated risk assessment by carrying out a full hazard and risk assessment for chemicals belonging to four compound classes. A DSS will be developed that will be updated on a regular basis in order to accommodate and integrate the alternative methods mentioned above. Operational procedures will be developed, tested, and disseminated that guide a transparent evaluation of four classes of emerging chemicals, explicitly taking account of variability and uncertainty in data and in models. The main goal is to exemplify the integration of information, models and strategies for carrying out safety-, hazard- and risk assessments for large numbers of substances. Real risk estimates will be delivered according to the basic philosophy of REACH of minimizing animal testing, costs, and time. CADASTER will show how to increase the use of non-testing information for regulatory decision whilst meeting the main challenge of quantifying and reducing uncertainty.

**Partners:**

| | | |
|---|---|---|
| 1 | RIJKSINSTITUUT VOOR VOLKSGEZONDHEIDEN MILIEU*NATIONAL INSTITUTEFOR PUBLIC HEALTH AND THE ENVIRONMENTEN | NL |
| 2 | ZAVOD ZA ZDRAVSTVENO VARSTVO MARIBOR | SI |
| 3 | UNIVERSITA DEGLI STUDI DELL'INSUBRIA | IT |
| 4 | IVL SVENSKA MILJOEINSTITUTET AB | SE |
| 5 | LINNEUNIVERSITETET | SE |
| 6 | HELMHOLTZ ZENTRUM MUENCHEN DEUTSCHES FORSCHUNGSZENTRUM FUER GESUNDHEIT UND UMWELT GMBH | DE |
| 7 | IDEACONSULT LTD | BG |
| 8 | STICHTING KATHOLIEKE UNIVERSITEIT | NL |
| 9 | MIKE COMBER CONSULTING SPRL | BE |

**Activity Code:** ENV.2008.3.3.1.1. **Funding Scheme:** CSA **Duration (Months):** 36

**Title:** Risk-based management of chemicals and products in a circular economy at a global scale

**Proposed EC Grant:** 996.148 €

**Abstract:**

Many potentially hazardous compounds are traded as chemicals or incorporated as additives in products. Their release to the environment has been a concern of EC, UNO, WHO and OECD. The discussion of the assessment and management of chemicals and products led to the OECD program Globally Harmonised System of Classification and Labelling of Chemicals (GHS). The World Summit encouraged countries to implement GHS with a view of having the system operating by 2008. The need to form GHS on a global scale is part of EU policy. GHS aims to have the same criteria worldwide to classify the responsible trade and handling of chemicals and at the same time protect human health. The EU will ensure transition from the current EU Classification & Labelling (C+L) to the GHS which harmonizes with REACH. Countries like Japan and the USA announced to implement GHS in the near future. UNITAR supports other countries. However, a complete picture on the global state of implementation is not available. With the growing level of worldwide trade we however face unsafe products on the marked. Only last year reports about toys releasing hazardous components made it to headlines. Vietnam reported that all kind of plastic gets recycled and sold back to the market. This shows that global trade in a circular economy is not acceptable without globally agreed assessment methods and harmonised C+L. A ECB study revealed that the EU regulation REACH will require 3.9 mill. additional test animals if no alternative methods are accepted. The number of additional tests are unknown when GHS is implemented in a global scale. The CA RISKCYCLE will include experts from OECD, UNEP, SusChem, country experts from Asia, America and Europe. The overall objective of the project is to define with international experts future needs of R+D contributions for innovations in the field of risk-based management of chemicals and products in a global perspective using alternative testing strategies to minimize animal tests.

**Partners:**

| | | |
|---|---|---|
| 1 | TECHNISCHE UNIVERSITAET DRESDEN | DE |
| 2 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 3 | ISTITUTO DI RICERCHE FARMACOLOGICHE MARIO NEGRI | IT |
| 4 | UNIVERSITAT POLITECNICA DE CATALUNYA | ES |
| 5 | UNIVERSITEIT LEIDEN | NL |
| 6 | IVL SVENSKA MILJOEINSTITUTET AB | SE |
| 7 | UNIVERSITAT ROVIRA I VIRGILI | ES |
| 8 | TUTECH INNOVATION GMBH | DE |
| 9 | UNIVERSITA CATTOLICA DEL SACRO CUORE | IT |
| 10 | DANMARKS TEKNISKE UNIVERSITET | DK |
| 11 | BUREAU DE RECHERCHES GEOLOGIQUES ET MINIERES | FR |
| 13 | Institute of Clean Energy & Environmental Engineering, Shenyang Institute of Aeronautical Engineering | CN |
| 14 | THE ENERGY AND RESOURCES INSTITUTE | IN |
| 15 | Hanoi University of Science, Vietnam National University Hanoi | VN |
| 16 | ANKARA UNIVERSITESI | TR |
| 17 | FUNDACAO COORDENACAO DE PROJETOS PESQUISAS E ESTUDOS TECNOLOGICOS COPPETEC | BR |
| 18 | NORDECONSULT SWEDEN AB | SE |
| 19 | HOCHSCHULE FUER ANGEWANDTE WISSENSCHAFTEN | DE |

**Activity Code:** ENV.2008.3.3.3.1. **Funding Scheme:** CSA **Duration (Months):** 42

**Title:** Coordination action on Environmental Technology Verification ETV - Building a framework for international cooperation

**Proposed EC Grant:** 998.898 €

**Abstract:**

AdvanceETV aims to demonstrate that the proposed schemes and protocols for Environmental Technologies Verification systems have the potential to be recognised internationally. Thus the main objective is to develop an international framework for cooperation and mutual recognition by supporting the cooperation of international ETV activities, e.g the International Working Group (IWG). This requires support by joint coordination activities: (I) Providing a European basis for mutual recognition (II) Coordinating requirements for co-verification and joint verification (III) Developing a framework for international harmonization The European basis will be elaborated through integrating previous and on-going European RTD. This is done by bringing together protocols/verification reports out of the FP6 projects, consolidating stakeholder feedback of RTD and EC activities and by integrating experiences out of the CEN workshop agreement (CWA) elaboration and use. To raise awareness on gaps and overlaps of international cooperation a case study workshop on co- and joint verification will be initiated together with U.S. and Canadian partners. To foster recognition by harmonisation a standardisation framework will be identified to prepare the initiation of a standardisation procedure. Cross cutting issue workshops ensure feedback and exchange between these different areas. To bring forward mutual recognition, to support cooperation by co-/joint verification and harmonisation requires a strong link to international ETV activities and the IWG on ETV. A confirmed expert board with ETV system representatives from Canada, U.S., South Korea, Japan and others provides the direct link here. This concept supports the working structure of the CA: focused on a series of conferences, coordinated with international ETV activities, serving as a platform for incremental consolidation of the international framework.

**Partners:**

| | | |
|---|---|---|
| 1 | DECHEMA GESELLSCHAFT FUER CHEMISCHE TECHNIK UND BIOTECHNOLOGIE E.V. | DE |
| 2 | IVL SVENSKA MILJOEINSTITUTET AB | SE |
| 3 | DHI | DK |
| 4 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 6 | FUNDACION TECNALIA RESEARCH & INNOVATION | ES |
| 7 | ENVIRONMENT AGENCY OF ENGLAND AND WALES | UK |
| 8 | STICHTING DELTARES | NL |
| 9 | INSTYTUT EKOLOGII TERENOW UPRZEMYSLOWIONYCH | PL |
| 10 | THE BLOOM CENTRE FOR SUSTAINABILITY TECHNOLOGY CORPORATION | CA |
| 11 | BATTELLE MEMORIAL INSTITUTE CORPORATION | US |
| 12 | COMITE EUROPEEN DE NORMALISATION | BE |
| 13 | THOMAS ERTEL | DE |

**Activity Code:** ENV.2008.3.3.2.1. **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Development and application of standardized methodology for the PROspective SUstaInability assessment of TEchnologies

**Proposed EC Grant:** 4.782.196 €

**Abstract:**

The main goal of PROSUITE is to develop a framework methodology, operational methods and tools for the sustainability assessment of current and future technologies over their life cycle, applicable to different stages of maturity. The project will apply the methodology for four technology cases with close consultation of the stakeholders involved, which includes cases from biorefineries, nanotechnology, information technologies, and carbon storage and sequestration. PROSUITE will show (i) how to combine technology forecasting methods with life cycle approaches, and (ii) how to develop and possibly combine the economic, environmental and social sustainability dimensions in a standardized, comprehensive, and broadly accepted way. PROSUITE will create a solid research basis for technology characterization, including the identification of decisive technology features, basic engineering modules for estimations of material flows and energy use, and learning curves. For the economic assessment, methods for the assessment for economic and sectoral impacts of novel technologies will be developed and combined with background data for scenario-based life-cycle inventory modelling. For the environmental assessment, state-of-the-art environment indicators will be proposed together with targeted method development for the assessment of geographically explicit land and water use impacts, metal toxicity and outdoor nanoparticle exposure. For the social assessment, a set of quantitative and qualitative social indicators will be selected via participatory approaches, setting the standard for future assessments. The use of various multicriteria assessment methods will be explored to aggegrate across indicators. The methods developed will be part of a decision support system, which will be output as open source modular software.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITEIT UTRECHT | NL |
| 2 | NORGES TEKNISK-NATURVITENSKAPELIGE UNIVERSITET NTNU | NO |
| 3 | DANMARKS TEKNISKE UNIVERSITET | DK |
| 4 | DIALOGIK GEMEINNUETZIGE GESELLSCHAFT FUER KOMMUNIKATIONS- UND KOOPERATIONSFORSCHUNG mbH | DE |
| 5 | FUNDACAO DA FACULDADE DE CIENCIAS E TECNOLOGIA DA UNIVERSIDADE NOVA DE LISBOA. | PT |
| 6 | EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZURICH | CH |
| 7 | INSTITUT SYMLOG | FR |
| 9 | SUOMEN YMPARISTOKESKUS | FI |
| 10 | UNIVERSITEIT GENT | BE |
| 11 | INTERNATIONALES INSTITUT FUER ANGEWANDTE SYSTEMANALYSE | AT |
| 12 | MAGYAR TUDOMANYOS AKADEMIA SZOCIOLOGIAI KUTATOINTEZET | HU |
| 13 | UNIVERSITAT AUTONOMA DE BARCELONA | ES |
| 14 | PRE CONSULTANTS BV | NL |
| 15 | GREENDELTATC GMBH | DE |
| 16 | FOUNDATION FOR RESEARCH AND TECHNOLOGY HELLAS | EL |
| 17 | SOLVAY SA | BE |
| 18 | ORGANIC WASTE SYSTEMS NV | BE |
| 19 | NOKIA OYJ | FI |
| 21 | HEIQ MATERIALS AG | CH |
| 22 | PAUL SCHERRER INSTITUT | CH |
| 23 | SONY MOBILE COMMUNICATIONS AB | SE |
| 24 | DSM RESINS BV | NL |
| 25 | STICHTING KATHOLIEKE UNIVERSITEIT | NL |
| 26 | HYBRID PLASTICS | US |

**Activity Code:** ENV.2009.3.3.2.1 **Funding Scheme:** CP **Duration (Months):** 42

**Title:** Development and application of environmental Life Cycle Impact assessment Methods for imProved sustAinability Characterisation of Technologies

**Proposed EC Grant:** 3.413.950 €

**Abstract:**

LC-IMPACT is a 3.5-year project and its main objective is the development and application of life cycle impact assessment methods, characterisation and normalisation factors. Impact from land use, water use, marine, mineral and fossil resource use, ecotoxicity and human toxicity, and a number of non-toxic emission-related impact categories will be considered in LC-IMPACT. First, new impact assessment methods will be developed for categories that are not (commonly) included in life cycle impact assessments and categories for which model uncertainties are very high, i.e. land use, water exploitation, resource use, and noise. Second, LC-IMPACT will provide spatially explicit characterisation factors based on global scale models for land use, water exploitation, toxicants, priority air pollutants, and nutrients. Thirdly, parameter uncertainty and value choices will be assessed for impact categories with high uncertainties involved, such as ecotoxicity and human toxicity. Fourthly, ready-to-use characterisation factors will be calculated and reported. Fifthly, normalisation factors for Europe and the world will be calculated for the impact categories included. Sixthly, the improved decision support of the new characterisation factors and normalisation factors will be demonstrated in the context of the following three case studies: i) food production (fish, tomatoes, margarine), ii) paper production and printing, and iii) automobile manufacturing and operation. Finally, verification and dissemination of the new life cycle impact assessment methods and factors will be done by a portfolio of actions, such as stakeholder consultation, a project website, workshops, course developments, and training of user groups. In short, LC-IMPACT will provide improved, globally applicable life cycle impact assessment methods, characterisation and normalisation factors, that can be readily used in the daily practice of life cycle assessment studies.

**Partners:**

| | | |
|---|---|---|
| 1 | STICHTING KATHOLIEKE UNIVERSITEIT | NL |
| 2 | EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZURICH | CH |
| 3 | DANMARKS TEKNISKE UNIVERSITET | DK |
| 4 | SIK - INSTITUTET FOER LIVSMEDEL OCH BIOTEKNIK AB | SE |
| 5 | PRE CONSULTANTS BV | NL |
| 6 | INTERNATIONALES INSTITUT FUER ANGEWANDTE SYSTEMANALYSE | AT |
| 7 | UNILEVER UK CENTRAL RESOURCES LIMITED | UK |
| 8 | UNIVERSITAET STUTTGART | DE |
| 9 | Quantis Sàrl | CH |
| 10 | UNIVERSITEIT LEIDEN | NL |
| 11 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 12 | Raw Materials Group RMG AB | SE |
| 13 | GRAFISK ARBEJDSGIVERFORENING | DK |
| 14 | DAIMLER AG | DE |
| 15 | INSTITUT DE RECERCA I TECNOLOGIA AGROALIMENTARIES. | ES |
| 16 | UNIVERSITAET BAYREUTH | DE |

**Activity Code:** ENV.2009.3.3.1.1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** CHEMICAL SUBSTANCE IN VITRO/IN SILICO SCREENING SYSTEM TO PREDICT HUMAN- AND ECOTOXICOLOGICAL EFFECTS

**Proposed EC Grant:** 3.496.723 €

**Abstract:**

The current system of risk assessment of chemicals is complex, very resource-intensive and extremely time-consuming. Because of this, there is a great need to modernize this process. However, this is not feasible without alternative, integrated testing strategies in which chemical characteristics are used to more advantage and where costly and time consuming animal tests are replaced to a large extent by more rapid, cheap and ethically less controversial methods. This is particularly needed for reproductive toxicity testing of chemicals. Reproductive toxicity is important to assess both human and environmental toxicity and uses the most animals in toxicity testing. Unfortunately, there are very few alternative methods. ChemScreen aims to fill this gap and place the tests in a more general innovative animal-free testing strategy. For this, we will generate a simple rapid screening system, which aims at widespread implementation within the tight time schedule of the REACH program. It will be a flexible tool that can be adapted and used for applications beyond the scope of REACH and in the post-REACH period. It will use in silico methods for prescreening chemicals for all relevant toxic effects. When found positive, this will be followed by further in silico and in vitro tests, most of which are available already. To fill the gap of suitable alternative methods for reproductive toxicity testing we will use a novel high throughput approach combining in silico/in vitro methods. In this approach we will combine knowledge of critical processes affected by reproductive toxicants with knowledge on the mechanistic basis of such effects. Straightforward data interpretation and decision trees will be developed in which all information on the potential toxicity of a chemical is considered. In this way we will provide a cost-effective means to generate a basic set of data on toxicological properties of chemicals and a decision tool to assess if further testing of chemicals is required.

**Partners:**

| | | |
|---|---|---|
| 1 | BioDetection Systems B.V. | NL |
| 2 | FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V | DE |
| 3 | NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO | NL |
| 4 | SIMPPLE S.L. | ES |
| 5 | RIJKSINSTITUUT VOOR VOLKSGEZONDHEIDEN MILIEU*NATIONAL INSTITUTEFOR PUBLIC HEALTH AND THE ENVIRONMENTEN | NL |
| 7 | DANMARKS TEKNISKE UNIVERSITET | DK |
| 10 | PROCTER & GAMBLE EUROCOR N.V. | BE |
| 11 | EBERHARD KARLS UNIVERSITAET TUEBINGEN | DE |
| 12 | UNIVERSITAT KONSTANZ | DE |

**Activity Code:** ENV.2010.3.3.2-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Boosting Life Cycle Assessment Use in European Small and Medium-sized Enterprises: Serving Needs of Innovative Key Sectors with Smart Methods and Tools

**Proposed EC Grant:** 3.499.802 €

**Abstract:**

"LCA to go" develops sectoral methods and tools for bio-based plastics, industrial machinery, electronics, renewable energy, sensors and smart textiles. These sectors have been chosen, as the manufacturers show a high interest in making clear the environmental benefits of their products to customers ("Green industries") and in prioritizing so they can reduce their environmental impacts. This is particularly the case for SMEs. Free webtools ("apps") will serve dedicated needs of these sectors, addressing the specifics of the technologies and implementing parameterised models, such as calculators for energy-break-even-point of photovoltaics, Product Carbon Footprints (PCF) based on technology parameters of printed circuit boards, and Key Environmental Performance Indicators (KEPIs) for smart textiles. Selected Product Category Rules will be developed to provide a robust LCA guidance for SMEs. Practically, the project website will provide an exchange of scientifically validated data templates, to assist SMEs to pass the right questions to their suppliers. Carbon Footprints are a perfect entry point for SMEs to LCA strategies. Thus, implementation of an SME-compatible PCF methodology is a key element of the project. The approaches will be tested in 7 sectoral case studies, involving suppliers, end-product manufacturers and engineering companies. Inter-linkages between the sectors (on a technical and data level) will be thoroughly addressed. A broad dissemination campaign includes a mentoring programme for 100 SMEs, which will act as showcases for others, boosting use of LCA approaches among European SMEs at large. RTD and dissemination activities will be complemented by policy recommendations and liaison with standardisation activities. The web-tools, being compatible with ILCD data and other external sources, will be made available as open source software, to be adapted to other sectors. The project will have a direct impact on sectors representing nearly 500,000 SMEs.

**Partners:**

| | | |
|---|---|---|
| 1 | FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V | DE |
| 2 | TECHNISCHE UNIVERSITAET WIEN | AT |
| 3 | INSTYTUT TELE- I RADIOTECHNICZNY | PL |
| 4 | TECHNISCHE UNIVERSITEIT DELFT | NL |
| 5 | SIMPPLE S.L. | ES |
| 6 | CARDIFF METROPOLITAN UNIVERSITY | UK |
| 7 | INSTITUTO TECNOLOGICO DEL EMBALAJE, TRANSPORTE Y LOGISTICA | ES |
| 8 | SIRRIS HET COLLECTIEF CENTRUM VAN TECHNOLOGISCHE INDUSTRIE VZW | BE |
| 9 | EUSKAL HERRIKO ELEKTRONIKA ETA INFORMAZIO | ES |
| 10 | MULTIMEDIA COMPUTER SYSTEM LTD | IE |
| 11 | Future Shape GmbH | DE |
| 12 | ELDOS SP ZOO | PL |
| 13 | TAIPRO ENGINEERING SA | BE |
| 14 | TRAMA TECNOAMBIENTAL S.L. | ES |
| 15 | VALSAY S.L. | ES |
| 16 | Carl Diver Advanced Manufacturing Consulting Limited | IE |
| 17 | INDUSTRIAL TECHNOLOGY RESEARCH INSTITUTE INCORPORATED | TW |
| 18 | United Microelectronics Corporation LTD | TW |

**Activity Code:** ENV.2010.3.3.1-1 **Funding Scheme:** CSA **Duration (Months):** 24

**Title:** EUROPEAN NETWORK FOR ALTERNATIVE TESTING STRATEGIES IN ECOTOXICOLOGY

**Proposed EC Grant:** 962.257 €

**Abstract:**

EUROECOTOX is a Coordination Action which aims at supporting and accelerating the development and use of alternative ecotoxicology methods and strategies in Europe in order to reduce or replace the use of laboratory animals, particularly those used for regulatory testing. For this, a network will be created (EUROECOTOX network) formed by European R&D groups from universities, public research institutions, animal welfare organizations, specialized ecotoxicological laboratories, industry and other stakeholders, developing alternative test methods.EUROECOTOX network will promote the cooperation between research centres, industry and other stakeholders in Europe devoted to the R&D and application of alternative ecotoxicity methods. It will aim at the integration of efforts and the exchange of knowledge, data and expertise between partners to accelerate the R&D, and validation of new methods. Planned activities includes: Mapping of European research capacities on alternative ecotoxicological test methods, identification of the rate-limiting steps to reduce or replace the use of animals, identification and promotion of new alternative methods, recommendations for future research, promotion of the dialogue with validation agencies and other coordination and networking activities. Elaboration of different documents and publications and launching a dedicated website is also planned. A final Conference open to all the stakeholders, will be organized to disseminate the results. Networking with ongoing activities of other European projects supporting R&D on alternative methods and with other relevant international, European and national R&D and initiatives is also expected.This Coordination Action will be carried out over two years by a consortium composed of eight partners with complementary background, but the EUROECOTOX network is expected to last over a longer term.

**Partners:**

| | | |
|---|---|---|
| 1 | ZF BIOLABS SL | ES |
| 2 | HELMHOLTZ-ZENTRUM FUER UMWELTFORSCHUNG GMBH - UFZ | DE |
| 3 | EIDGENOESSISCHE ANSTALT FUR WASSERVERSORGUNG ABWASSERREINIGUNG UND GEWAESSERSCHUTZ | CH |
| 4 | VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V. | BE |
| 5 | RUPRECHT-KARLS-UNIVERSITAET HEIDELBERG | DE |
| 6 | NOTOX BV | NL |
| 7 | CENTRE EUROPEEN D'ECOTOXICOLOGIE ET DE TOXICOLOGIE DES PRODUITS CHIMIQUES | BE |
| 8 | MASARYKOVA UNIVERZITA | CZ |

**Activity Code:** GC.ENV.2011.3.1.3-2 **Funding Scheme:** CSA **Duration (Months):** 12

**Title:** E-Mobility Life Cycle Assessment Recommendations

**Proposed EC Grant:** 487.610 €

**Abstract:**

The eLCAr (E-Mobility Life Cycle Assessment Recommendations) project aims at supporting the process of assessing the environmental impact of electric vehicles. In order to do so a set of guidelines derived from the ILCD Handbook and adapted to the specific requirements of the projects of the Green Cars PPP is designed. This set of guidelines will be benchmarked according to a set of criteria such as applicability, practicability and ease of use and disseminated in an up to date fashion relying on interactive and online training materials.The guidelines will answer questions of how to treat ambiguities in the analysis of all aspects of electric mobility. They also provide a coherent benchmark framework enabling an ecological comparison of electric vehicles with other technological such as bio-fuel propelled cars and hydrogen based mobility. The project work plan reflects the broad range of topics such as battery and electric component production, typical vehicle utilization and driving cycles, interaction between electricity storage, power generation and grid services, as well as end of life and recycling by covering the different stages of an EV's life.Stakeholders will be actively involved in the process, either by taking part in a number of input workshops or by participating in the project's advisory board, which will ensure the crucial feedback from practitioners in the industry. Special attention will be paid to the requirements of participants of the Green Car Initiative, of which some stakeholders have already declared their support for and willingness to assist the project.Furthermore, the eLCAr project will develop training materials and concepts which will facilitate a swift and sustainable diffusion of the results into the respective stakeholder groups. Thus different learning and teaching concepts from self-learning materials to an interactive online platform are utilized to address as many different types of stakeholders and preferences as possible.

**Partners:**

| | | |
|---|---|---|
| 1 | RHEINISCH-WESTFAELISCHE TECHNISCHE HOCHSCHULE AACHEN | DE |
| 2 | IFU INSTITUT FUR UMWELTINFORMATIK HAMBURG GMBH | DE |
| 3 | EIDGENOESSISCHE MATERIALPRUEFUNGS- UND FORSCHUNGSANSTALT | CH |
| 4 | TECHNISCHE UNIVERSITAET BRAUNSCHWEIG | DE |

**Activity Code:** ENV.2007.4.1.3.2. **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Integration and enhancement of key existing European deep-ocean observatories

**Proposed EC Grant:** 3.482.601 €

**Abstract:**

At present there are a number of fixed point observatories that autonomously measure biological, chemical and physical variables in the oceans around Europe. These operate at various levels of sophistication but in a largely uncoordinated and fragmented manner. There is no agreed set of basic variables and common data protocols are not followed. EuroSITES has two main objectives: 1: To enhance the existing deep ocean observatories thus forming a coherent European network. This will then provide a clear and relevant description of the time varying properties of the ocean system. 2: To perform a small number of specific science missions that will, in the future, form the basis for greatly improved and novel monitoring capability. The work we propose addresses directly and explicitly the vision of GEOSS. We will address this in the context of the time changing properties of the ocean interior, seafloor and sub seafloor around Europe. EuroSITES will promote links with other international observation networks such as the network envisioned under the U.S. National Science Foundation's Ocean Observatories Initiative (OOI). Long-term time-series data offer some of the most important insights into the ways our oceans are changing. Crucially important processes occur on time scales that can not be observed by ships and in the deep parts of the ocean that are outside the reach of satellites. Sustained in situ observations are therefore required to provide high quality data on climatically and ecologically relevant variables at a few key locations. EuroSITES is the means to achieve this.

**Partners:**

| | | |
|---|---|---|
| 1 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 2 | UNIVERSITETET I BERGEN | NO |
| 3 | HELLENIC CENTRE FOR MARINE RESEARCH | EL |
| 4 | ISTITUTO NAZIONALE DI OCEANOGRAFIA E DI GEOFISICA SPERIMENTALE - OGS | IT |
| 5 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 6 | LEIBNIZ-INSTITUT FUER MEERESWISSENSCHAFTEN AN DER UNIVERSITAET KIEL | DE |
| 7 | THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN | UK |
| 8 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 9 | INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER | FR |
| 10 | SOPAB BREST SA | FR |
| 11 | INSTITUTO CANARIO DE CIENCIAS MARINAS | ES |
| 12 | INSTITUTO NACIONAL DE DESENVOLVIMENTO DAS PESCAS | CV |
| 13 | UNIVERSIDAD DE LAS PALMAS DE GRAN CANARIA | ES |

**Activity Code:** ENV.2007.4.1.4.3. **Funding Scheme:** CSA **Duration (Months):** 41

**Title:** GEONETCast for and by Developing countries

**Proposed EC Grant:** 1.852.527 €

**Abstract:**

The DevCoCast project aims at involving Developing Countries in the GEONETCast initiative. Many Developing Countries are exposed to serious environmental risks and their need for adequate information is high. Unfortunately, reliable and continuous access to real time environmental information is often lacking. The GEONETCast concept overcomes existing telecommunication limitations and is able to provide reliable and fast access to environmental information. The DevCoCast project will 1. disseminate existing environmental added-value datasets (both in-situ and satellite based) from various sources in Africa, South- and Central America and Europe in (near) real time and at no cost via GEONETCast to a broad range of user communities in Developing Countries and 2. promote and support the use of these products. By utilizing the existing EUMETCast dissemination system, we can directly take benefit from the operational infrastructures and from a well developed user base in Africa and South-America. This enables us to focus our effort on the support of the use of the data and building up and maintaining the capacity in Developing Countries which includes training, workshops, networking and outreach. The project sets up a number of pilot cases in Africa, South- and Central America and Asia and is conceived to have a big impact with a limited budget, by building upon existing production (SPOT-VEGETATION a.o.) and dissemination infrastructures (EUMETCast, FengYunCast), existing research projects (GEOLAND, VGT4AFRICA, MERSEA, GOOS, YEOS a.o.) and servicing all relevant environmental end-user communities. The ultimate ambition is to introduce and embed the GEONETCast data in a systematic manner into reporting systems in support of planning and decision making processes. This effort will enable authorities in Developing Countries in fulfilling their increasing monitoring and reporting obligations and help them to better manage their natural resources.

**Partners:**

| | | |
|---|---|---|
| 1 | VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V. | BE |
| 2 | AFRICAN CENTRE OF METEOROLOGICAL APPLICATION DEVELOPMENT | NE |
| 3 | CENTRE REGIONAL AGRHYMET | NE |
| 4 | Companhia Nacional de Abastecimento | BR |
| 5 | UNIVERSIDAD NACIONAL DE CORDOBA | AR |
| 6 | COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH | ZA |
| 7 | DANMARKS METEOROLOGISKE INSTITUT | DK |
| 8 | EMPRESA BRASILEIRA DE PESQUISA AGROPECUARIA | BR |
| 9 | THE EUROPEAN ORGANISATION FOR THE EXPLOITATION OF METEOROLOGICAL SATELLITES | DE |
| 10 | INSTITUTO NACIONAL DE PESQUISAS ESPACIAIS | BR |
| 11 | INSTITUTO NACIONAL DE TECNOLOGIA AGROPECUARIA | AR |
| 12 | UNIVERSITEIT TWENTE | NL |
| 13 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 14 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 16 | UNIVERSITY OF CAPE TOWN | ZA |
| 17 | PLYMOUTH MARINE LABORATORY | UK |

**Activity Code:** ENV.2007.4.1.3.3. **Funding Scheme:** CP **Duration (Months):** 42

**Title:** Regional pilot platform as EU contribution to a Global Soil Observing System

**Proposed EC Grant:** 2.599.914 €

**Abstract:**

Soil and land information is needed for a wide range of applications but available data are often inaccessible, incomplete, or out of date. GEOSS plans a global Earth Observation System and, within this framework, the e-SOTER project addresses the felt need for a global soil and terrain database. As the European contribution to a Global Soil Observing System, it will deliver a web-based regional pilot platform with data, methodology, and applications, using remote sensing to validate, augment and extend existing data. Technical barriers that have to be overcome include: quantitative mapping of landforms; soil parent material and soil attribute characterization and pattern recognition by remote sensing; standardization of methods and measures of soil attributes to convert legacy data. Two major research thrusts involve: 1) improvement of the current SOTER methodology at scale 1:1 million in four windows in Europe, China and Morocco. Moderate-resolution optical remote sensing will be combined existing parent material/geology and soil information, making use of advanced statistical procedures; 2) within 1:250 000-scale pilot areas, advanced remote sensing applications will be developed - geomorphic landscape analysis, geological re-classified remote sensing, and remote sensing of soil attributes. Advances beyond the state of the art include: transformation of pre-existing data and addition of new information with remote sensing and DEM; interpretations of the e-SOTER database that address threats defined in the EU Soil Thematic Strategy and comparing the results with current assessments; and delivery through a web service of a data portal. e-SOTER will deliver a Pilot Platform and a portal that provides open access to: 1) a methodology to create 1:1 million-scale SOTER databases, and an enhanced soil and terrain database at scale 1:1 million for the four windows; 2) an artifact-free 90m digital elevation model; 3) methodologies to create 1:250 000-scale enhanced SOTER databases, and the databases themselves for four pilots; 4) advanced remote sensing techniques to obtain soil attribute data; 5) validation and uncertainty propagation analysis; 6) dedicated applications related to major threats to soil quality and performance.

**Partners:**

| | | |
|---|---|---|
| 1 | STICHTING INTERNATIONAL SOIL REFERENCE AND INFORMATION CENTRE | NL |
| 2 | MISKOLCI EGYETEM | HU |
| 3 | BUNDESANSTALT FUR GEOWISSENSCHAFTEN UND ROHSTOFFE | DE |
| 4 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 5 | CRANFIELD UNIVERSITY | UK |
| 6 | ALTERRA B.V. | NL |
| 7 | SZENT ISTVAN EGYETEM | HU |
| 8 | SCILANDS GMBH - GESELLSCHAFT ZUR BEARBEITUNG DIGITALER LANDSCHAFTEN | DE |
| 9 | INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE | FR |
| 10 | THE UNIVERSITY OF NOTTINGHAM | UK |
| 11 | CESKA ZEMEDELSKA UNIVERSZITA V PRAZE | CZ |
| 12 | INSTITUTE OF SOIL SCIENCE CHINESE ACADEMY OF SCIENCES | CN |
| 13 | ECOLE NATIONALE D'AGRICULTURE DE MEKNES | MA |
| 14 | WAGENINGEN UNIVERSITEIT | NL |
| 15 | INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE | MA |

**Activity Code:** ENV.2007.4.1.1.1. **Funding Scheme:** CSA **Duration (Months):** 42

**Title:** Coordination Action Carbon Observation System

**Proposed EC Grant:** 1.747.683 €

**Abstract:**

COCOS will assess the status of harmonization of key carbon cycle variables with international partners. It will improve the interoperability of data sets that are used in global scale carbon cycle studies through joint activities between ecosystem, atmospheric and ocean bottom-up and top down observation communities. COCOS will also perform integrated regional-scale multiple constraint assessments of the land and ocean carbon balance through the use of harmonized data sets. It will identify, narrow down uncertainties and decrease differences in emerging global data sets that are aimed at providing constraints on the vulnerability of the global carbon cycle. COCOS will thus contribute to the implementation and improvement of global observing systems. It will organize a large international conference to demonstrate the status and way ahead of global carbon observations in light of monitoring requirements for GEO and the implementation of future climate change mitigation commitments. As such, it will contribute to an effective monitoring of the carbon cycle at global level as recommended by GEO and GCOS in supporting the European participation to an international CO2 research monitoring project. The research and harmonization work developed in this proposal will contribute significantly to building an integrated global approach that promotes close collaboration with the international carbon cycle research community.

**Partners:**

| | | |
|---|---|---|
| 1 | VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG | NL |
| 2 | UNIVERSITETET I BERGEN | NO |
| 3 | MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. | DE |
| 4 | UNIVERSITA DEGLI STUDI DELLA TUSCIA | IT |
| 5 | LEIBNIZ-INSTITUT FUER MEERESWISSENSCHAFTEN AN DER UNIVERSITAET KIEL | DE |
| 6 | UNIVERSITE DE LIEGE | BE |
| 7 | COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES | FR |
| 8 | ALFRED-WEGENER-INSTITUT FUER POLAR- UND MEERESFORSCHUNG | DE |
| 9 | UNIVERSITY OF EAST ANGLIA | UK |
| 11 | UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION -UNESCO | FR |
| 12 | JOHANN HEINRICH VON THUENEN-INSTITUT, BUNDESFORSCHUNGSINSTITUT FUER LANDLICHE RAUME, WALD UND FISCHEREI | DE |

**Activity Code:** ENV.2007.4.1.1.2. **Funding Scheme:** CP **Duration (Months):** 48

**Title:** European Biodiversity Observation Network; a project to design and test a biodiversity observation system integrated in time and space

**Proposed EC Grant:** 2.701.985 €

**Abstract:**

The key challenge addressed in the present proposal is to develop a biodiversity observation system that is transmissible, cost effective and provides added value to the currently independent data sources of in situ data and EO. There are three requirements: the production of protocols to enable extant data to be placed on a common framework for analysis; the provision of a sound scientific conceptual basis for the system that will provide a robust statistical structure for analytical tests and for the eventual estimates of stock and change and the provision of a system for estimating past change and monitoring as well as enabling forecasting of future options so that policy makers can generate appropriate strategies for mitigation. The present consortium has a major advantage in that the framework is based on existing institutional collaboration which has been developed in the EU project ALTERNET. This framework will ensure continuity of recording and shows an existing commitments of the institutes concerned to long term monitoring. It will also provide the necessary structure for integration of available data.. This network already has long term data sets for biodiversity indicators eg butterflies and birds but the ambition is to convert these from site specific measures through inter-calibration to the wider European picture, using tried and tested statistical procedures. The key work package will involve inter-calibration between EO and in situ data,which will involve habitats that can be linked to specific biodiversity indicators. These will be identified using a conceptual framework developed in another work package. The target is to provide a basis for up and down scaling that can be tested to show the added value of integration. Other work packages will provide protocols to place data onto a common framework tests of validation and stratification procedures for assessing the consistency of data coverage.

**Partners:**

| | | |
|---|---|---|
| 1 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 2 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 3 | HELMHOLTZ-ZENTRUM FUER UMWELTFORSCHUNG GMBH - UFZ | DE |
| 4 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 5 | UMWELTBUNDESAMT GMBH | AT |
| 6 | UNIVERSITATEA DIN BUCURESTI | RO |
| 7 | INSTITUT NATIONAL DE RECHERCHE EN SCIENCES ET TECHNOLOGIES POUR L'ENVIRONNEMENT ET L'AGRICULTURE | FR |
| 8 | INSTITUUT VOOR NATUUR EN BOSONDERZOEK | BE |
| 9 | THE UNIVERSITY OF EDINBURGH | UK |
| 10 | ISRAEL NATURE AND NATIONAL PARKS PROTECTION AUTHORITY | IL |
| 11 | STIFTELSEN NORSK INSTITUTT FOR NATURFORSKNING | NO |
| 12 | INSTITUTE OF LANDSCAPE ECOLOGY OF THE SLOVAK ACADEMY OF SCIENCES | SK |
| 13 | ARISTOTELIO PANEPISTIMIO THESSALONIKIS | EL |
| 14 | EESTI MAAULIKOOL | EE |
| 15 | UNIVERSIDAD POLITECNICA DE MADRID | ES |
| 17 | SVERIGES LANTBRUKSUNIVERSITET | SE |
| 18 | UNIVERSITAET WIEN | AT |
| 19 | COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH | ZA |

**Activity Code:** ENV.2007.4.1.4.1. **Funding Scheme:** CSA **Duration (Months):** 36

**Title:** African-European Georesources Observation System

**Proposed EC Grant:** 1.930.996 €

**Abstract:**

Africa, the largest single component of the African Caribbean Pacific (ACP) Group of States, despite its huge potential for development through both human and georesources, suffers in many places from poverty and underdevelopment. The sustainable use of its resources is a key issue, not only for development of the African countries, but also for the world's future. Over the coming decades, these issues are likely to play an ever-increasing role due to the world's growing population, rapid urban development and the rising demand for better infrastructure and services. The sustainable use of georesources requires a knowledge based on data, information and expertise. Thus, the availability, traceability, accessibility and processing using GIS technologies of heterogeneous data from multiple sources is essential. Such processing requires a qualified and experienced personnel and the definition of strategies for capacity building and training. In view of this situation, a recognised need has emerged for a shared, distributed, Internet-linked georesources observation system, based on open standards and interoperability developments, as a contribution to the sustainable development of African countries. The Support Action is the preparatory phase needed to design the African-European Georesource Observation System (AEGOS) capable of hosting and providing access to Africa's geological resources, including groundwater, energy, raw materials and mineral resources. Its objectives are to define: i) operational procedures for data management (Spatial Data Infrastructure, metadata and data specification), ii) user-oriented products and services including the preparation of innovative spin off projects based on AEGOS and an evaluation of the input of Interoperability and interdisciplinary in support of GEOSS iii) the African- European partner network, iv) a geoscience contribution to GEOSS, in the context of INSPIRE

**Partners:**

| | | |
|---|---|---|
| 1 | BUREAU DE RECHERCHES GEOLOGIQUES ET MINIERES | FR |
| 3 | CESKA GEOLOGICKA SLUZBA | CZ |
| 4 | GEOLOGIAN TUTKIMUSKESKUS | FI |
| 5 | CENTRE INTERNATIONAL POUR LA FORMATION ET LES ECHANGES EN GEOSCIENCES | FR |
| 6 | INSTITUT DE RECHERCHE POUR LE DEVELOPPEMENT | FR |
| 7 | BUNDESANSTALT FUR GEOWISSENSCHAFTEN UND ROHSTOFFE | DE |
| 8 | BEAK CONSULTANTS GMBH | DE |
| 9 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 10 | PANSTWOWY INSTYTUT GEOLOGICZNY | PL |
| 11 | NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO | NL |
| 12 | INSTITUTO NACIONAL DE ENGENHARIA, TECNOLOGIA E INOVACAO | PT |
| 13 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 14 | The Southern and Eastern African Mineral centre | TZ |
| 15 | UNION ECONOMIQUE ET MONETAIRE OUEST AFRICAINE | BF |
| 17 | COUNCIL FOR GEOSCIENCE | ZA |
| 18 | Geological Survey and Mines | UG |
| 19 | Ministère des Mines et de l'Industrie | SN |
| 20 | UNIVERSITY OF ZAMBIA | ZM |
| 21 | Geological Survey of Ethiopia | ET |
| 22 | UNIVERSITY OF DAR ES SALAAM | TZ |
| 23 | Geological Survey Department | GH |
| 24 | Ministère des Mines et de la Géologie | GN |
| 25 | INSTITUT ROYAL DES SCIENCES NATURELLES DE BELGIQUE | BE |

**Activity Code:** ENV.2007.4.1.3.2. **Funding Scheme:** CP **Duration (Months):** 54

**Title:** Acoustic Technology for observing the interior of the Arctic Ocean

**Proposed EC Grant:** 3.000.000 €

**Abstract:**

ACOBAR will develop an observing system for the interior of the Arctic Ocean based on underwater acoustic methods including tomography, data transmission and communication to/from underwater platforms, and navigation of gliders. ACOBAR offers complementary methods to the ARGO system, which has limited capability in ice-covered seas. Data collection and transmission from the water column, the seafloor and the subseafloor will be possible in ice-covered seas based on research conducted in ACOBAR. The research will contribute to filling gaps in the global ocean observing system and thereby support the development of GEOSS. ACOBAR will implement field experiments with acoustic sources and receivers as well as gliders in the Fram Strait. Acoustic travel time data will be used to obtain integrated 3-D fields of temperature, transports and heat fluxes. Long-range acoustic navigation commands will be tested to operate gliders. Data transmission from fixed moorings via acoustic modems to the surface for downloading from ships or for satellite transmission will be implemented. The existing array of acoustic sources from ice-tethered platforms in the Arctic Ocean will be tested for tomographic measurements of water mass properties. Data from tomography arrays and other underwater platforms will be disseminated to users with near real-time capability, including assimilation in ocean models. ACOBAR will extend and improve methods for underwater data collection that was first tested in DAMOCLES IP. The acoustic technologies in ACOBAR aim to be used for transmission of multidisciplinary data from underwater observatories developed in ESONET NoE. Transfer of technology and know-how from USA to Europe and between industry and research institutes will take place, with exchange of scientists, workshops and meetings between scientists, engineers and students. The consortium consists of 9 partners, of which three are SMEs and six are research and educational institutions.

**Partners:**

| | | |
|---|---|---|
| 1 | STIFTELSEN NANSEN SENTER FOR FJERNMAALING | NO |
| 2 | ALFRED-WEGENER-INSTITUT FUER POLAR- UND MEERESFORSCHUNG | DE |
| 3 | UNIVERSITE PIERRE ET MARIE CURIE - PARIS 6 | FR |
| 4 | UNIVERSITY OF CALIFORNIA SAN DIEGO | US |
| 5 | WOODS HOLE OCEANOGRAPHIC INSTITUTION | US |
| 6 | OPTIMARE SENSORSYSTEME AG | DE |
| 7 | ECOLE NATIONALE SUPERIEURE DES INGENIEURS DES ETUDES ET TECHNIQUES D'ARMEMENT | FR |
| 8 | AQUATEC TELEMETRY LIMITED | UK |
| 9 | ARCHITECTURE ET CONCEPTION DE SYSTEMES AVANCES | FR |

**Activity Code:** ENV.2007.4.1.4.2. **Funding Scheme:** CP **Duration (Months):** 60

**Title:** Coordinated Asia-European long-term Observing system of Qinghai – Tibet Plateau hydro-meteorological processes and the Asian-monsoon systEm with Ground satellite Image data and numerical Simulations

**Proposed EC Grant:** 3.403.076 €

**Abstract:**

Human life and the entire ecosystem of South East Asia depend upon the monsoon climate and its predictability. More than 40% of the earth's population lives in this region. Droughts and floods associated with the variability of rainfall frequently cause serious damage to ecosystems in these regions and, more importantly, injury and loss of human life. The headwater areas of seven major rivers in SE Asia, i.e. Yellow River, Yangtze, Mekong, Salween, Irrawaddy, Brahmaputra and Ganges, are located in the Tibetan Plateau. Estimates of the Plateau water balance rely on sparse and scarce observations that cannot provide the required accuracy, spatial density and temporal frequency. Fully integrated use of satellite and ground observations is necessary to support water resources management in SE Asia and to clarify the roles of the interactions between the land surface and the atmosphere over the Tibetan Plateau in the Asian monsoon system. The goal of this project is to: 1. Construct out of existing ground measurements and current / future satellites an observing system to determine and monitor the water yield of the Plateau, i.e. how much water is finally going into the seven major rivers of SE Asia; this requires estimating snowfall, rainfall, evapotranspiration and changes in soil moisture; 2. Monitor the evolution of snow, vegetation cover, surface wetness and surface fluxes and analyze the linkage with convective activity, (extreme) precipitation events and the Asian Monsoon; this aims at using monitoring of snow, vegetation and surface fluxes as a precursor of intense precipitation towards improving forecasts of (extreme) precipitations in SE Asia. A series of international efforts initiated in 1996 with the GAME-Tibet project. The effort described in this proposal builds upon 10 years of experimental and modeling research and the consortium includes many key-players and pioneers of this long term research initiative.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITE DE STRASBOURG | FR |
| 2 | UNIVERSITEIT TWENTE | NL |
| 3 | ARIESPACE SRL | IT |
| 4 | UNIVERSITAET BAYREUTH | DE |
| 5 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 6 | UNIVERSITAT DE VALENCIA | ES |
| 7 | INSTITUTE OF TIBETAN PLATEAU RESEARCH CHINESE ACADEMY OF SCIENCES | CN |
| 8 | CHINESE ACADEMY OF METEOROLOGICAL SCIENCES | CN |
| 9 | BEIJING NORMAL UNIVERSITY | CN |
| 11 | UNIVERSITY OF TSUKUBA | JP |
| 12 | WATERWATCH BV | NL |
| 13 | COLD AND ARID REGIONS ENVIRONMENTALAND ENGINEERING RESEARCH INSTITUTE | CN |
| 14 | UNIVERSITA DEGLI STUDI DI FERRARA | IT |
| 15 | INSTITUTE OF GEOGRAPHICAL SCIENCES AND NATURAL RESOURCES RESEARCH, CHINESE ACADEMY OF SCIENCES | CN |
| 16 | INSTITUTE OF REMOTE SENSING APPLICATIONS | CN |
| 17 | FUTUREWATER BV | NL |
| 18 | TECHNISCHE UNIVERSITEIT DELFT | NL |
| 19 | National Institute of Technology Rourkela | IN |

**Activity Code:** ENV.2008.4.1.2.1. **Funding Scheme:** CP **Duration (Months):** 36

**Title:** In situ monitoring of oxygen depletion in hypoxic ecosystems of coastal and open seas, and land-locked water bodies

**Proposed EC Grant:** 3.499.711 €

**Abstract:**

Hypoxic (low oxygen) conditions in aquatic ecosystems increase in number, duration and extent due to global warming and eutrophication. Global warming will lead to degassing of oxygen, increased stratification, reduced deep-water circulation and changes in wind patterns affecting transport and mixing. Projected increases in hypoxia (e.g. doubling of “dead zones”) are accompanied by enhanced emission of greenhouse gases, losses in biodiversity, ecosystem functions and services such as fisheries, aquaculture and tourism. A better understanding of global changes in oxygen depletion requires a global observation system continuously monitoring oxygen at high resolution, including assessment of the role of the seafloor in controlling the sensitivity of aquatic systems to and recovery from hypoxia. Here we propose to monitor oxygen depletion and associated processes in aquatic systems that differ in oxygen status or sensitivity towards change: open ocean, oxic with high sensitivity to global warming (Arctic), semi-enclosed with permanent anoxia (Black Sea, Baltic Sea) and seasonally or locally anoxic land-locked systems (fjords, lagoons, lakes) subject to eutrophication. We will improve the capacity to monitor oxygen depletion globally, by implementing reliable long-term sensors to different platforms for in situ monitoring; and locally by training and implementing competence around the Black Sea. Our work will contribute to GEOSS tasks in the water, climate, ecosystem and biodiversity work plans, and comply to GEOSS standards by sharing of observations and products with common standards and adaptation to user needs using a state of the art world data centre. We will connect this project to the GOOS Regional Alliances and the SCOR working group and disseminate our knowledge to local, regional and global organisations concerned with water and ecosystem health and management.

**Partners:**

| | | |
|---|---|---|
| 1 | MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. | DE |
| 2 | ALFRED-WEGENER-INSTITUT FUER POLAR- UND MEERESFORSCHUNG | DE |
| 3 | EIDGENOESSISCHE ANSTALT FUR WASSERVERSORGUNG ABWASSERREINIGUNG UND GEWAESSERSCHUTZ | CH |
| 4 | A.O. KOVALEVSKIY INSTITUTE OF BIOLOGY OF SOUTHERN SEAS | UA |
| 5 | LEIBNIZ-INSTITUT FUER MEERESWISSENSCHAFTEN AN DER UNIVERSITAET KIEL | DE |
| 6 | INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER | FR |
| 7 | ISTITUTO NAZIONALE DI GEOFISICA E VULCANOLOGIA | IT |
| 8 | INSTITUT FUER OSTSEEFORSCHUNG WARNEMUENDE AN DER UNIVERSITAET ROSTOCK | DE |
| 9 | ISTANBUL TEKNIK UNIVERSITESI | TR |
| 10 | UNIVERSITAET BREMEN | DE |
| 11 | THE SCOTTISH ASSOCIATION FOR MARINE SCIENCE | UK |
| 12 | GOETEBORGS UNIVERSITET | SE |
| 13 | UNIVERSITY OF PATRAS | EL |
| 14 | HELMHOLTZ-ZENTRUM GEESTHACHT ZENTRUM FUR MATERIAL- UND KUSTENFORSCHUNG GMBH | DE |
| 15 | INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE PENTRU GEOLOGIE SI GEOECOLOGIE MARINA-GEOECOMAR | RO |
| 16 | KONINKLIJKE NEDERLANDSE AKADEMIE VAN WETENSCHAPPEN - KNAW | NL |

**Activity Code:** ENV.2008.4.1.3.1. **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Earth Observation for monitoring and assessment of the environmental impact of energy use

**Proposed EC Grant:** 6.010.977 €

**Abstract:**

The main objective of the EnerGEO project is to develop a strategy for a global assessment of the current and future impact of the exploitation of energy resources on the environment and ecosystems and to demonstrate this strategy for a variety of energy resources worldwide. The global observation strategy will be developed to appropriately assess the impacts of current and future transitions in energy-use on the environment by a combination of: • models already available for the different sources of energ: TASES, REMIX and MESSAGE • existing global datasets from which environmental indicators will be derived to quantify changes to freshwater systems, biosphere, ecosystems, atmosphere and oceans. • existing and currently developed models capable of assessing and forecasting environmental impacts and costs of energy exploitation. By developing a distributed system based on the recommendations of the GEO-Architecture and Data Committee global collection and dissemination of data relating to the effect of energy use on the environment will be supported. By including members of the Energy-Community of Practice of GEO, sustained contribution of the GEO-tasks EN-07-02 and EN-07-3 will be realised. The project takes the testing and demonstration of the observing system and developed scenarios through the execution of dedicated pilots at heart. The pilots are focused on the most important issues relating to atmospheric composition and land degradation through the use of fossil fuels, future impacts of the use and production of biomass on land ecosystems and food security, sustainable integration of solar energy in current grids as well as its visual impact and relating to the impact of wind energy on marine ecosystems. Attention will be given to pollutants that are continuously cycling between the atmosphere and aquatic ecosystems. The results of the pilots feed into an integrated platform that will be run for known scenarios in order to assess energy strategies.

**Partners:**

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|---|---|---|
| 1 | NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO | NL |
| 2 | ASSOCIATION POUR LA RECHERCHE ET LE DEVELOPPEMENT DES METHODES ET PROCESSUS INDUSTRIELS - ARMINES | FR |
| 3 | DEUTSCHES ZENTRUM FUER LUFT - UND RAUMFAHRT EV | DE |
| 4 | BMT ARGOSS BV | NL |
| 5 | Research Studios Austria Forschungsgesellschaft mbH | AT |
| 6 | INTERNATIONALES INSTITUT FUER ANGEWANDTE SYSTEMANALYSE | AT |
| 7 | UNIRESEARCH BV | NL |
| 8 | PARIS-LODRON-UNIVERSITÄT SALZBURG | AT |
| 9 | AKADEMIA GORNICZO-HUTNICZA IM. STANISLAWA STASZICA W KRAKOWIE | PL |
| 10 | Pakistan Space and Upper Atmosphere Research Commission | PK |
| 11 | INSTITUT FUR ENERGIE UND UMWELTTECHNIK EV - IUTA | DE |
| 12 | STICHTING SRON NETHERLANDS INSTITUTE FOR SPACE RESEARCH | NL |

**Activity Code:** ENV.2008.4.1.1.1. **Funding Scheme:** CP **Duration (Months):** 36

**Title:** European approach to GEOSS

**Proposed EC Grant:** 6.035.566 €

**Abstract:**

EuroGEOSS demonstrates the added value to the scientific community and society of making existing systems and applications interoperable and used within the GEOSS and INSPIRE frameworks. The project will build an initial operating capacity for a European Environment Earth Observation System in the three strategic areas of Drought, Forestry and Biodiversity. It will then undertakes the research necessary to develop this further into and advanced operating capacity that provides access not just to data but also to analytical models made understandable and useable by scientists from different disciplinary domains. This concept of inter-disciplinary interoperability requires research in advanced modelling from multi-scale heterogeneous data sources, expressing models as workflows of geo-processing components reusable by other communities, and ability to use natural language to interface with the models. The extension of INSPIRE and GEOSS components with concepts emerging in the Web 2.0 communities in respect to user interactions and resource discovery, also supports the wider engagement of the scientific community with GEOSS as a powerful means to improve the scientific understanding of the complex mechanisms driving the changes that affect our planet.

**Partners:**

| | | |
|---|---|---|
| 1 | BUREAU DE RECHERCHES GEOLOGIQUES ET MINIERES | FR |
| 2 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 3 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 4 | INTERNATIONALES INSTITUT FUER ANGEWANDTE SYSTEMANALYSE | AT |
| 5 | UNIVERSITAT JAUME I DE CASTELLON | ES |
| 6 | THE UNIVERSITY OF NOTTINGHAM | UK |
| 7 | CENTRO NACIONAL DE INFORMACION GEOGRAFICA | ES |
| 8 | SECTION FRANCAISE DE L'INSTITUT DES INGENIEURS ELECTRICIENS ET ELECTRONICIENS | FR |
| 9 | EDISOFT-EMPRESA DE SERVICOS E DESENVOLVIMENTO DE SOFTWARE SA | PT |
| 10 | FOOD AND AGRICULTURE ORGANISATION OF THE UNITED NATIONS FAO | IT |
| 11 | FUNDACION GENERAL DE LA UNIVERSIDAD DE ALCALA | ES |
| 12 | UNIVERZA V LJUBLJANI | SI |
| 13 | Global Biodiversity Information Facility | DK |
| 14 | UNITED NATIONS ENVIRONMENT PROGRAMME | KE |
| 15 | ROYAL SOCIETY FOR THE PROTECTION OFBIRDS | UK |
| 16 | BIRDLIFE INTERNATIONAL | UK |
| 17 | UNIVERSITAET HAMBURG | DE |
| 18 | UNIVERSITAET FUER BODENKULTUR WIEN | AT |
| 19 | ALBERT-LUDWIGS-UNIVERSITAET FREIBURG | DE |
| 20 | UNIVERSIDAD DE ZARAGOZA | ES |
| 21 | CONFEDERACION HIDROGRAFICA DEL EBRO | ES |
| 22 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 23 | UNIVERSITY OF NEBRASKA | US |

**Activity Code:** ENV.2008.4.1.4.1. **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Building Capacity for a Black Sea Catchment Observation and Assessment System supporting Sustainable Development

**Proposed EC Grant:** 6.222.574 €

**Abstract:**

The Black Sea Catchment is internationally known as one of ecologically unsustainable development and inadequate resource management, which has led to severe environmental, social and economic problems. EnviroGRIDS @ Black Sea Catchment aims at building the capacities of regional stakeholders to use new international standards to gather, store, distribute, analyze, visualize and disseminate crucial information on past, present and future states of the environment, in order to assess its sustainability and vulnerability. The EnviroGRIDS @ Black Sea Catchment project addresses these issues by bringing several emerging information technologies that are revolutionizing the way we are able to observe our planet. The Group on Earth Observation Systems of Systems (GEOSS) is building a data-driven view of our planet that feeds into models and scenarios. EnviroGRIDS aims at building the capacity of scientist to assemble such a system in the Black Sea Catchment, the capacity of decision-makers to use it, and the capacity of the general public to understand the important environmental, social and economic issues at stake. To achieve its objectives, EnviroGRIDS will build an ultra-modern Grid enabled Spatial Data Infrastructure (GSDI) that will become one component in the Global Earth Observation System of Systems (GEOSS), compatible with the new EU directive on Infrastructure for Spatial Information in the European Union (INSPIRE). EnviroGRIDS will particularly target the needs of the Black Sea Commission (BSC) and the International Commission for the Protection of the Danube River (ICPDR) in order to help bridging the gap between science and policy.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITE DE GENEVE | CH |
| 6 | Ceske centrum pro vedu a spolecnost | CZ |
| 7 | ORGANISATION EUROPEENNE POUR LA RECHERCHE NUCLEAIRE EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCHCERN | CH |
| 11 | EIDGENOESSISCHE ANSTALT FUR WASSERVERSORGUNG ABWASSERREINIGUNG UND GEWAESSERSCHUTZ | CH |
| 12 | GIS and RS Consulting Center GeoGraphic | GE |
| 15 | UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION -UNESCO | FR |
| 22 | UNIVERSITAT AUTONOMA DE BARCELONA | ES |
| 24 | UKRAINIAN SCIENTIFIC AND RESEARCH INSTITUTE OF ECOLOGICAL PROBLEMS | UA |
| 27 | Soresma NV | BE |
| 28 | SAINT PETERSBURG STATE UNIVERSITY - SPSU | RU |
| 29 | ISTANBUL TEKNIK UNIVERSITESI | TR |
| 30 | Melitopol State Pedagocical University | UA |
| 31 | arx iT Consulting | CH |
| 32 | BLACK SEA REGIONAL ENERGY CENTRE | BG |
| 34 | INSTITUTUL NATIONAL DE CERCETARE DEZVOLTARE DELTA DUNARII | RO |
| 35 | DANUBE HYDROMETEOROLOGICAL OBSERVATORY OF STATE HYDROMETEOROLOGICAL SERVICE OF MINISTRY OF UKRAINE OF EMERGENCIES AND AFFAIRS OF POPULATION PROTECTION FROM CONSEQUENCES OF CHORNOBYL CATASTROPHE | UA |
| 36 | A.O. KOVALEVSKIY INSTITUTE OF BIOLOGY OF SOUTHERN SEAS | UA |
| 37 | INSTITUTUL DE GEOGRAFIE | RO |
| 38 | INSTITUTUL NATIONAL DE HIDROLOGIE SI GOSPODARIRE A APELOR | RO |
| 39 | ODESSA NATIONAL I.I. MECHNIKOV UNIVERSITY | UA |
| 40 | UNIVERSITATEA TEHNICA CLUJ-NAPOCA | RO |
| 41 | VITUKI KORNYEZETVEDELMI ES VIZGAZDALKODASI KUTATO INTEZET NONPROFIT KOZHASZNU KORLATOLT FELELOSSEGU TARSASAG | HU |
| 42 | THE COMMISSION ON THE PROTECTION OFTHE BLACK SEA AGAINST POLLUTION | TR |
| 43 | CENTRO DI RICERCA, SVILUPPO E STUDI SUPERIORI IN SARDEGNA | IT |
| 45 | International Commission for the Protection of the Danube River | AT |
| 46 | NATIONAL INSTITUTE OF METEOROLOGY AND HYDROLOGY OF THE BULGARIAN ACADEMY OF SCIENCES | BG |
| 47 | TAURIDA NATIONAL V.I. VERNADSKY UNIVERSITY | UA |
| 48 | KOZEP-EUROPAI EGYETEM | HU |
| 49 | CEVRE VE ORMAN BAKANLIGI - TURKIYE CUMHURIYETI | TR |
| 50 | UNIVERSIDAD DE MALAGA | ES |

**Activity Code:** ENV.2009.4.1.3.1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Earth Observation and ENVironmental modelling for the mitigation of HEAlth risks

**Proposed EC Grant:** 6.273.262 €

**Abstract:**

EO2HEAVEN contributes to a better understanding of the complex relationships between environmental changes and their impact on human health. The project will monitor changes induced by human activities, with emphasis on atmospheric, river, lake and coastal marine pollution. EO2HEAVEN will follow a multidisciplinary and user-driven approach involving public health stakeholders who will work closely with technology and service providers in both the earth observation and in-situ environmental monitoring domain. The result of this collaboration will be the design and development of a GIS based upon an open and standards-based Spatial Information Infrastructure (SII) envisaged as a helpful tool for research of human exposure and early detection of infections. The key factors of the EO2HEAVEN system will be 1) an enhanced integration of remotely sensed and in-situ environmental measurements, and 2) the development of models to relate these environmental data to exposure and health data. Both factors will directly address current goals of GEOSS such that the resulting system will be integrated into the GEOSS infrastructure after successful validation already during the course of the project. Throughout the life span of the project the stakeholder requirements from three different use cases (in Europe and Southern Africa) will be assessed and the technical solutions proposed by EO2HEAVEN will be evaluated through an iterative process, thus ensuring that the solutions can be applied on a global scale. EO2HEAVEN will specify and implement the SII as an open architecture based upon international standards and adaptive geospatial Web services in alignment with the large-scale initiatives INSPIRE and GMES. The SII will include bridging capabilities at the syntactic and semantic levels to and between environmental and health systems. Ongoing and recently completed research projects in the ICT, environmental and health domains will be studied and used in an integrative approach.

**Partners:**

| | | |
|---|---|---|
| 1 | FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V | DE |
| 2 | TECHNISCHE UNIVERSITAET DRESDEN | DE |
| 3 | 52°North Initiative for Geospatial Open Source Software GmbH | DE |
| 4 | ATOS SPAIN SA | ES |
| 5 | SPOT IMAGE (SI) SA | FR |
| 6 | NEVANTROPIC | FR |
| 7 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 8 | COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH | ZA |
| 9 | OPEN GEOSPATIAL CONSORTIUM (EUROPE) LIMITED | UK |
| 11 | BUREAU DE RECHERCHES GEOLOGIQUES ET MINIERES | FR |
| 12 | UNIVERSITEIT TWENTE | NL |
| 13 | UNIVERSITY OF KWAZULU-NATAL | ZA |
| 14 | UNIDADE TECNICA DE IMPLEMENTACAO DA POLITICA DE INFORMATICA | MZ |
| 15 | MAKERERE UNIVERSITY | UG |
| 16 | HET KONINKLIJK INSTITUUT VOOR DE TROPEN | NL |

**Activity Code:** ENV.2009.4.1.2.1 **Funding Scheme:** CSA **Duration (Months):** 24

**Title:** Improving coordination, visibility and impact of European GEOSS contributions by establishing a EUropean GEoss NEtwork (EUGENE)

**Proposed EC Grant:** 735.039 €

**Abstract:**

The EUGENE project aims at improving cooperation among European institutions acive in the domain of Earth observations and intensifying the coordination of contributions from national and European programmes to building GEOSS. EUGENE will initiate a process that should lead to a more coordinated planning and acting of the relevant European actors in the future.Specifically, the project will analyze the status quo in the European Earth observation for three of the nine GEO Societal Benefit Areas (SBA), namely disasters, water, and climate. For each of these SBA a report will be prepared to describe the current situation in Europe, including the main initiatives and activities. The main actors will be engaged for preparing these reports. Three thematic workshops will be organized on the basis of these reports. They will discuss potential activities for improvement and develop recommendations for a targeted, strategic participation of Europe in building GEOSS.The project results are aimed at supporting the European Commission and other European GEO Members and GEO Participating Organizations in their participation in GEO. The project will also be active in preparing the European positions for the 2010 GEO Summit.

**Partners:**

| | | |
|---|---|---|
| 1 | DEUTSCHES ZENTRUM FUER LUFT - UND RAUMFAHRT EV | DE |
| 2 | THE EUROPEAN ORGANISATION FOR THE EXPLOITATION OF METEOROLOGICAL SATELLITES | DE |
| 3 | Bundesanstalt fuer Gewaesserkunde | DE |
| 4 | RHEINISCHE FRIEDRICH-WILHELMS-UNIVERSITAET BONN | DE |

**Activity Code:** ENV.2009.4.1.3.2 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Impact Monitoring of Mineral Resources Exploitation

**Proposed EC Grant:** 2.613.824 €

**Abstract:**

ImpactMin will develop new methods and a corresponding toolset for the environmental impact monitoring of mining operations using Earth Observations. Novel technology will be proposed for the combined use of satellite remote sensing, aerial lightweight measurements and Unmanned Aerial Vehicles (UAVs). The proposed methods will be validated at four demonstration sites in Sweden, Bosnia&Herzegovina, Romania and Russia. The theoretical advancement in science and technology will be made public knowledge with the help of a free multimedia e-learning programme whereas the tools and foreground knowledge will be commercialised by the participating SMEs. The scientific challenge is to use remote sensing technologies to develop cost-effective, reliable and repeatable approaches for monitoring the impact of mining activities on the environment through time, in order to identify, predict and prevent potentially serious consequences for the natural and human environment. On the one hand it is of great importance that the amount of detail obtained from these data sources is sufficient to monitor relatively small changes through time. On the other hand it is essential that the methods used are sufficiently flexible to operate under different circumstances at acceptable cost. The composition of project partnership and the selection of demonstration sites correspond to European interests in both accessing strategic minerals needed for the European economy and the need to monitor and control environmental pollution from these sources.

**Partners:**

| | | |
|---|---|---|
| 1 | GEONARDO ENVIRONMENTAL TECHNOLOGIES LTD | HU |
| 2 | geosense | NL |
| 4 | THE UNIVERSITY OF EXETER | UK |
| 5 | LULEA TEKNISKA UNIVERSITET | SE |
| 6 | Photon d.o.o | HR |
| 7 | University of Mostar | BA |
| 9 | STATE SCIENTIFIC AND RESEARCH INSTITUTION INSTITUTE OF MINERALOGY OF THE URAL BRANCH OF THE RUSSIAN ACADEMY OF SCIENCES | RU |
| 10 | UNIVERSITATEA BABES BOLYAI | RO |
| 11 | MIZHNARODNA ASOCIACIA UKRAINSKII CENTR MENEDJMENTU ZEMLI TA RESURSIV | UA |
| 12 | DMT GmbH & CO. KG | DE |
| 13 | VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V. | BE |

**Activity Code:** ENV.2009.4.1.4.1 **Funding Scheme:** CSA **Duration (Months):** 36

**Title:** GEO Network for Capacity Building

**Proposed EC Grant:** 999.988 €

**Abstract:**

The purpose of the GEO Network for Capacity Building (GEO-Net-CaB) project is to create the conditions for the improvement and increase of the GEO capacity building activities and framework, with special emphasis on developing countries, new EU member states (and EU neighbouring states) and climate monitoring and will serve the bigger goal of improved effectiveness and efficiency of GEO capacity building for application in the GEO societal benefit areas. Coinciding with this purpose, successful brokerage with (potential) clients for earth observation products and services will be facilitated. The project will deliver the following output: 1. Capacity building needs in earth observation are identified (at a generic and global level, but with emphasis on the target regions). 2. Specifications for earth observation capacity buildings are described. 3. Resource providers are identified. 4. Sustainable brokerage between stakeholders (including resource providers) is established. 5. A mechanism to facilitate cooperation between stakeholders and providers is established. 6. A global base of technical expertise for education and training in earth observation is established (with emphasis on developing countries, new EU member states and climate monitoring). 7. Monitoring and evaluation mechanisms for determining the efficacy of GEO capacity building efforts are established. To achieve maximum impact demonstration projects will be carried out in Southern Africa, the French-speaking African region, Czechia and Poland, with spin-offs to EU neighbouring countries and Latin America and Asia. The project (with a duration of three years) will be carried out by a strong consortium of partners from the Netherlands, France, South Africa, Morocco, Czechia and Poland, supervised by an advisory board with worldwide representation and strong connections to GEO.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITEIT TWENTE | NL |
| 2 | CENTRE NATIONAL D'ETUDES SPATIALES - CNES | FR |
| 3 | INSTITUT DE RECHERCHE POUR LE DEVELOPPEMENT | FR |
| 4 | CENTRUM BADAN KOSMICZNYCH POLSKIEJ AKADEMII NAUK | PL |
| 5 | UNIVERZITA KARLOVA V PRAZE | CZ |
| 6 | COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH | ZA |
| 7 | CENTRE REGIONAL AFRICAIN DES SCIENCES ET TECHNOLOGIES DE L'ESPACE | MA |
| 8 | Umvoto Africa (pty) ltd | ZA |

**Activity Code:** ENV.2009.4.1.4.1 **Funding Scheme:** CSA **Duration (Months):** 24

**Title:** GEO capacity building initiative in Central Asia

**Proposed EC Grant:** 576.516 €

**Abstract:**

Central Asia is an important Europe's partner facing critical environmental challenges. Possessing certain experiences and capabilities of EO data application for solving environmental, economic, societal and other development problems, this region is better prepared for the uptake of GEOSS technologies than many other clusters of developing countries. Thus, the goal of SEOCA is to promote European GEO-techlogies in the region of Central Asia as a platform solution for the regional development challenges. In order to achieve this goal, the following activities will be implemented: - mapping of regional needs, capabilities, stakeholders, providers and planning further GEO CB activities in the region for the period until 2020 - pilot GEO capacity building programme incl. training for stakeholders, reforming educational standards, direct brokerage between stakeholders and providers, etc. - setting up regional network of GEO offices in all 5 countries - pilot regional GEONETCast network - systemic dissemination and networking activities aimed at promoting GEOSS technologies in the region, building synergies with other relevant initiatives. As a result the consortium expects that SEOCA will radically increase acceptance of GEOSS technologies by regional governments for national environmental services, meteorology, natural hazards prevention, geological explorations, etc. Moreover, the project will lay a foundation for long-term GEO CB activities in the region

**Partners:**

| | | |
|---|---|---|
| 1 | TECHNISCHE UNIVERSITAT BERLIN | DE |
| 2 | ENGINEERING CONSULTING AND MANAGEMENT OFFICE ECM OFFICE | DE |
| 4 | JEODIJITAL BILISIM TEKNOLOJI MADENCILIK INSAAT TAAHUT SANAYI VE TICARET LIMITED SIRKETI | TR |
| 5 | ARATOS ANONYMOS ETERIA ANAPTYXIS, PARAGOGIS & EMPORIAS PROIONTON PLIROFORIKIS & IPSILIS TECHNOLOGIAS (Aratos Technologies S.A.) | EL |
| 6 | GIRAF PM Consultants | DE |
| 7 | HYDROMETEOROLOGICAL RESEARCH INSTITUTE OF UZHYDROMET | UZ |
| 8 | The State enterprise “Center of remote sensing and GIS technologies” | UZ |
| 9 | Tashkent State Technical University named after Abu Raikhman Beruni | UZ |
| 10 | Joint-stock company “The National Center of Space Researches and Technologies” | KZ |
| 11 | L.N. Gumilyov Eurasian National University | KZ |
| 12 | STATE AGENCY OF HYDROMETEOROLOGY UNDER MINISTRY OF EMERGENCY SITUATIONS OF THE KYRGYZ REPUBLIC | KG |
| 13 | STATE ADMINISTRATION ON HYDROMETEOROLOGY | TJ |
| 14 | National Institute of Deserts, Flora and Fauna of the Ministry of Nature Protection of Turkmenistan | TM |
| 15 | TURKIYE BILIMSEL VE TEKNOLOJIK ARASTIRMA KURUMU | TR |

**Activity Code:** ENV.2009.4.1.3.2 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Earth Observation for Monitoring and Observing Environmental and Societal Impacts of Mineral Resources Exploration and Exploitation

**Proposed EC Grant:** 3.120.838 €

**Abstract:**

European Commission Vice President Günter Verheugen, responsible for enterprise and industry policy declared "European industries need predictability in the flow of raw materials and stable prices to remain competitive. We are committed to improve the conditions of access to raw materials, be it within Europe or by creating a level playing field in accessing such materials from abroad.” The global dimension of access to raw materials was on the agenda of the G8 Summit on June 2007. On that occasion a Declaration on "Responsibility for raw materials: transparency and sustainable growth" was adopted. Several national and international initiatives, both from the private or the institutional sectors, arised to address the sustainable development of the extractive industry and the reduction of its environmental footprint. Meanwhile, the extractive industry is facing increasing environmental and societal pressures, being regulatory or not, during all phases of a project, from exploration to exploitation and closure. The social acceptability of a project is among the major key issues to be dealt with. EO-MINERS scientific and technical objectives are to: - assess policy requirements at macro (public) and micro (mining companies) levels and define environmental, socio-economic, societal and sustainable development criteria and indicators to be possibly dealt using EO - use existing EO knowledge and carry out new developments on demonstration sites to further demonstrate the capabilities of integrated EO-based methods and tools in monitoring, managing and contributing reducing the environmental and societal footprints of the extractive industry during all phases of a mining project, from the exploration to the exploitation and closure stages - contribute making available reliable and objective information about affected ecosystems, populations and societies, to serve as a basis for a sound “trialogue” between industrialists, governmental organisations and stakeholder

**Partners:**

| | | |
|---|---|---|
| 1 | BUREAU DE RECHERCHES GEOLOGIQUES ET MINIERES | FR |
| 2 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 3 | TEL AVIV UNIVERSITY | IL |
| 4 | DEUTSCHES ZENTRUM FUER LUFT - UND RAUMFAHRT EV | DE |
| 5 | WUPPERTAL INSTITUT FUR KLIMA, UMWELT, ENERGIE GMBH. | DE |
| 6 | GEOLOSKI ZAVOD SLOVENIJE | SI |
| 7 | Mineral Industry Research Organisation | UK |
| 8 | COUNCIL FOR GEOSCIENCE | ZA |
| 9 | ANGLO OPERATIONS LIMITED | ZA |
| 10 | UNIVERSITE DE VERSAILLES SAINT-QUENTIN-EN-YVELINES. | FR |
| 11 | CESKA GEOLOGICKA SLUZBA | CZ |
| 12 | Sokolovská uhelná, právní nástupce, a.s. | CZ |
| 13 | CENTRAL-ASIAN INSTITUTE FOR APPLIED GEOSCIENCES | KG |
| 14 | KYRGYZALTYN OAO | KG |

**Activity Code:** ENV.2010.4.1.3-1 **Funding Scheme:** CSA **Duration (Months):** 36

**Title:** GNSS for Global Environmental Earth Observation (GEEO) and GEOSS

**Proposed EC Grant:** 1.000.000 €

**Abstract:**

In the next future, the number of GNSS will drastically increase. Not only more signals and frequencies will be available, but also the new generation of navigation satellites (GALILEO), will greatly enhance the performance of GNSS based applications, both scientific and mass-market. Current and next generation GNSS can improve and sustain GEEO applications, as well as be the enablers of novel applications. With the scope to support the GEOSS 10-year implementation plan (2005-2015) the 2010 Environment FP7 work program is launching various topics under sub-activity 6.4.1 Earth and ocean observation systems and monitoring methods for the environment and sustainable development. In line with the objectives of sub-activity 6.4.1, a coordination action promoting discipline connection, identity building and integration while defining future research, technology and policy directions is needed. GNSS for GEEO and GEOSS (Gfg2) responds to these needs addressed by work program topic: ENV.2010.4.1.3-1 Exploring GNSS applications for GEEO and GEOSS. The goals of this three-year long initiative are: 1) to consolidate a community of experts with interest to exploit GNSS for GEEO and GEOSS; 2) to explore novel applications derived from GNSS for GEEO and GEOSS while enhancing research-industry collaboration to implement these applications; 3) to identify the research and technological challenges and define the strategic vision, roadmap and policy for GNSS for GEEO and GEOSS available or under development (EU and non-EU); 4) to assess the value (in this context) of the European GNSS independent constellation (EGNOS-GALILEO); 5) to promote the public understanding of GNSS for GEEO and GEOSS research and use within the GEO community, providing support to GEO tasks. Gfg2 will achieve its objectives especially by using a working methodology based on active community interaction and events (2 summer schools, 4 workshops and a socioeconomic impact workshop).

**Partners:**

| | | |
|---|---|---|
| 1 | STARLAB BARCELONA SL | ES |
| 2 | THE UNIVERSITY OF NOTTINGHAM | UK |
| 3 | Helmholtz-Zentrum Potsdam Deutsches GeoForschungsZentrum | DE |
| 4 | CHALMERS TEKNISKA HOEGSKOLA AB | SE |
| 5 | UNIVERSITY OF LEICESTER | UK |
| 6 | METEOROLOGISK INSTITUTT | NO |
| 7 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |

**Activity Code:** ENV.2010.4.1.3-2 **Funding Scheme:** CP **Duration (Months):** 60

**Title:** Global Mercury Observation System

**Proposed EC Grant:** 6.882.068 €

**Abstract:**

The overall goal of the proposed project is to develop a coordinated global observation system for mercury able to provide temporal and spatial distributions of mercury concentrations in ambient air and precipitation over land and over surface waters at different altitudes and latitudes around the world. This will then provide high quality data for the validation and application of regional and global scale atmospheric models, to give to governments, national and international organisations and stakeholders a firm basis for future policy development and implementation. Specific objectives of the proposed project are (a) to establish a Global Observation System for Mercury (GMOS) able to provide ambient concentrations and deposition fluxes of mercury species around the world, by combining observations from permanent ground-based stations, and from oceanographic and tropospheric measurement campaigns; (b) to validate regional and global scale atmospheric mercury modelling systems able to predict temporal variations and spatial distributions of atmospheric mercury entering to and re-emitted from terrestrial and aquatic receptors; (c) to evaluate and identify source-receptor relationships at country scale and their temporal trends for current and projected scenarios of mercury emissions from anthropogenic and natural sources; (d) to develop interoperable tools to allow the sharing of observational and models output data produced by GMOS. The overarching goal of GMOS is to support the achievement of goals set by the GEO / GEOSS, and specifically of the GEO Task HE-09-02d and contribute to the advancement of our scientific understanding in the nine Societal Benefit Areas (SBA) established in GEOSS. The proposed project will rely on the results and knowledge acquired in the framework of past EU projects (i.e., MAMCS, MOE, MERCYMS) and international programs (i.e., UNECE TF HTAP; UNEP F&T partnership area).

**Partners:**

| | | |
|---|---|---|
| 1 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 2 | NORSK INSTITUTT FOR LUFTFORSKNING | NO |
| 3 | IVL SVENSKA MILJOEINSTITUTET AB | SE |
| 4 | INSTITUT JOZEF STEFAN | SI |
| 5 | CONSEJO NACIONAL DE INVESTIGACIONES CIENTIFICAS Y TECNICAS | AR |
| 6 | INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER | FR |
| 7 | INSTITUUT VOOR TOEGEPASTE TECHNIEK | SR |
| 8 | GOETEBORGS UNIVERSITET | SE |
| 9 | UNIVERSITA CA' FOSCARI VENEZIA | IT |
| 10 | AARHUS UNIVERSITET | DK |
| 10 | AARHUS UNIVERSITET | DK |
| 11 | HELMHOLTZ-ZENTRUM GEESTHACHT ZENTRUM FUR MATERIAL- UND KUSTENFORSCHUNG GMBH | DE |
| 12 | UNIVERSITE JOSEPH FOURIER GRENOBLE 1 | FR |
| 13 | UNIVERSITY OF YORK | UK |
| 14 | Institute of Geochemistry Chinese Academy of Sciences | CN |
| 15 | ASSOCIACAO DOS PESQUISADORES DO EXPERIMENTO DE GRANDE ESCALA DA BIOSFERA-ATMOSFERA NA AMAZONIA | BR |
| 16 | METEOROLOGICAL SYNTHESIZING CENTREEAST*MSC-EAST MSC-E | RU |
| 17 | MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. | DE |
| 18 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 19 | ANNA UNIVERSITY CHENNAI | IN |
| 20 | South African Weather Service | ZA |
| 21 | INSTITUTO NACIONAL DE METEOROLOGIA E GEOFISICA | CV |
| 22 | MINISTRY OF ENVIRONMENT AND MINERAL RESOURCES | KE |
| 23 | LATVIJAS UNIVERSITATE | LV |
| 24 | SAINT PETERSBURG STATE UNIVERSITY - SPSU | RU |

**Activity Code:** ENV.2010.4.1.1-1 **Funding Scheme:** CSA **Duration (Months):** 24

**Title:** Coordinating Earth and Environmental cross-disciplinary projects to promote GEOSS

**Proposed EC Grant:** 994.656 €

**Abstract:**

EGIDA will prepare a sustainable process promoting coordination of activities carried out by: the GEO Science & Technology (S&T) Committee; S&T national and European initiatives; and other S&T Communities. This will be done by supporting broader implementation and effectiveness of the GEOSS S&T Roadmap and the GEOSS mission through coherent and interoperable networking of National and European projects, and international initiatives. EGIDA will deliver evaluation processes, tests and assessment indexes, expertise databases, a “GEO Label” concept, surveys, and other instruments that will link relevant European S&T communities to GEOSS and ensure it is built using state-of-the-art science and technology. Through co-ordination with the GEOSS S&T Committee (five co-chairs are involved in EGIDA), these deliverables will contribute strongly to the GEO S&T Roadmap implementation.For European countries, EGIDA will deliver the EGIDA Methodology, a sustainable mechanism based on the GEO S&T approach at national and regional level, to coordinate national multi-disciplinary “System of Systems”. This builds on existing national initiatives and European projects, and facilitates the European S&T Community contributions to and interactions with GEOSS. The EGIDA Methodology will improve development and management of S&T infrastructures (i.e. sensors, data, processing services, and environmental modelling infrastructures), supporting mobilization of the resources needed to contribute effectively to GEOSS.EGIDA will involve developing countries by transferring the EGIDA S&T methodology to them and implementing three specific use cases: two regional use-cases (Balkan region, Mediterranean region) and a pan-European thematic use-case (Air Quality and Health). EGIDA will be embedded within a wide Network of Stakeholders selected to represent the various actors (science teams and institutions, S&T programmes, GEO components) and the scientific fields relevant to the nine GEOSS SBAs.

**Partners:**

| | | |
|---|---|---|
| 1 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 2 | SECTION FRANCAISE DE L'INSTITUT DES INGENIEURS ELECTRICIENS ET ELECTRONICIENS | FR |
| 3 | INTERNATIONALES INSTITUT FUER ANGEWANDTE SYSTEMANALYSE | AT |
| 4 | Istituto Superiore per la Protezione e la Ricerca Ambientale | IT |
| 5 | NORSK INSTITUTT FOR LUFTFORSKNING | NO |
| 6 | MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. | DE |
| 7 | HELMHOLTZ-ZENTRUM GEESTHACHT ZENTRUM FUR MATERIAL- UND KUSTENFORSCHUNG GMBH | DE |
| 8 | IVL SVENSKA MILJOEINSTITUTET AB | SE |
| 9 | INSTITUT JOZEF STEFAN | SI |
| 10 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 11 | BENTE LILJA BYE | NO |
| 12 | DANMARKS METEOROLOGISKE INSTITUT | DK |
| 13 | CENTRO DE INVESTIGACION ECOLOGICA YAPLICACIONES FORESTALES | ES |

**Activity Code:** ENV.2010.4.1.4-1 **Funding Scheme:** CSA **Duration (Months):** 36

**Title:** Balkan GEO Network – Towards Inclusion of Balkan Countries into Global Earth Observation Initiatives

**Proposed EC Grant:** 990.189 €

**Abstract:**

Inclusion of all Balkan countries into GEO and their contribution to GEOSS is of great importance, since only a comprehensive EO framework can lead to better understanding and more intelligent utilization of the environmental resources, increased quality of life and faster economic development. The importance and benefits from participation in global EO initiatives have already been recognized by several Balkan countries. However, a great number of Balkan countries are still not members of GEO.This project aims to identify existing EO-data providers and users in the wider Balkan region, to determine their status, potentials and needs, and to coordinate EO players by establishing proper interfaces and networking between them. A broad analysis of gaps and complementarities of EO activities within the region will be performed, with the emphasis on user needs in the specific context of the Balkan region.The consortium has been carefully constituted to include key players both from EO-data provider and EO-data user communities, from all Balkan countries. Participants from other EU countries are also included to allow straightforward identification of mechanisms for leveraging, developing and coordinating EO capacity building initiatives in the region, and to ensure that the Project outcomes will be in line with the currently designed Shared Environmental Information System and with Infrastructure for Spatial Information in Europe.Main outcomes of the Project will be the creation of a permanent web-based networking facility, and the design of roadmaps and recommendations for an active, coordinated and sustained participation of all Balkan countries in global EO initiatives. These outcomes will also present a contribution to GEO task CB-09-03 „Building Institutional Capacity to Use EO" and specifically to subtask CB-09-03b „Establishing Regional Capacity Building Networks".

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERZITET U NOVOM SADU | RS |
| 2 | INSTITUT JOZEF STEFAN | SI |
| 3 | JOANNEUM RESEARCH FORSCHUNGSGESELLSCHAFT MBH | AT |
| 4 | EREVNITIKI & ANAPTIKSIAKI ETAIRIA THEOXARATOS & SIA OE | EL |
| 5 | SVEUCILISTE U SPLITU (UNIVERSITY OF SPLIT) | HR |
| 6 | GEONARDO ENVIRONMENTAL TECHNOLOGIES LTD | HU |
| 7 | UMWELTBUNDESAMT GMBH | AT |
| 8 | INTERNATIONALES INSTITUT FUER ANGEWANDTE SYSTEMANALYSE | AT |
| 9 | UNIVERSITEIT GENT | BE |
| 10 | ROMANIAN SPACE AGENCY | RO |
| 11 | NATIONAL INSTITUTE OF GEOPHYSICS GEODESY AND GEOGRAPHY - BULGARIAN ACADEMY OF SCIENCES | BG |
| 12 | UNIVERZITET U SARAJEVU | BA |
| 13 | JAVNA USTANOVA UNIVERZITET CRNE GORE PODGORICA | ME |
| 14 | UNIVERSITETI POLITEKNIK I TIRANES | AL |
| 15 | BALKAN FOUNDATION FOR SUSTAINABLE DEVELOPMENT | MK |
| 16 | PROVINCIAL SECRETARIAT OF AGRICULTURE, WATER ECONOMY AND FORESTRY, VOJVODINA | RS |

**Activity Code:** ENV.2010.4.1.2-2 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** QUAlity aware VIsualisation for the Global Earth Observation system of systems

**Proposed EC Grant:** 3.266.804 €

**Abstract:**

The GEOSS Common Infrastructure provides clearinghouses and portals that allow discovery and visualisation of data in an integrated way. GEOVIQUA will extend the GEOSS infrastructure by adding well-defined data quality indicators and quality-enabled search and visualisation tools. These GEOVIQUA components will be implemented so they can be accessed based on existing geo-portal standards and in the mass market "Google-like" map tools and other 3D viewers, as well as on mobile devices. The design and development of GEOVIQUA components will be undertaken in collaboration with the relevant GEO committees, the Open Geospatial Consortium Architecture Implementation Pilots and other relevant standards committees.Data quality will be extracted from metadata, from provenance information, from the reference data, from validation with in-situ sensors and from expert user comments. Existing quality standards will be used or extended to formalise the quality indicators and provenance in line with the Quality Assurance for Earth Observation (QA4EO) framework and taken forward into the standardisation process.Graphical representation of metadata will allow users to easily screen data. Search functions will be augmented using quality indicators and search results will be able to be ranked by quality indicator. The work will contribute to a GEO S&T label increasing user trust in GEO product quality.Components will be developed to visualise data and associated quality information on GEO portals using different strategies. Work will link quality indicators and data in web map services and “Google like” tools, and make these available on mobile devices.Several pilot case studies ranging from local to global scales concerning many key Societal Benefit Areas will be used to motivate and validate the GEOVIQUA developments. The Global Carbon Project and the European Space Agency will link GEOVIQUA to the Communities of Practices in GEO, disseminating the results widely.

**Partners:**

| | | |
|---|---|---|
| 1 | CENTRO DE INVESTIGACION ECOLOGICA YAPLICACIONES FORESTALES | ES |
| 2 | UNIVERSITAT AUTONOMA DE BARCELONA | ES |
| 3 | 52°North Initiative for Geospatial Open Source Software GmbH | DE |
| 4 | FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V | DE |
| 5 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 6 | ASTON UNIVERSITY | UK |
| 7 | THE UNIVERSITY OF READING | UK |
| 8 | COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES | FR |
| 9 | EUROPEAN SPACE AGENCY | FR |
| 10 | SCIENCE AND TECHNOLOGY B.V. | NL |

**Activity Code:** ENV.2010.4.1.2-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** European Re-Analysis of global CLIMate observations

**Proposed EC Grant:** 3.499.607 €

**Abstract:**

ERA-CLIM will develop observational datasets suitable for global climate studies, with a focus on the past 100 years. These datasets will include atmospheric, oceanic, and terrestrial observations from a variety of sources, high-resolution global reanalysis products of the observations, and associated data quality information needed for climate applications. The project will use existing climate data records and make a substantial contribution to filling known gaps in these records. Proposed data recovery efforts will focus on upper-air observations made in the first half of the 20th century, as well as near-surface observations of wind and humidity, in all regions of the globe.A specific goal for the project is to improve the quality and consistency of climate observations through reanalysis. Together with other in-situ and remote-sensing datasets available from existing data archives, the observations collected for ERA-CLIM will be included in a newly developed Observation Feedback Archive. Quality feedback information for this archive, including data departures and bias estimates, will be generated during several new pilot reanalyses, as well as from existing reanalysis datasets. The pilot reanalyses and the Observation Feedback Archive will be made available to users world-wide as a unique resource for climate research and observational studies of the Earth system.

**Partners:**

| | | |
|---|---|---|
| 1 | EUROPEAN CENTRE FOR MEDIUM-RANGE WEATHER FORECASTS | UK |
| 2 | MET OFFICE | UK |
| 3 | UNIVERSITAET WIEN | AT |
| 4 | UNIVERSITAET BERN | CH |
| 5 | ALL-RUSSIAN RESEARCH INSTITUTE OF HYDROMETEOROLOGICAL INFORMATION-WORLD DATA CENTRE | RU |
| 6 | FUNDACAO DA FACULDADE DE CIENCIAS DA UNIVERSIDADE DE LISBOA | PT |
| 7 | THE EUROPEAN ORGANISATION FOR THE EXPLOITATION OF METEOROLOGICAL SATELLITES | DE |
| 8 | METEO-FRANCE | FR |
| 9 | UNIVERSIDAD DEL PACIFICO | CL |

**Activity Code:** ENV.2010.4.1.4-1 **Funding Scheme:** CSA **Duration (Months):** 24

**Title:** Strengthening and development of Earth Observation activities for the environment in the Balkan area

**Proposed EC Grant:** 999.465 €

**Abstract:**

Balkan countries do not have a coherent and continuous approach towards the challenge of implementing integrated Earth Observation (EO) applications in environmental monitoring and management. It should be mentioned that the Balkan countries, except Greece, are not ESA members. Besides, Albania, Serbia, Bulgaria, FYROM, Montenegro and Bosnia Herzegovina are also not members of the GEO.The defect in the implementation of EO applications and their use in the environmental decision making are manifested through the limited synergies among national and regional institutions, ineffective technological means and discontinuous record of participation to international organizations and committees.On the other hand, the increasing importance of a common approach towards effective environmental monitoring practices, for the benefit of the societal web of the broader Balkan region, calls for immediate action, setting as a starting point the built up of regional institutional capacity and spillage of technology transfer.The aim of the OBSERVE project is to collect and compile all the necessary information for delivering an integrated analysis on the current status of EO activities and networks in the Balkans regarding environmental monitoring, the potential benefit from the full exploitation of an integrated capacity building strategy and the prospect of creating a relevant permanent EO Community in the broader region. OBSERVE project has the ultimate goal to raise awareness and establish firm links with the regional decision making bodies on the importance of a mutual and enhanced EO application network on environmental monitoring according to the principles of the GEO.The OBSERVE project consortium consists of 15 institutions from 13 different countries, 8 of which belong to the Balkan region. 10 of the partners are Universities/Research Organizations while the other 5 are from private sector.

**Partners:**

| | | |
|---|---|---|
| 1 | ARISTOTELIO PANEPISTIMIO THESSALONIKIS | EL |
| 2 | EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZURICH | CH |
| 3 | UNIVERZA V LJUBLJANI | SI |
| 4 | GEOIMAGING LTD | CY |
| 5 | INFOMETRIA IPIRESIES GEOPLIROFORIKIS EPE | EL |
| 6 | ISTANBUL TEKNIK UNIVERSITESI | TR |
| 7 | UNIVERSITY OF HAIFA | IL |
| 8 | Univerzitet u Beogradu - Saobracajni fakultet | RS |
| 9 | UNIVERSITETI POLITEKNIK I TIRANES | AL |
| 10 | UNIVERSITY OF ARCHITECTURE, CIVIL ENGINEERING AND GEODESY | BG |
| 11 | UNIVERZITET U SARAJEVU | BA |
| 12 | GEO-SAT DRUSTVO S OGRANICENOM ODGOVORNOSCU ZA ISTRAZIVACKO RAZVOJNE USLUGE | HR |
| 13 | DEUTSCHES ZENTRUM FUER LUFT - UND RAUMFAHRT EV | DE |
| 14 | GISDATA DOO | RS |
| 15 | Ss. CYRIL AND METHODIUS UNIVERSITY IN SKOPJE | MK |

**Activity Code:** ENV.2011.4.1.4-1 **Funding Scheme:** CP **Duration (Months):** 42

**Title:** A framework for enhancing EO capacity for Agriculture and Forest Management in Africa as a contribution to GEOSS

**Proposed EC Grant:** 3.499.234 €

**Abstract:**

AGRICAB aims to strengthen Earth Observation (EO) capacities in Africa by building on the open data sharing through GEONETCast, connecting the available satellite and other data with predictive models in order to facilitate integration in agriculture and forestry planning and management processes. Dedicated national applications in various African countries are designed to address particular policy issues related to livestock, crop systems and forest management. Through these applications, “twinning partnerships” are developed between a European and an African partner, to maximize knowledge transfer and integration. Experiences learned will form a good basis for regional trainings to the member states of the Observatoire du Sahara et du Sahel (OSS) in Tunisia, the Regional Centre for Mapping Resources for Development (RCMRD) in Kenya and the AGRHYMET regional centre in Niger, covering almost the entire African continent. These activities will be linked with Africa-wide management and research initiatives and programmes on Forest and Agriculture and builds on experiences from the GEONETCast for and by Developing Countries (DevCoCast) and Global Monitoring for Food Security (GMFS) projects.

**Partners:**

| | | |
|---|---|---|
| 1 | VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V. | BE |
| 2 | International Livestock Research Institute | KE |
| 3 | UNIVERSITE DE LIEGE | BE |
| 4 | Regional Centre for Mapping of Resources for Development | KE |
| 5 | UNIVERSITEIT TWENTE | NL |
| 6 | INSTITUTO NACIONAL DE METEOROLOGIA | MZ |
| 7 | CENTRE REGIONAL AGRHYMET | NE |
| 8 | I.T.A. - CONSORZIO ITALIANO PER IL TELERILEVAMENTO DELL AMBIENTE E DELL AGRICOLTURA | IT |
| 9 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 10 | CENTRE DE SUIVI ECOLOGIQUE | SN |
| 11 | MINISTRY OF ENVIRONMENT AND MINERAL RESOURCES | KE |
| 12 | UNIVERSIDADE EDUARDO MONDLANE | MZ |
| 13 | OBSERVATOIRE DU SAHARA ET DU SAHEL | TN |
| 14 | COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH | ZA |
| 15 | GEOSAS CONSULTING SERVICE PLC | ET |
| 16 | INSTITUTO NACIONAL DE PESQUISAS ESPACIAIS | BR |
| 17 | DEIMOS IMAGING S.L. | ES |

**Activity Code:** ENV.2011.4.1.3-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** GEOSS interoperability for Weather, Ocean and Water

**Proposed EC Grant:** 6.399.098 €

**Abstract:**

GEOWOW (GEOSS Interoperability for Weather, Ocean and Water) is the responds to call ENV.2011.4.1.3-1 Inter-operable integration of shared Earth Observations in the Global Context.The objectives of GEOWOW are to:• Propose and validate a distributed architectural model federating Earth observation and other Earth Science data holdings, including specific communities' infrastructures, and put this model forward as the European contribution to the GEOSS Common Infrastructure (GCI) and its evolution toward a wider GEOSS architecture;• Develop innovative methods for harmonized access and use of heterogeneous data, services, and models to foster the sharing of knowledge among multiple disciplines, and the more integrated assessment and understanding necessary to advance global sustainability research;• Contribute to the GCI interoperability, standardisation and operability via developments and evolution;• Develop and support services for data dissemination, access, use (and processing) for the selected SBAs, contributing to the development of assessment tools and monitoring methods for sustainable development;• Establish, harmonise and promote data sharing and usage procedures consistent with the GEOSS Data Sharing Implementation Guidelines, and contribute to the development of the GEOSS Data CORE.• Provide harmonized and fast data access for meteorological hazards/extreme events, e.g., floods, including pre-processing services aimed at making the data of immediate use;• Deploy an e-infrastructure giving access to in-situ and satellite data as needed by hydrological application and Run-off process;• Support and enhance the access to in-situ and satellite ocean observations, to information on threats to ocean ecosystems, and to key ocean forecasts and projections - for research and assessment.A particular focus will be on supporting inter-disciplinary interoperability and on the use of semantics for enhanced discovery of data in the selected SBAs' domains.

**Partners:**

| | | |
|---|---|---|
| 1 | EUROPEAN SPACE AGENCY | FR |
| 2 | TERRADUE SRL | IT |
| 3 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 4 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 5 | EUROPEAN CENTRE FOR MEDIUM-RANGE WEATHER FORECASTS | UK |
| 6 | Bundesanstalt fuer Gewaesserkunde | DE |
| 7 | UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION -UNESCO | FR |
| 8 | RHEINISCHE FRIEDRICH-WILHELMS-UNIVERSITAET BONN | DE |
| 9 | 52°North Initiative for Geospatial Open Source Software GmbH | DE |
| 10 | KISTERS AG | DE |
| 11 | MET OFFICE | UK |
| 12 | METEO-FRANCE | FR |
| 13 | Karlsruher Institut fuer Technologie | DE |
| 14 | INSTITUTO NACIONAL DE PESQUISAS ESPACIAIS | BR |
| 15 | University of Tokyo | JP |

**Activity Code:** ENV.2011.4.1.4-2 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Marine Ecosystem Dynamics and Indicators for North Africa

**Proposed EC Grant:** 3.454.575 €

**Abstract:**

MEDINA is designed to enhance Northern African Countries's monitoring capacity of their coastal areas ecosystems, including fish stocks resources, and consequently their capacity to implement environmental policies, conventions and protocols. In response to this Call for proposal and supported by a strong European partnership, MEDINA focuses on the Mediterranean coasts of Morocco, Algeria, Tunisia, Libya and Egypt.The plan to enhance those States monitoring capacity relies on a scientific and technology transfer approach, starting from the solid European experience in Mediterranean coasts management and active participation across GEO activities and Communities of Practice. MEDINA plans to achieve its objectives by implementing and demonstrating a set of five thematic pilot case studies, based on the requirements identified during the project's initial phase. Relevant data include satellite earth observations (EO), in-situ monitoring networks, airborne and ground survey information as well as socio-economic data, ecological analyses and national and regional cartographic datasets. Data availability to all parties will be ensured through the GEOSS Common Infrastructure (GCI). Existing software components for data access, processing and modelling will be adapted to requirements gathered within MEDINA and integrated in the GCI. MEDINA will exploit the GCI capabilities populating its registries and complying with the GEOSS Data Sharing Principles. In agreement with the GCI System of Systems philosophy, MEDINA will build on existing National capacities -represented in the project by key actors in ICZM- completing and advancing them, where necessary. MEDINA will mobilize such resources by assembling them in a dedicated e-infrastructure. Addressing user requirements, a set of specific tools will complete the platform to advance the scientific knowledge.These tools will enable MEDINA to assess the status of the coastal ecosystem, including fish stocks and marine habitats.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITA CA' FOSCARI VENEZIA | IT |
| 2 | UNIVERSITAT AUTONOMA DE BARCELONA | ES |
| 3 | UNIVERSIDAD PABLO DE OLAVIDE | ES |
| 4 | UNIVERSITE ABDELMALEK ESSAADI | MA |
| 5 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 6 | National Institute of Oceanography and Fisheries | EG |
| 7 | UNION INTERNATIONALE POUR LA CONSERVATION DE LA NATURE ET DE SES RESSOURCES | CH |
| 8 | COMMISSARIAT NATIONAL DU LITTORAL | DZ |
| 9 | PLYMOUTH MARINE LABORATORY | UK |
| 10 | ACRI ETUDES ET CONSEIL | MA |
| 11 | EUROPEAN SPACE AGENCY | FR |
| 12 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |

**Activity Code:** ENV.2011.4.1.1-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Operational Global Carbon Observing System

**Proposed EC Grant:** 6.648.530 €

**Abstract:**

Today, countries use a wide variety of methods to monitor the carbon cycle and it is difficult to compare datafromcountry to country and to get a clear global picture. The current global observational and modelling capabilitiesallow us to produce estimates of carbon budget at different level (from local to global) but many uncertainties stillremain. Decision makers need now more than ever systematic, consistent and transparent data, information andtools for an independent and reliable verification process of greenhouse gas emissions and sinks. Thereforehigher quality and quantity of CO2 and CH4 data, from different domains and with an enhanced spatial andtemporal resolution, need to be collected by a globally integrated observation and analysis system. This can beobtained by the coordinated Global Carbon Observation and Analysis System that this project aims at designing,addressing the climate targets of the Group on Earth Observations (GEO) toward building a Global EarthObservation System of Systems (GEOSS) for carbon.Specific objectives of the GEOCARBON project are:• Provide an aggregated set of harmonized global carbon data information (integrating the land, ocean,atmosphere and human dimension)• Develop improved Carbon Cycle Data Assimilation Systems (CCDAS)• Define the specifications for an operational Global Carbon Observing System• Provide improved regional carbon budgets of Amazon and Central Africa• Provide comprehensive and synthetic information on the annual sources and sinks of CO2 for the globeand for large ocean and land regions• Improve the assessment of global CH4 sources and sinks and develop the CH4 observing systemcomponent• Provide an economic assessment of the value of an enhanced Global Carbon Observing System• Strengthen the effectiveness of the European (and global) Carbon Community participation in the GEOsystem

**Partners:**

| | | |
|---|---|---|
| 1 | CENTRO EURO-MEDITERRANEO PER I CAMBIAMENTI CLIMATICI SCARL | IT |
| 2 | UNIVERSITY OF EAST ANGLIA | UK |
| 3 | EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZURICH | CH |
| 4 | WAGENINGEN UNIVERSITEIT | NL |
| 5 | THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF OXFORD | UK |
| 6 | VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG | NL |
| 7 | UNIVERSITY OF LEEDS | UK |
| 8 | MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. | DE |
| 9 | UNIVERSITE DE VERSAILLES SAINT-QUENTIN-EN-YVELINES. | FR |
| 10 | STICHTING SRON NETHERLANDS INSTITUTE FOR SPACE RESEARCH | NL |
| 11 | SECONDA UNIVERSITÀ DEGLI STUDI DI NAPOLI | IT |
| 12 | THE UNIVERSITY OF EDINBURGH | UK |
| 13 | STIFTELSEN NANSEN SENTER FOR FJERNMAALING | NO |
| 14 | UNIVERSITA DEGLI STUDI DELLA TUSCIA | IT |
| 15 | UNIVERSITETET I BERGEN | NO |
| 16 | GAMMA REMOTE SENSING RESEARCH AND CONSULTING AG | CH |
| 17 | CAMEROON BIODIVERSITY CONSERVATION SOCIETY | CM |
| 18 | FASTOPT GMBH | DE |
| 19 | UNIVERSITY OF BRISTOL | UK |
| 20 | INTERNATIONALES INSTITUT FUER ANGEWANDTE SYSTEMANALYSE | AT |
| 21 | INSTITUTO DE PESQUISAS ENERGETICAS E NUCLEARES | BR |
| 22 | FOOD AND AGRICULTURE ORGANISATION OF THE UNITED NATIONS FAO | IT |
| 23 | UNIVERSITE LIBRE DE BRUXELLES | BE |
| 24 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 25 | UNIVERSITAET HAMBURG | DE |

**Activity Code:** ENV.2012.6.5-1 **Funding Scheme:** CP **Duration (Months):** 24

**Title:** Odour MoNitoring and Information System based on CItizEN and Technology Innovative Sensors

**Proposed EC Grant:** 1.243.638 €

**Abstract:**

Odours from industry or livestock breeding are a great deal of annoyance for neighbours in rural and urban locations. The level of annoyance depends in a complex way on the release and strength of odour emissions, their dispersion under ambient atmospheric conditions and finally on the exposure and perception of citizens. OMNISCIENTIS brings together state of the art technologies and open communication capabilities in order to mitigate odour annoyance. The project enables a feedback of citizens, enhance knowledge on odour measurement and management, aims to support harmonization of legislations at EU level and provide savings to industrials. The core is an information system allowing inhabitants to act as human sensors with sociological behaviour; indicating odour perception, discomfort and nuisance. It provides a dedicated tool to consider odour acceptability, based on a community-based opinion. Due to the subjective nature of odour perception odour monitoring and fast modelling is used to assist and adjust the information given by citizens via smartphones and measurements. Innovative in-situ sensors are improved to monitor ambient odour exposures. A specific odour dispersion model system is developed to obtain interrelated spatial odour exposure levels. The fast and innovative model system is used to evaluate measures acting on the time of release, acting on the way of release. OMNISCIENTIS is applied in several case studies in Belgium, France and/or Austria. The case studies are part of Living Lab from the beginning of the project. This approach ensures involvement of stakeholders and particularly citizens in the decision process and supports dissemination actions. The results are conveyed to relevant stakeholders and published. The dissemination strategy comprise scientific workshops and conferences, written reports and publications, internet presentations, media mailing lists and press briefings, and presentations for the public.

**Partners:**

| | | |
|---|---|---|
| 1 | SPACEBEL SA | BE |
| 2 | odometric | BE |
| 3 | KTT-iMA Sarl | FR |
| 4 | UNIVERSITE DE LIEGE | BE |
| 5 | TECHNISCHE UNIVERSITAET GRAZ | AT |
| 6 | A.P.S. Technology | BE |
| 7 | Burgo Ardennes | BE |
| 8 | Inter-Environnement Wallonie | BE |

**Activity Code:** ENV.2012.6.5-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** WeSenseIT: Citizen Observatory of Water

**Proposed EC Grant:** 5.423.765 €

**Abstract:**

WeSenseIt will develop a citizen-based observatory of water, which will allow citizens and communities to become active stakeholders in information capturing, evaluation and communication. We propose: (i) data collection: (a) a first “hard” layer consisting of low-cost, static and portable devices that sense and transfer water information when automatically monitored or when initiated by citizens from their mobile devices; (b) a second “soft” layer consisting of techniques to harness citizens’ Collective Intelligence, i.e. the information, experience and knowledge embodied within individuals and communities, both in terms of enabling direct messages to the authorities (with mobile-phone pictures, messages, etc.) and in terms of crowd-sourcing (e.g. by mining social networks like Twitter and Facebook, as well as bulletin boards, RSS feeds, etc.). (ii) the development of descriptive and predictive models and decision-making tools integrating sensor and citizen-based data; the data suppliers (physical sensors or people) are seen as nodes of an integrated heterogeneous data collection network which undergoes progressive multi-objective optimization and tuning. (iii) two-way feedback and exchange of environmental knowledge/experience between citizens and authorities for decision-making and governance within an e-collaboration framework ,enabling improved transparency, knowledge management, accountability and responsiveness, as well as facilitating participation in water management. We will test, experiment and demonstrate the citizen observatory of water in three different case studies in water management with civil protection agencies in UK, NL and Italy. The topic is the entire hydrologic cycle with a major focus on variables responsible for floods and drought occurrences.The project results have the potential to fundamentally change the traditional concept of environmental monitoring and forecasting, as well as models of governance.

**Partners:**

| | | |
|---|---|---|
| 1 | THE UNIVERSITY OF SHEFFIELD | UK |
| 2 | UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION -UNESCO | FR |
| 3 | ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE | CH |
| 4 | MIDDLESEX UNIVERSITY HIGHER EDUCATION CORPORATION | UK |
| 5 | Sensorscope SARL | CH |
| 6 | Disdrometrics B.V. | NL |
| 7 | ADVANTIC SISTEMAS Y SERVICIOS | ES |
| 8 | HYDROLOGIC RESEARCH BV | NL |
| 9 | KNOWLEDGE NOW LIMITED | UK |
| 10 | STARLAB BARCELONA SL | ES |
| 11 | SOFTWARE MIND SA | PL |
| 12 | Doncaster Metropolitan Borough Council | UK |
| 13 | AUTORITA DI BACINO DEI FIUMI ISONZO TAGLIAMENTO LIVENZA PIAVE BRENTA BACCHIGLIONE | IT |
| 14 | QUINARY SPA | IT |

**Activity Code:** ENV.2012.6.5-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Citizens' observatory for coast and ocean optical monitoring

**Proposed EC Grant:** 3.839.758 €

**Abstract:**

In the marine environment, anthropogenic pressures on resources and non-anthropogenic causes may create harmful conditions that affect human society. Harmful algal blooms and habitat destruction are examples, which pose serious human-health threats and severely affect numerous industries, causing annual economic losses in the tens of millions of euros, in the form of reduced sales, diminished tourist activity and unemployment. A widely adopted, scientific way to assess the environmental status of water bodies is by measuring their optical properties (as indicators of, e.g., sewage impact, dissolved organic matter, sediment load or gross biological activity). The Citclops project aims to develop systems to retrieve and use data on seawater colour, transparency and fluorescence, using low-cost sensors combined with contextual information (e.g., georeferencing) and a community-based Internet platform, taking into account existing experiences (e.g., Secchi Dip-In, Coastwatch Europe and Oil Reporter). Simple and fast methods to establish the optical properties of seawater will be developed and used: e.g., the colour through Forel-Ule observations, and transparency through a variant of the Secchi disc. People will be able to acquire data taking photographs of the sea surface on ferries or other vessels, at the open sea or from the beach. Wearable digital cameras for aquatic activities with extended sensing systems are also proposed as alternative resources for crowdsourcing data. Data are automatically uploaded through a specific service or application (such as Google+ Instant Upload), archived remotely and processed, and resulting information is accessed through a webpage or a mobile application by end users. These are: policy makers (e.g., local administrations), which will be able to use the information to improve the management of the coastal zone; and citizens, who will be able to maximize their experience in activities in which water quality has a role.

**Partners:**

| | | |
|---|---|---|
| 1 | FUNDACIO PRIVADA BARCELONA DIGITAL CENTRE TECNOLOGIC | ES |
| 2 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 3 | CARL VON OSSIETZKY UNIVERSITAET OLDENBURG | DE |
| 4 | STICHTING KONINKLIJK NEDERLANDS INSTITUUT VOOR ZEEONDERZOEK (NIOZ) | NL |
| 5 | KINETICAL BUSINESS, SL | ES |
| 6 | TRIOS MESS- UND DATENTECHNIK GMBH | DE |
| 7 | MARIENE INFORMATIE SERVICE MARIS BV | NL |
| 8 | NOVELTIS SAS | FR |
| 9 | Coastwatch Europe | IE |
| 10 | VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG | NL |
| 11 | STICHTING DELTARES | NL |

**Activity Code:** ENV.2012.6.5-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Citizen Observatory Web

**Proposed EC Grant:** 6.549.522 €

**Abstract:**

COBWEB will leverage the UNESCO World Network of Biosphere Reserves (WNBR). Concentrating initially on the Welsh Dyfi Biosphere Reserve, we will develop a citizens' observatory framework, and then validate the work within the context of the UK National Spatial Data Infrastructure (SDI) and internationally, within the WNBR; specifically, within Greek and German Reserves. The infrastructure we develop will exploit technological developments in ubiquitous mobile devices, crowd-sourcing of geographic information and the operationalising of standards based SDI such as the UK Location Information Infrastructure. It will enable citizens living within Biosphere Reserves to collect environmental information on a range of parameters including species distribution, flooding and land cover/use. A main driver will be the opportunity to participate in environmental governance. Data quality issues will be addressed by using networks of "people as sensors" and by analysing observations and measurements in real-time combination with authoritative models and datasets. The citizen's observatory framework will integrate with evolving INSPIRE compliant national SDI's and allow the fusion of citizen sourced data with reference data from public authorities in support of policy objectives. To maximise impact, COBWEB will work within the processes of the standards defining organisations. Specifically, we will aim to improve the usability of Sensor Web Enablement standards with mobile devices, develop widespread acceptance of the data quality measures we develop and maximise the commercial appeal of COBWEB outputs. The end result we are aiming for is a toolkit and a set of models that demonstrably works in different European countries and which is accepted as a core information system component of the WNBR. Implementations of COBWEB will act as models for how technology may be used to empower citizens associations in environmental decision making.

**Partners:**

| | | |
|---|---|---|
| 1 | THE UNIVERSITY OF EDINBURGH | UK |
| 2 | THE UNIVERSITY OF NOTTINGHAM | UK |
| 3 | ABERYSTWYTH UNIVERSITY | UK |
| 4 | WELSH ASSEMBLY GOVERNMENT | UK |
| 5 | Environment Systems Limited | UK |
| 6 | Partneriaeth Eco Dyffryn Dyfi Eco Valley Partnership | UK |
| 7 | OPEN GEOSPATIAL CONSORTIUM (EUROPE) LIMITED | UK |
| 8 | UNIVERSITY COLLEGE DUBLIN, NATIONAL UNIVERSITY OF IRELAND, DUBLIN | IE |
| 9 | TECHNISCHE UNIVERSITAET DRESDEN | DE |
| 10 | SECURE DIMENSIONS GMBH | DE |
| 11 | UNIVERSITY OF WESTERN GREECE | EL |
| 12 | OIKOM - Meletitiki Perivallontos EPE | EL |
| 13 | GeoCat BV | NL |

**Activity Code:** ENV.2012.6.5-1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Development of sensor-based Citizens' Observatory Community for improving quality of life in cities

**Proposed EC Grant:** 8.968.282 €

**Abstract:**

CITI-SENSE will develop “citizens’ observatories” to empower citizens to contribute to and participate in environmental governance, to enable them to support and influence community and societal priorities and associated decision making. CITI-SENSE will develop, test, demonstrate and validate a community-based environmental monitoring and information system using innovative and novel Earth Observation applications. To achieve this, the project will: (i) raise environmental awareness in citizens, (ii) raise user participation in societal environmental decisions and (iii) provide feedback on the impact that citizens had in decisions. It will address the call’s request for effective participation by citizens in environmental stewardship, based on broad stakeholder and user involvement in support of both community and policy priorities. The project aims to learn from citizen experience and perception and enable citizenship co-participation in community decision making and co-operative planning.The concept of CITI-SENSE rests on three pillars: technological platforms for distributed monitoring; information and communication technologies; and societal involvement. Three pilot case studies will focus on a range of services related to environmental issues of societal concern: combined environmental exposure and health associated with air quality; noise and development of public spaces, and indoor air at schools. Attention will be given to representativeness of citizen participation. The case studies will be designed in collaboration with citizens’ groups and decision makers. They will be based on distributed data collection using innovative static, portable and personal devices (low-cost reliable microsensor packs) that communicate with a data repositories through mobile phones or other devices. Development of participatory methods, data management strategies, and applications to facilitate exploitation of the data and information for policy, and society, will be done.

**Partners:**

| | | |
|---|---|---|
| 1 | NORSK INSTITUTT FOR LUFTFORSKNING | NO |
| 2 | Bureau Medische Milieukunde | NL |
| 3 | The Norwegian Asthma and Allergy Association | NO |
| 4 | TECHNION - ISRAEL INSTITUTE OF TECHNOLOGY. | IL |
| 5 | CESKE VYSOKE UCENI TECHNICKE V PRAZE | CZ |
| 6 | QUEENSLAND UNIVERSITY OF TECHNOLOGY - QLD QUT | AU |
| 7 | AirBase | IL |
| 8 | CENTRE DE RECERCA I INNOVACIO DE CATALUNYA S.A. | ES |
| 9 | GAC spol. s r.o. | CZ |
| 10 | INSTITUTE OF OCCUPATIONAL MEDICINE | UK |
| 11 | Iritziak Batuz Koop, elk. Txikia | ES |
| 13 | Alphasense Limited | UK |
| 14 | UBIMET GMBH | AT |
| 15 | U-HOPPER SRL | IT |
| 16 | FUNDACIO CENTRE DE RECERCA EN EPIDEMIOLOGIA AMBIENTAL - CREAL | ES |
| 17 | USTAV EXPERIMENTALNI MEDICINY AKADEMIE VED CESKE REPUBLIKY VEREJNA VYZKUMNA INSTITUCE | CZ |
| 18 | INSTITUT NATIONAL DE L ENVIRONNEMENT ET DES RISQUES INERIS | FR |
| 19 | INSTITUT ZA NUKLEARNE NAUKE VINCA | RS |
| 20 | VLAAMS GEWEST | BE |
| 21 | INSTITUT JOZEF STEFAN | SI |
| 22 | STIFTELSEN SINTEF | NO |
| 23 | FUNDACION TECNALIA RESEARCH & INNOVATION | ES |
| 24 | Korea Institute of Construction Technology | KR |
| 25 | THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE | UK |
| 26 | DRUSTVO ZA KONSALTING, RAZVOJ I IMPLEMENTACIJU INFORMACIONIH I KOMUNIKACIONIH TEHNOLOGIJA DUNAVNET DOO | RS |
| 27 | SNOWFLAKE SOFTWARE LIMITED | UK |
| 28 | Geotechnical Instruments (UK) Ltd | UK |
| 29 | Obeo as | NO |

**Activity Code:** ENV.2007.4.2.3.2. **Funding Scheme:** CSA **Duration (Months):** 24

**Title:** Integrating civil, scientific and stakeholder knowledge towards African sustainable energy policy

**Proposed EC Grant:** 548.832 €

**Abstract:**

Sustainable development is closely linked to the issues of Environment and Energy and their interdependencies. Sustainable economic growth and social development are only possible if secure, constant and equal access to energy sources is guaranteed. However, intensive energy use is likely to present serious implications for the environment and the climate. Especially in developing countries, promotion of sustainable energy options is necessary to tackle these challenges. In Africa, Civil Society Organisations (CSO) have been particularly active in addressing sustainable development and energy management within the last 15 years. While presenting important representatives for social needs and concerns, their effective impact on research policy agenda setting has however been considerably low yet. In line with the EU's commitments to strengthening civil participation and to promoting a global approach to the issue of sustainable development, SustainergyNet aims at promoting the engagement of CSOs in Africa in the field of research policy agenda setting concerning sustainable and efficient energy management. In this perspective, the project will elaborate and suggest ways on how to encourage and facilitate the cooperation between CSOs and RTD performers. This will be based on the assessment of current settings and frameworks that already exist, the formulation of recommendations and best practices and the presentation of a specific facility ("CSO Involvement Net") that shall support CSOs towards actively contributing to research and policy processes.

**Partners:**

| | | |
|---|---|---|
| 1 | ORGANISATION FOR INTERNATIONAL DIALOGUE AND CONFLICT MANAGEMENT | AT |
| 2 | GROUPE DE RECHERCHE ET D'ECHANGES TECHNOLOGIQUES | FR |
| 3 | OESTERREICHISCHES INSTITUT FUER INTERNATIONALE POLITIK | AT |
| 4 | TECHNISCHE UNIVERSITAET DRESDEN | DE |
| 5 | AFREPREN/FWD ENERGY, ENVIRONMENT AND DEVELOPMENT NETWORK FOR AFRICA | KE |
| 6 | CAIRO UNIVERSITY | EG |

**Activity Code:** ENV.2007.4.2.2.1. **Funding Scheme:** CP **Duration (Months):** 36

**Title:** INtegrating MainSTREAM Economic Indicators with those of Sustainable Development

**Proposed EC Grant:** 1.208.536 €

**Abstract:**

Though mainstream economic measures such as GDP are useful measures with great influence on both public and private decisions, they are flawed as measures of human welfare. In addition, they give little information as to whether the market is helping Europe make progress on its environmental goals and its commitment to sustainable development. There is a critical need in Europe for indicators and measurement systems that—working in conjunction with mainstream economic indicators—provide a useful measure of progress toward economic success, human well-being, environmental protection and long-term sustainability. There is now a growing interest and momentum on the part of policy makers and researchers in developing these complementary headline indicators to better assess progress. The IN-STREAM project will undertake the qualitative and quantitative assessments necessary for linking mainstream economic indicators with key well-being and sustainability indicators, providing needed insight into the synergies and trade-offs implicit in Europe's simultaneous pursuit of economic growth and environmental sustainability. Based on qualitative and quantitative analyses, recommendations for new indicator approaches will be proposed. Recommended indicators (and sets of indicators) will those that perform best in terms of their robustness, feasibility and suitability to EU policy objectives. Strategies for implementing these approaches will be identified and developed in consultation with stakeholders.

**Partners:**

| | | |
|---|---|---|
| 1 | ECOLOGIC INSTITUT gemeinnützige GmbH | DE |
| 2 | UNIVERSITY OF BATH | UK |
| 3 | FONDAZIONE ENI ENRICO MATTEI | IT |
| 4 | UNIVERZITA KARLOVA V PRAZE | CZ |
| 5 | INSTITUTE FOR EUROPEAN ENVIRONMENTAL POLICY, LONDON | UK |
| 6 | UNIVERSITAET STUTTGART | DE |
| 7 | INTERNATIONALES INSTITUT FUER ANGEWANDTE SYSTEMANALYSE | AT |
| 8 | ZENTRUM FUER EUROPAEISCHE WIRTSCHAFTSFORSCHUNG GmbH | DE |

**Activity Code:** ENV.2007.4.2.3.1. **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Policies to promote sustainable consumption patterns (POPP)

**Proposed EC Grant:** 1.437.078 €

**Abstract:**

The project aims at increasing knowledge about the impact of sustainable consumption (SC) policies on consumption patterns and on sustainability. This objective will be achieved by the following steps: A conceptual model will be developed as a framework for the whole project. Embedded in a broader overview of general SC strategies and instruments, research will focus on the need areas of food and housing. For these areas, sustainability potentials will be quantified in order to identify the potential that SC policies may tap. Impacts will then be explored at macro and micro-level that food and housing related SC instruments throughout Europe have on consumption patterns (Impact Assessment). Instruments to be looked at encompass regulatory and economic instruments, including fiscal and procurement policies, as well as communicative instruments, procedural regulation and societal self-regulation. Conditions of success and failure of these instruments will be identified. The instrument impact assessment is based on the analysis of statistical data, expert interviews, focus groups with consumers and workshops with public procurers. Having explored the impact of SC instruments on consumption patterns, a material flow analysis will be carried out to assess their impact on sustainability, including at international level. Options to enhance sustainable consumption patterns will be explored, especially with regard to designing, implementing and transferring effective SC instruments. On the basis of the project results, policy recommendations will be developed to be fed into the Marrakech process. The project is relevant to the Work Programme by identifying the impact of different types of policy instruments at disaggregated level; by evaluating the conditions of success and failure of SC strategies in an interdisciplinary effort; by developing links between the economy, environment and society and presenting innovative policies to make consumption more sustainable.

**Partners:**

| | | |
|---|---|---|
| 1 | OEKO-INSTITUT E.V. - INSTITUT FUER ANGEWANDTE OEKOLOGIE | DE |
| 2 | KULUTTAJATUTKIMUSKESKUS | FI |
| 3 | UNIVERSITY COLLEGE LONDON | UK |
| 4 | BALTIJAS VIDES FORUMS | LV |
| 5 | ASSOCIACIO ECOINSTITUT D'ECOLOGIA APLICADA | ES |
| 6 | ICLEI EUROPEAN SECRETARIAT GMBH (ICLEI EUROPASEKRETARIAT GMBH)* | DE |
| 7 | INSTITUT FUR SOZIAL OKOLOGISCHE FORSCHUNG GMBH | DE |

**Activity Code:** ENV.2007.4.2.3.2. **Funding Scheme:** BSG **Duration (Months):** 27

**Title:** The Development of Indicators & Assessment Tools for CSO Values-based projects in Education for Sustainable Development (ESD)

**Proposed EC Grant:** 814.565 €

**Abstract:**

This project involves five very different Civil Society Organisations (CSOs) involved in Education for Sustainable Development in a very wide range of project types coming together to investigate two main aims, with academic assistance: 1) to develop more useful indicators to measure the impact of value/behaviour change elements in their ESD projects – at the project level. This will enable them to better prioritise their resources across a wide range of project types. A considerable range of value-based projects will be considered, involving SMEs, communities and schoolchildren. The newly developed project level impact indicators will be related to those for other levels, e.g. regional, national; and those used in academic arenas. It will be necessary to particularly focus on the development of less established SD indicators such as " well-being" which are can be strongly affected by spiritual/faith-based values and activities (Clark and Lelkes, 2005). Indicators for this have been difficult to quantify so far in mainstream discussions, but by focussing at project impact level we believe some can be defined and refined, with CSOs working with academics. Some schools of thought suggest that reinforcing local values will lead more effectively to behaviour changes, leading to larger SD impacts; without ways to measure, such ideas cannot be tested. 2) to improve the environmental impact of projects through advice at ground level. Three of the CSO participants in this proposal are faith-based whose projects generally focus on social issues more than environmental ones. The RTDs will be asked to outline possibilities to increase the projects' environmental impact within their current context, leading to suggestions and guidelines for such CSOs to allow them to be more effective at environmental impact even when this is not their main focus. Researchers officers will work extensively in the field on CSO projects, with CSO staff, for both aims.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITY OF BRIGHTON | UK |
| 2 | Earth Charter Initiative | CR |
| 3 | EUROPEAN BAHA'I BUSINESS FORUM ASSOCIATION | FR |
| 4 | Alliance of Religions and Conservation | UK |
| 5 | BAHA'I AGENCY FOR SOCIAL AND ECONOMIC DEVELOPMENT - UNITED KINGDOM | UK |
| 6 | People's Theater e.V. | DE |
| 7 | Arthur Lyon DAHL | CH |
| 8 | UNIVERZITA KARLOVA V PRAZE | CZ |

**Activity Code:** ENV.2007.4.2.3.2. **Funding Scheme:** BSG **Duration (Months):** 36

**Title:** Civil Society for Sustainability

**Proposed EC Grant:** 851.994 €

**Abstract:**

Civil society and its organisations (CSO) play a vital role in the implementation of sustainable development (SD). Civil society actors exhibit special features, they are to a large degree driven by visions or ideals, place a focus on common action, participate in and initiate discourses about SD in society, enhance social capital, and share a non-economical (non-efficiency driven) world view. Given these characteristics, CSOs show some specific shortcomings: a non-economical worldview leads to less efficient pursuit of SD goals and to a weak representation in political and economical decision-processes; initiating discourses often excludes evidence-based thinking, giving away chances for increased self-reflexivity and learning; and a lack of institutionalisation within existing institutional frameworks of governance provide not sufficient leverage to influence policy making. Apart from these more general shortcomings, there are numerous specific and context-related issues that would need to be researched in order to increase efficiency of CSOs. To foster sustainability from an analytical perspective, there are two aspects underlying (or overarching) all these context-dependent problems: (1) Degree of institutionalisation of sustainable development efforts within a local/regional context (socio-economical-political-cultural). Also therein, the degree of institutionalisation of sustainability-driven CSO in political/institutional decision structures ("participative governance"). (2) Sustainability knowledge and sustainability learning: getting sustainability across to people ("the long way from head to hand"). These aspects are closely related to each other and will provide the general research framework (GRF) of the proposed project, providing the "bracket" to keep context-related research with CSO partners focused on a more general analytic framework which will be individually adapted to each participating CSO's needs. The GRF will be identical for all partners, sufficiently theoretically structured and capable of deriving generalisations, but at the same time flexible enough and adaptive to various contexts to fit into different CSO environments.

**Partners:**

| | | |
|---|---|---|
| 1 | DIALOGIK GEMEINNUETZIGE GESELLSCHAFT FUER KOMMUNIKATIONS- UND KOOPERATIONSFORSCHUNG mbH | DE |
| 2 | ULMER INITIATIVKREIS NACHHALTIGE WIRTSCHAFTSENTWICKLUNG E.V. | DE |
| 3 | MUTADIS CONSULTANTS SARL | FR |
| 4 | REGIONAL ENVIRONMENTAL CENTER FOR CENTRAL AND EASTERN EUROPE -REC | SI |
| 5 | MAGYAR TUDOMANYOS AKADEMIA SZOCIOLOGIAI KUTATOINTEZET | HU |
| 6 | ENERGIAKLUB SZAKPOLITIKAI INTEZET MODSZERTANI KOZPONT EGYESULET | HU |

**Activity Code:** ENV.2007.4.2.1.1. **Funding Scheme:** CP **Duration (Months):** 33

**Title:** Transactional Environmental Support System

**Proposed EC Grant:** 1.801.111 €

**Abstract:**

TESS will assist policy makers to integrate knowledge from the EU, national, regional and local level into the decision making process while also encouraging local people to maintain and restore biodiversity ecosystem services. To achieve this, a transactional environmental decision support system will be designed, linking central policy planning to local livelihoods. To develop this system, TESS will first research the needs and capacities of central policy makers and local actors, identify paths and trajectories of cooperation, and model required transactions between the central and the local in relation to each one's needs. A set of representative case studies from the whole EU (including the New Member States and pre-accession countries) will test the validity of the models and consolidate the project's results into the design for a transactional environmental decision support system, named TESS. TESS will also include base-line information and predictive models for Strategic Environmental Assessment (SEA), Sustainability (Impact) Assessment (SIA) and Environmental Impact Assessment (EIA). TESS will be supplemented by a set of brief and memorable policy guidelines to ensure its usefulness and enable its application in a European context. The process of developing TESS will be facilitated by a large interdisciplinary consortium, in which participants include European associations with a strong network of support and influence not only in the Brussels milieu, but also at the grassroots.

**Partners:**

| | | |
|---|---|---|
| 1 | ARISTOTELIO PANEPISTIMIO THESSALONIKIS | EL |
| 2 | BOURNEMOUTH UNIVERSITY | UK |
| 3 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 4 | ANATRACK LTD | UK |
| 5 | ERENA,ORDENAMENTO E GESTAO DE RECURSOS NATURAIS LIMITADA | PT |
| 6 | EFSTRATIOS ARAMPATZIS MONOPROSOPI EPE | EL |
| 7 | EUROPEAN SUSTAINABLE USE SPECIALISTGROUP OF IUCN/SS | BE |
| 8 | Federation des Asssociations de Chasse et Conservation de la Faune Sauvage de l'Union Europeenne | BE |
| 9 | ZENON FELIKS TEDERKO | PL |
| 10 | CENTER ZA KARTOGRAFIJO FAVNE IN FLORE ZAVOD | SI |
| 11 | SZENT ISTVAN EGYETEM | HU |
| 12 | TALLINNA TEHNIKAULIKOOL | EE |
| 13 | DOGAL HAYATI KORUMA VAKFI | TR |
| 14 | INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE DELTA DUNARII | RO |

**Activity Code:** ENV.2007.4.2.1.1. **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Prototypical Policy Impacts on Multifunctional Activities in rural municipalities

**Proposed EC Grant:** 1.999.333 €

**Abstract:**

The proposed project will develop a method for scaling down the analysis of policy impacts on multifunctional land uses and on the economic activities. This method will rely on micro-simulation and multi-agents models, designed and validated at municipality level using input from stakeholders. The models will address the structural evolution of the populations (appearance, disappearance and change of agents) depending on the local conditions for applying the structural policies on a set of municipality case studies. We shall consider policies related to use of Structural Funds (SFs), Cohesion Fund (CF), Preaccession funds (PAFs) and EAFRD (respectively CAP). This project will include the following actions: - Review the EU structural policies, identify driving forces at EU, national and regional levels for multifunctional land use activities and provide baselines for the design of national and regional scenarios on multifunctional land use activities. - Interaction with stakeholders: pre-model engagement with stakeholders in terms of scenario design and formulating agent decision rules for agent-based models, on-model engagement with stakeholders mirroring agent-based models, and post-model engagement with stakeholders in terms of assessing model outputs. - Design and develop micro-simulation and multi-agents models, of local dynamics and of the impact of European structural policies at the municipality level. - Build a mapping between available data on municipalities and prototypical, contrasted evolutions of micro-simulation and agent based models. This will allow us to aggregate the results provided by these models at a regional level, on a set of regional case studies, and to compare these results with existing models at regional scale. - Investigate the potential of the approach to design a method that enhances the scope of Strategic Environmental Assessment (SEA), Environmental Impact Assessment (EIA) and Sustainable Impact Assessment (SIA).

**Partners:**

| | | |
|---|---|---|
| 1 | INSTITUT NATIONAL DE RECHERCHE EN SCIENCES ET TECHNOLOGIES POUR L'ENVIRONNEMENT ET L'AGRICULTURE | FR |
| 2 | TECHNISCHE UNIVERSITAET DORTMUND | DE |
| 3 | UNIVERSITY OF NATIONAL AND WORLD ECONOMY | BG |
| 4 | UNIVERSITETET FOR MILJO OG BIOVITENSKAP | NO |
| 5 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 6 | UNIVERSITY OF NEWCASTLE UPON TYNE | UK |
| 7 | LEIBNIZ INSTITUT FUER AGRARENTWICKUNG IN MITTEL- UND OSTEUROPA | DE |
| 8 | RIJKSUNIVERSITEIT GRONINGEN | NL |
| 12 | FACULTY OF AGRICULTURE UNIVERSITY ZAGREB - CROATIA | HR |
| 13 | MINISTERIE VAN INFRASTRUCTUUR EN MILIEU | NL |
| 15 | USTAV ZEMEDELSKE EKONOMIKY A INFORMACI | CZ |

**Activity Code:** ENV.2007.4.2.3.2. **Funding Scheme:** CSA **Duration (Months):** 29

**Title:** Partnering to Enhance Civil Society Organisations' Contribution to Research in Sustainable Consumption & Production

**Proposed EC Grant:** 583.454 €

**Abstract:**

Some relative decoupling of economic growth from materials and energy consumption has been achieved in many EU countries during the past decade. However, this did not lead to an absolute decrease in environmental pressures, because absolute resource use has been generally remained steady over the past two decades. Moreover, due to the 'rebound effect', it is unlikely that resource use can be reduced by technological improvements alone. This leads us to the conclusion that sustainability of current lifestyles and consumption patterns may have to be critically reviewed. In order to reach the goal of shifting towards less environmentally damaging consumption patterns without reductions in the "quality of life", contributions from and agreement among a variety of economic and societal actors are required. Civil Society Organizations (CSOs) have the unique position to bring a variety of actors together and convince them to take action for more transformational type of change beyond resource productivity measures. They can encourage concrete set of goals to drive away from currently unsustainable patterns of consumption. This project looks into how CSOs can provide new insights for research in sustainable consumption and production with the goal of reaching absolute decoupling of economic growth from resource use. Incorporating all major priorities of the call, specific objectives of the project are as follows: - Identify gaps (1) in the knowledge of CSO's how to shape consumption and production patterns in a sustainable way, and (2) in the research agenda for sustainable consumption and production policy strategies, assessment tools and indicators; - Providing new insights for increasing efficiency of policy strategies, assessment tools and indicators for sustainable consumption and production through small-scale exploratory actions; - Create partnerships between CSOs and research organisations to increase involvement of CSOs in research.

**Partners:**

| | | |
|---|---|---|
| 1 | UNEP/WUPPERTAL INSTITUTE COLLABORATING CENTRE ON SUSTAINABLE CONSUMPTION AND PRODUCTION GGMBH-CSCP | DE |
| 2 | NORTHERN ALLIANCE FOR SUSTAINABILITY IVZW | BE |
| 3 | STOCKHOLM ENVIRONMENT INSTITUTE | SE |
| 4 | SERI - NACHHALTIGKEITSFORSCHUNGS UND -KOMMUNIKATIONS GmbH | AT |
| 5 | WWF-UK | UK |
| 6 | FUNDACION ECOLOGIA Y DESARROLLO | ES |
| 7 | ZALA BRIVIBA | LV |
| 8 | ALL-UKRAINIAN ENVIRONMENTAL NON-GOVERNMENTAL ORGANISATION "MAMA-86" | UA |
| 9 | TURKIYE TEKNOLOJI GELISTIRME VAKFI | TR |

**Activity Code:** ENV.2007.4.2.1.3. **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Spatial-economic-ecological model for the assessment of sustainability policies of Russia

**Proposed EC Grant:** 1.237.189 €

**Abstract:**

The objective of the study is to develop and implement for Russia an integrated spatial-economic-ecological modelling approach, which represents the state-of-the-art in different areas of economic, transport, resource-use and environmental modelling, and can be used to assist policy makers in their choice of medium and long-term sustainability policies. This implies the following interrelated aims: develop modelling approach, which represents the state-of-the-art in impact assessment modelling and corresponds the complexity of the sustainability issue; build consistent database necessary for the implementation of the developed approach for Russia; construct the spatial-economic-ecological model for Russia; develop a set of sustainability indicators associated with the model, which allows for quantification of social, economic and environmental effects of sustainability policies; use the model to assess the effects of a set of important sustainability policy measures in order to demonstrate the operation ability and reliability of the developed modelling approach. The SUST-RUS modelling approach will provide Russian and international community with the sound scientific support for formulating sustainability policies, which is characterized by a balanced integration between social, economic and environmental policy objectives. The use of the SUST-RUS approach will assist the implementation of the EU strategy for sustainable development in Russia as well as an efficient incorporation of the sustainability goals into the existing Russian policy tools on regional and federal levels. The SUST-RUS modelling approach represents the state-of-the-art in many different areas of knowledge and, hence, will be superior to other models available for Russia.

**Partners:**

| | | |
|---|---|---|
| 1 | NON-COMMERCIAL FOUNDATION OF ECONOMIC DEVELOPMENT AND SOCIAL STABILITY CO-OPERATION_ ECONOMIC AND FINANCIAL RESEARCH AND DEVELOPMENT CENTER | RU |
| 2 | TRANSPORT & MOBILITY LEUVEN NV | BE |
| 3 | ZENTRUM FUER EUROPAEISCHE WIRTSCHAFTSFORSCHUNG GmbH | DE |
| 4 | E.T. GAIDAR INSTITUTE FOR THE ECONOMIC POLICY FOUNDATION | RU |
| 6 | VORONEZH STATE UNIVERSITY | RU |
| 7 | Far Eastern Center for Economic Development | RU |
| 8 | STATISTISK SENTRALBYRAA - STATISTICS NORWAY | NO |
| 9 | FEDERAL STATE AUTONOMOUS EDUCATIONAL INSTITUTION OF HIGHER PROFESSIONAL EDUCATION "URAL FEDERAL UNIVERSITY NAMED AFTER THE FIRST PRESIDENT OF RUSSIA B.N.YELTSIN" | RU |

**Activity Code:** ENV.2007.4.2.3.2. **Funding Scheme:** CSA **Duration (Months):** 36

**Title:** European Network engaging CIvil society in Low Carbon scenarios

**Proposed EC Grant:** 717.980 €

**Abstract:**

The overall aim of ENCI-LowCarb is to engage civil society in research on low carbon scenarios. This will be achieved by : - Creating a European network related to the factor 4 composed by Civil Society Organisations and research institutes - Elaborating two national studies (France and Germany) based on the confrontation between climate policies of low carbon scenarios and civil society organisations (social acceptability) - Disseminating the results to a larger public This project has direct relevance to the last developments of climate change european policies. The Spring Council of 8-9 march 2007 recognized that in order to stabilize the climate and to reach the 2°C objective, industrialized countries need to cut their greenhouse gases emissions by 30% by 2020 and by 60 to 80% by 2050 compared to 1990. In this context, the European Council endorsed an EU objective of a 30% reduction in greenhouse gas emissions by 2020 compared to 1990 as its contribution to a global and comprehensive agreement for the period beyond 2012. Policies able to reach these objectives still have to be conceived, and as there is not one single emission reduction objective common to each member state, there is no unique way to reach it. Discussions on this subject will take into account different national circumstances and potentials : French and German situations in particular will be analysed. But two main elements are decisive in implementing climate policies : of course their economic assessment, but also their social acceptability. The long term impact of the ENCI-LowCarb project will be to enhance the adoption by citizens and decision makers of the new behaviours which are required to reach the Factor 4 objective.

**Partners:**

| | | |
|---|---|---|
| 1 | RESEAU ACTION CLIMAT - FRANCE | FR |
| 2 | INTERNATIONAL NETWORK FOR SUSTAINABLE ENERGY-EUROPE | DK |
| 3 | Germanwatch Nord-Sued-Initiative e.V. | DE |
| 4 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 5 | POTSDAM INSTITUT FUER KLIMAFOLGENFORSCHUNG | DE |

**Activity Code:** ENV.2008.4.2.3.2. **Funding Scheme:** CSA **Duration (Months):** 30

**Title:** How to achieve sustainable water ecosystems management connecting research, people and policy makers in Europe

**Proposed EC Grant:** 1.497.356 €

**Abstract:**

The issue of concern of the AWARE project is the anthropogenic deterioration of water ecosystems, in particular in coastal areas. The new approach proposed by the AWARE project to enhance connectivity between research and policy-making exploit the concept of integrated adaptive ecosystem management, engaging scientists, policy makers and the public (the latter including both stakeholders and lay citizens/water users) into comparable case studies of participatory scenario-building. The emphasis given to the role of the public enlarges the concept of organisational learning to the wider concept of social learning. The specific objectives and WPs of the AWARE project will include therefore: WP1: to design and prepare the pilot experiments of participatory scenario-building; WP2: to perform three case studies of participatory-scenario building in different coastal regions of Europe; WP3: to make an evaluation and assessment of the pilot case studies and of the proposed approach; WP4: to foster networking between science institutions, policy authorities and stakeholders in the case study areas and at EU level, and disseminate the approach elsewhere in Europe. The AWARE consortium includes 14 partners of complementary expertise in the field of aquatic ecosystems studies (UU, UPMC, ULB, UNIPR), social sciences (ADELPHI, ICCR, Missions Publiques), system analysis (ISIS, JRC-IES, UNISI) and integrated water management (BIOFORSK, POLIEDRA), plus the Environmental Service from the Provincial Administration of Ferrara and the Baltic Environmental Forum (BEF). The consortium will be complemented by an advisory group of 10 policy makers and stakeholders.

**Partners:**

| | | |
|---|---|---|
| 1 | ISTITUTO DI STUDI PER L'INTEGRAZIONE DEI SISTEMI (ISIS) | IT |
| 2 | NORWEGIAN INSTITUTE FOR AGRICULTURAL AND ENVIRONMENTAL RESEARCH - BIOFORSK | NO |
| 3 | ADELPHI RESEARCH GGMBH | DE |
| 4 | INTERDISCIPLINARY CENTRE FOR COMPARATIVE RESEARCH IN THE SOCIAL SCIENCES - ICCR | AT |
| 5 | UPPSALA UNIVERSITET | SE |
| 6 | MISSIONS PUBLIQUES | FR |
| 7 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 8 | UNIVERSITA' DEGLI STUDI DI SIENA | IT |
| 9 | UNIVERSITA DEGLI STUDI DI PARMA | IT |
| 10 | POLIEDRA - CENTRI DI CONOSCENZA EFORMAZIONE DEL POLITECHNICO DI MILANO | IT |
| 11 | UNIVERSITE PIERRE ET MARIE CURIE - PARIS 6 | FR |
| 12 | PROVINCIA DI FERRARA | IT |
| 13 | UNIVERSITE LIBRE DE BRUXELLES | BE |
| 14 | BALTIJAS VIDES FORUMS | LV |

**Activity Code:** ENV.2008.4.2.2.1. **Funding Scheme:** BSG **Duration (Months):** 42

**Title:** GEOTRACEBILITY FAIR TRADE

**Proposed EC Grant:** 1.460.710 €

**Abstract:**

Fair Trade is an activity area where CSOs play a key role. Fair Trade is also an activity area promoting the best social, economic and environmental practices of sustainable development. Unfortunately CSOs do not have the means to develop concerted strategies in Research and Technology Development. Their short term concerns often prevent them to have the necessary hindsight. The main objective of the Geo Fair Trade project is to bring together Fair Trade CSOs and RTD performers. Discussions with the principle Fair Trade stakeholders and actors have shown that their basic needs to win new markets and new consumers are Transparency and Traceability. Taking advantage of the results obtained in two FP5 and FP6 research projects, the CCI Gers and its partners CRA-W and CIRAD, together with 5 Fair Trade CSOs, have defined the main objectives of the project whose: 1. To select sustainable development indicators with a spatial component and related to the three dimensions of Fair Trade (social, economic and environmental). 2. To adapt the Geo-traceability Integrated System, set-up in the previous research projects, enabling finding and browsing of all relevant information corresponding to the needs of Fair Trade actors. 3. To validate this approach with six case studies chosen by the CSOs. 4. To develop training and educative tools to disseminate this approach. The Geo Fair Trade project is based on a permanent communication between the RTD performers and the CSOs, who will participate in all scheduled progress meetings, to validate the results or to reorientate the Research and Technology Development activities. The final expected result is a reference framework built on the sustainable development geo-indicators that can be used in all the traceability systems already implemented in Fair Trade. This reference framework will improve the certification of the best practices implemented by the Fair Trade actors.

**Partners:**

| | | |
|---|---|---|
| 1 | Chambre de Commerce et d'Industrie du Gers | FR |
| 2 | CENTRE DE COOPERATION INTERNATIONAL EN RECHERCHE AGRONOMIQUE POUR LE DEVELOPPEMENT | FR |
| 3 | CENTRE WALLON DE RECHERCHES AGRONOMIQUES | BE |
| 4 | Ecocert Deutschland GmbH | DE |
| 5 | Systèmes d'Information à Référence Spatiale (SIRS) SAS | FR |
| 6 | Association Equi'Sol | FR |
| 7 | Pakka Trade AG | CH |
| 8 | World Fair Trade Organization | NL |
| 9 | STICHTING VAN HALL LARENSTEIN | NL |
| 10 | Max Havelaar France | FR |
| 11 | Coordinadora Estatal del Comercio Justo | ES |

**Activity Code:** ENV.2008.4.2.2.1. **Funding Scheme:** CSA **Duration (Months):** 18

**Title:** Participatory Assessment of Sustainable Development indicators on good governance from the Civil Society perspective

**Proposed EC Grant:** 597.360 €

**Abstract:**

PASSO will assess Sustainable Development Indicators on Good Governance and its cross-cutting features from a social perspective. The starting point will be the list of SDIs adopted in the context of the EU Sustainable Development Strategy on the Good Governance Theme. Alternative sets of governance indicators from international initiatives (e.g. United Nations) will be considered too. These sets of indicators will be subject to a participatory assessment process allowing CSOs members to react to RTD performers, statisticians and experts' views in an iterative manner. A small interdisciplinary International Expert Group (20 members) composed of both CSOs representatives and experts will be created for a first professional review of the existing indicators. The results of the assessment will be submitted for consultation to a Europe-wide large CSOs network. In parallel, national CSOs consultations in Austria, Belgium, Bulgaria, France, Italy, Romania, Spain and The Netherlands will take place. The consultation process will be reiterated within the IEG first and with the public at large at the end so as to ensure that the outcome of PASSO is built on the consensus among all social actors concerned. The aim of the overall assessment will be: • to appraise the relevance and efficiency of the existing indicators from the Civil society perspective in combination with experts views; • to identify gaps and suggest how to fill them, with possible amendments or development of new indicators; • to produce a priority list of such amendments/new developments based on a multi-criteria assessment of their relevance from the CSOs perspective • to draft recommendations for the improvement of SDS/SDIs.

**Partners:**

| | | |
|---|---|---|
| 1 | ISTITUTO DI STUDI PER L'INTEGRAZIONE DEI SISTEMI (ISIS) | IT |
| 2 | MISSIONS PUBLIQUES | FR |
| 3 | POUR LA SOLIDARITE ASBL | BE |
| 4 | UNIVERSITAET STUTTGART | DE |

**Activity Code:** ENV.2008.4.2.3.2. **Funding Scheme:** CP **Duration (Months):** 40

**Title:** Brokering Environmentally Sustainable Sanitation for Europe

**Proposed EC Grant:** 927.918 €

**Abstract:**

This collaborative research project will last 40 months and involve 10 partners. Its general aim is to contribute to the EU Renewed Sustainable Development Strategy through the enhancement of the links between policy and research on sustainable development in the field of sanitation (a crucial area with regard to environmental sustainability and quality of life in general). The project has two specific aims. 1. Generating new knowledge on the factors hindering the dissemination of scientific and technological knowledge that can be immediately applied in support to sustainable development, and of identifying knowledge brokerage methods enabling to overcome these hindering factors and to maximise the exploitation of relevant knowledge. 2. Starting up a learning process on knowledge brokerage in general as a tool for the socialisation of Scientific and Technological Research. The project components, to be implemented in the partner countries, are: - Research. Activities will carried out for mapping the knowledge and technological options for environmentally sustainable sanitation (ESS), and the actors that possess this knowledge. This, together with a consultation of experts aimed at listing the obstacles to knowledge brokerage dissemination, will provide the basis for experimentations. - Experimentation. Knowledge brokerage experiments on ESS will be carried out in the Netherlands, Italy and Bulgaria via 3 pilot projects. - Learning. The results achieved will serve to start up a process aimed at drafting policy guidelines (including a position paper) on knowledge brokerage on ESS. - Dissemination. Dissemination and awareness-raising initiatives will be carried out on the project issues and results. 9 WPs are foreseen. WP1 and 2 for the first part of the research; WP3-6 will be devoted to the design and implementation of 3 pilot projects, WP7 will be devoted to learning process; WP8 will deal with dissemination and WP9 with project management.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITEIT MAASTRICHT | NL |
| 2 | LABORATORIO DI SCIENZE DELLA CITTADINANZA - LSC | IT |
| 3 | LOUGHBOROUGH UNIVERSITY | UK |
| 4 | RESEARCH CENTRE - REGIONAL AND GLOBAL DEVELOPMENT | BG |
| 5 | Comune di Castel Sant'Angelo di Rieti | IT |
| 6 | Waterschapsbedrijf Limburg | NL |
| 8 | AICCRE - ASSOCIAZIONE ITALIANA PER IL CONSIGLIO DEI COMUNI E DELLE REGIONI D'EUROPA | IT |
| 9 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 10 | International Water Association | UK |
| 11 | MUNICIPALITY OF PERNIK | BG |

**Activity Code:** ENV.2008.4.2.3.2. **Funding Scheme:** CSA **Duration (Months):** 36

**Title:** Policies and Research for an Integrated Management of Urban Sustainability

**Proposed EC Grant:** 1.221.545 €

**Abstract:**

The PRIMUS project has been designed to bridge the gap between research on the European level on one hand, and policy-making at (and for) the local level on the other hand. The theme chosen for this 36-months coordination action is 'sustainable urban management', thus covering the way how the various policy areas of urban development (energy/water/waste, transport, planning and design, social inclusion, etc) are integrated, rather than one of these themes in particular. This focus is based on the assumption that the decoupling of environmental degradation and economic growth can only be achieved through a better management and governance of the largely inter-dependent issues of urban development. Indicators and information systems, efficient and effective policy processes, and innovative public participation are the main instruments to set ambitious targets, gain wide acceptance, and implement behavioural changes in society. The project is built around a series of events of different nature - so-called Connection Fora, Linkage Fora and Implementation Fora - linking into and building upon each other. They convene local governments from across Europe, researchers in the field of urban sustainability management, and national ministries and agencies dealing with sustainability policies directed at the local level in their respective Member States. A pilot dimension of the project is the 'explorative application' of two selected research-based tools for sustainable urban management by some 100 local governments throughout Europe. This application should explore the connectivity between research and policy-making and deliver criteria for its general enhancement in other thematic areas and in the future. With the European Report on Urban Sustainability - the first of its kind and derived from this explorative application - PRIMUS will demonstrate the fascinating potential of a better connectivity between research and policy-making.

**Partners:**

| | | |
|---|---|---|
| 1 | ICLEI EUROPEAN SECRETARIAT GMBH (ICLEI EUROPASEKRETARIAT GMBH)* | DE |
| 2 | UNIVERSITY OF NORTHUMBRIA AT NEWCASTLE. | UK |
| 3 | Ambiente Italia s.r.l. | IT |
| 4 | ABO AKADEMI | FI |

**Activity Code:** ENV.2008.4.2.3.2. **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Policy Science Interactions: connecting science and policy through innovative knowledge brokering

**Proposed EC Grant:** 1.373.082 €

**Abstract:**

European policy makers and researchers recognise the large policy potential of research in the field of sustainable development, but the potential is not fully used. PSI-connect wants to contribute to bridging the gap between science and policy in the field of the impacts of climate change on water management. The decoupling challenge from the EU Sustainable Development Strategy implies that impacts of climate change on the river basin system should be diminished. This is a policy issue of contemporary urgency and it is a topic where large quantities of high quality knowledge ('untapped potential') are available. The consortium partners are all involved in different EU-projects with high relevance and have excellent contacts with relevant national research programs and easy access to national and regional policy makers. PSI-connect will experiment with and develop innovative knowledge brokering instruments in the field of impacts of climate change impacts on river systems. These instruments will be developed from available candidates such as Communities of Practice, games, group model building, and scenario workshops. We will develop and test these instruments in six case studies: • Working group Climate Change and Water of the CIS of the WFD; • Committee on Climate Change of the EU Parliament; • German Ministry of Environment; • Dutch Ministry of Traffic, Public Works and Water management; • River basin Community Elbe (Germany) • Water Board Rivierenland (the Netherlands); The final results of PSI-connect will be tested knowledge brokering instruments for different policy levels. Furthermore, 'knowledge brokerage communities' will be established that act as learning communities and have the capacity to maintain European leadership in this field beyond the lifetime of the PSI-connect project itself. Results will be disseminated to the relevant audiences through summer schools, a web-site and a final conference.

**Partners:**

| | | |
|---|---|---|
| 1 | NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO | NL |
| 2 | CRANFIELD UNIVERSITY | UK |
| 3 | Stowarzyszenie Centrum Rozwiazan Systemowych | PL |
| 4 | UNIVERSITAET OSNABRUECK | DE |
| 5 | POTSDAM INSTITUT FUER KLIMAFOLGENFORSCHUNG | DE |
| 6 | VITUKI KORNYEZETVEDELMI ES VIZGAZDALKODASI KUTATO INTEZET NONPROFIT KOZHASZNU KORLATOLT FELELOSSEGU TARSASAG | HU |
| 7 | STICHTING DELTARES | NL |

**Activity Code:** ENV.2008.4.2.3.1. **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Rethinking Globalisation in the light of Contraction and CONVERGEnce

**Proposed EC Grant:** 1.398.152 €

**Abstract:**

The CONVERGE project will build from the concept of 'contraction and convergence' that informed the Kyoto process. C&C linked the key social concept of equal rights to emissions with the key ecological need for reduced emissions to issue a challenge to economic systems to develop fair processes for emissions reduction. CONVERGE aims to re-think globalisation by developing our understanding of convergence beyond emissions-trading across wider social, economic and ecological dimensions of sustainability. CONVERGE will research, develop and test the processes of contraction, convergence and divergence in current forms of globalisation. The research will be based on systems science to integrate social, scientific and economic disciplines in order to create coherent solutions to complex problems. Key to the success of this study is the interdisciplinary approach and working with stakeholders from civil society, government and business. CONVERGE seeks to explore convergent sustainability relationships across different scales from local, national, global-regional to global. CONVERGE will research current examples of convergence in communities, policies and indicators moving towards sustainability. The project will develop a convergence frame for understanding and development in civil society and policy communities; accessible publications providing guidance and tools for the use of this framework; a set of Convergence indicators, quantitative and qualitative, that will be used to test and model the processes of convergence including development of a Computer Programme; and recommendations to assist policy makers to integrate C&C into the decision making process. CONVERGE will play a significant role in achieving the strategic objective of EUs global partnership: "to promote sustainable development actively worldwide and ensure that the European Union's internal and external policies are consistent with global sustainable development and its international commitments."

**Partners:**

| | | |
|---|---|---|
| 1 | DR. E.F. SCHUMACHER SOCIETY LIMITED | UK |
| 2 | UNIVERSITY OF BRISTOL | UK |
| 3 | LUNDS UNIVERSITET | SE |
| 4 | GREENDEPENDENT - Fenntartható Megoldások Egyesülete | HU |
| 5 | SZENT ISTVAN EGYETEM | HU |
| 6 | THE SCHUMACHER CENTRE LTD | UK |
| 7 | The Natural Step International | SE |
| 8 | SOCIAL CHANGE AND DEVELOPMENT | IN |
| 9 | HASKOLI ISLANDS | IS |

**Activity Code:** ENV.2008.4.2.3.1. **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Sustainable development reflexive inputs to world organisation

**Proposed EC Grant:** 983.637 €

**Abstract:**

The objective of the project is to provide the EU with conceptual tools and applicable ideas to make sustainable development an operational paradigm framing EU policy making in the globalization process. Broadening the utilitarian, state-centred, and market failure approach often mobilised in globalisation analysis, we develop a reflexive framework within which time and irreversibility, institutional path-dependency and multiple actors, with heterogeneous knowledge, beliefs, preferences, technology and power, interfere in the process of policy making. In this procedural approach, the policy making process itself will be scrutinised and integrated as a key determinant of the policy outcome itself. Within this renewed framework, globalization core challenges will be intersected with sustainable development conceptual challenges, which will be tackled specifically before nurturing back EU policy-making in the globalization process. The "ultimate test case for collective action" according to recent statement by Nick Stern - namely the governance of climate change and the bottom billion interlinked issue - will be used as an application case study throughout the project. The project's main outputs are threefold: firstly, identify methodological tools to fulfil the empirical deficit in the measure of world citizens' heterogeneous preferences across a range of sustainable development issues; second, develop conceptual tools to better understand sustainable development implications on EU social contracts and policy making processes; third, propose building blocks for a renewed dialogue on global governance within the EU and outside as "if sustainable development really mattered" to paraphrase Dani Rodrick.

**Partners:**

| | | |
|---|---|---|
| 1 | FONDATION INSTITUT DE RECHERCHE POUR LE DEVELOPPEMENT DURABLE ET LES RELATIONS INTERNATIONALES | FR |
| 2 | LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE | UK |
| 3 | FREIE UNIVERSITAET BERLIN | DE |
| 4 | FONDATION NATIONALE DES SCIENCES POLITIQUES | FR |

**Activity Code:** ENV.2008.4.2.3.1. **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Globalisation Informed by Sustainable Development

**Proposed EC Grant:** 1.189.089 €

**Abstract:**

The objectives of GLOBIS are to synthesise from the scholarly debate in different disciplines, a theoretical foundation for reconciling the three global processes: globalisation, development and sustainable development. Our ontological assumption is that globalisation is an ongoing and in principle benign process, but a process that needs to be promoted and adjusted in relation to sustainable development. Development as a concrete and institutionalised process also needs to be carefully aligned with sustainability. Based on this comprehensive understanding we will analyse how the global flows of financial capital, people, goods and ideas are promoted, restricted and regulated through a number of important policy areas, such as: trade, agriculture and food, energy, transport, technology and innovation, and tourism, in order to identify the existing tensions in globalization, recognizing the trade-offs involved, and thus pointing to possible areas of reform in current policy practices and global institutions. GLOBIS will serve to inform European policy processes on how to reconcile globalisation and sustainable development in order to promote ambition of EU to become the leading force in the world towards sustainability. This will be pursued through a number of thematic studies of important policy areas. The project will engage stakeholders from different sectors of EU and beyond in dialogues on concrete policy dilemmas.

**Partners:**

| | | |
|---|---|---|
| 1 | LUNDS UNIVERSITET | SE |
| 3 | SOCIETE DE MATHEMATIQUES APPLIQUEES ET DE SCIENCES HUMAINES | FR |
| 4 | FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V | DE |

**Activity Code:** ENV.2008.4.2.2.1. **Funding Scheme:** BSG **Duration (Months):** 27

**Title:** One Planet Economy Network: Europe

**Proposed EC Grant:** 1.300.000 €

**Abstract:**

The goal of the One Planet Economy Network Europe project (OPEN: EU) is to help transform the EU economy to a One Planet Economy by 2050. As the world's largest economy, Europe must embark upon an immediate and major transformation to avert dangerous climate change and prevent ecosystem collapse. Currently, the impact of the European economy is nearly three times larger than what is required for a sustainable world. A shift to a more sustainable future for Europe must be achieved by building an economy that respects all environmental limits and is socially and financially sustainable. CSOs are well placed to help catalyse this transformation through bringing insights, concerns and issues into the public debate and making them communicable, relevant and timely. The achievement of a One Planet Economy will require a range of actors to come together to deliver this transformation. In this context the 'convening power' of major CSOs is a significant asset. Through a project consortium of CSOs and RTD performers, OPEN: EU will: 1. Build the evidence base and enhance sustainable development indicators by developing an academically robust and policy relevant "footprint family" (Ecological, Carbon and Water footprints); 2. Build the application by developing a new scenario modelling tool for evidence-based policy, increasing the policy relevance of sustainable development indicators and helping CSOs to illustrate the links between economic growth and environmental degradation to policy makers and the public; 3. Build capacity through a new One Planet Economy Network – an online network of decision-makers, CSOs and businesses leaders. This will provide a forum for the visions, knowledge and interests of different stakeholders and facilitate dialogue and debate on solutions to achieve a One Planet Economy. The network will enable a targeted dissemination of communication materials, workshop programme and website to CSO's, policy makers and other key audiences.

**Partners:**

| | | |
|---|---|---|
| 1 | WWF-UK | UK |
| 2 | ECOLOGIC INSTITUT gemeinnützige GmbH | DE |
| 3 | Global Footprint Network | US |
| 5 | UNIVERSITEIT TWENTE | NL |
| 6 | NORGES TEKNISK-NATURVITENSKAPELIGE UNIVERSITET NTNU | NO |
| 7 | SERI - NACHHALTIGKEITSFORSCHUNGS UND -KOMMUNIKATIONS GmbH | AT |
| 8 | INSTITUTE FOR EUROPEAN ENVIRONMENTAL POLICY, LONDON | UK |
| 9 | UNIVERSITY OF YORK | UK |

**Activity Code:** ENV.2009.4.2.1.1 **Funding Scheme:** NoE **Duration (Months):** 54

**Title:** Linking Impact Assessment Instruments to Sustainability Expertise

**Proposed EC Grant:** 6.996.405 €

**Abstract:**

Existing research points out that the full potential of Impact Assessment (IA) for delivering sustainable development is not being realised. Many tools to support IA are not yet being fully employed by policy makers. This is symptomatic of a large and deep gap between the two broad communities of IA researchers and IA practitioners. Practitioners tend to look for tools that are simple and transparent while the researchers are more interested in the sophistication and innovative aspects of assessment tools. The main purpose of LIAISE is to identify and exploit opportunities to bridge between these two communities in a way that leads to an enhanced use of IA tools in policy making. Its centrepiece will be a shared toolbox – simultaneously accessible and useful for policy makers as well as for the research community. The LIAISE consortium will: • Unite the multi-disciplinary competences of a core of large European institutes, that in turn consolidate the expertise from large FP6 projects. • Combine researchers that analyse current policy needs and link them in innovative ways to those who maintain and develop IA tools; • Develop a roadmap towards a virtual centre of excellence on IA, that can operate as the durable hub of existing academic and practitioner networks relevant to the themes of the NoE; • Maintain the flexibility to support 'real life' IA processes, informed by a structured dialogue with the IA user community; • Develop a business plan to ensure durable operation, scientific credibility and efficient usability of the shared toolbox, also in the post-project period. Resulting in: • A shared toolbox: a durable and flexible infrastructure to support IA with improved tools; • A continuously updated shared research agenda; • Capacity building and training components to spread the results of research activities to target groups in communities of IA users and IA researchers; • A virtual centre of excellence on IA

**Partners:**

| | | |
|---|---|---|
| 1 | STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK | NL |
| 2 | FREIE UNIVERSITAET BERLIN | DE |
| 3 | ARISTOTELIO PANEPISTIMIO THESSALONIKIS | EL |
| 4 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 5 | FONDAZIONE ENI ENRICO MATTEI | IT |
| 6 | AARHUS UNIVERSITET | DK |
| 6 | AARHUS UNIVERSITET | DK |
| 7 | ESTONIAN INSTITUTE FOR SUSTAINABLE DEVELOPMENT,STOCKHOLM ENVIRONMENT INSTITUTE TALLINN CENTRE | EE |
| 8 | SUOMEN YMPARISTOKESKUS | FI |
| 9 | FUNDACION TECNALIA RESEARCH & INNOVATION | ES |
| 10 | RHEINISCHE FRIEDRICH-WILHELMS-UNIVERSITAET BONN | DE |
| 11 | UNIVERSITY OF EAST ANGLIA | UK |
| 12 | HELMHOLTZ-ZENTRUM FUER UMWELTFORSCHUNG GMBH - UFZ | DE |
| 13 | WAGENINGEN UNIVERSITEIT | NL |
| 14 | LEIBNIZ-ZENTRUM FUER AGRARLANDSCHAFTSFORSCHUNG (ZALF) e.V. | DE |
| 15 | ZENTRUM FUER EUROPAEISCHE WIRTSCHAFTSFORSCHUNG GmbH | DE |

**Activity Code:** ENV.2009.4.2.3.2 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** POLICY ADDRESSING CLIMATE CHANGE AND LEARNING ABOUT CONSUMER BEHAVIOUR AND EVERYDAY LIFE

**Proposed EC Grant:** 1.330.619 €

**Abstract:**

At the heart of this project lies the development, trialling and operationalisation of a tool (STAVE), designed to support the work of policy-making for sustainability in real-world settings. The tool will support processes of knowledge brokerage, promoting the appropriate application of existing research findings, and the generation of new knowledge which is focused on specific policy objectives. In substantive terms, the project responds to recent work on sustainable consumption, which has provided compelling arguments about the difficulties entailed in seeking to address anthropogenic climate change by attempting to shift patterns of consumer behaviour. The project will take the form of a series of collaborative problem-focused interventions with policy-makers which will engage with their current work in these areas. STAVE will allow these policy-makers to examine the nature and validity of assumptions about human sensibilities, reasoning and action that are incorporated into the development of policy. The project will yield detailed guidance on how best to utilise STAVE across a variety of organisational and policy-specific environments. It will also generate important insights into the mechanisms by which different sources of knowledge are utilised in the practical activity of policymaking; and into the nature of lay citizens' practical reasoning and everyday activities, as they relate to the sustainability of their patterns of consumption.

**Partners:**

| | | |
|---|---|---|
| 1 | CENTRO DE INVESTIGACIONES ENERGETICAS, MEDIOAMBIENTALES Y TECNOLOGICAS-CIEMAT | ES |
| 2 | UNIVERSITAT AUTONOMA DE BARCELONA | ES |
| 3 | CARDIFF UNIVERSITY | UK |
| 5 | LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE | UK |
| 6 | INSTITUT SYMLOG | FR |
| 7 | DIALOGIK GEMEINNUETZIGE GESELLSCHAFT FUER KOMMUNIKATIONS- UND KOOPERATIONSFORSCHUNG mbH | DE |
| 8 | Försvarshögskolan, Swedish National Defence College | SE |
| 9 | SC MedaResearch SRL | RO |
| 10 | AMPHOS 21 CONSULTING SL | ES |
| 11 | BRUNEL UNIVERSITY | UK |

**Activity Code:** ENV.2009.4.2.3.2 **Funding Scheme:** CP **Duration (Months):** 39

**Title:** SCIENCE-POLICY INTERFACES FOR BIODIVERSITY: RESEARCH, ACTION, AND LEARNING

**Proposed EC Grant:** 1.349.292 €

**Abstract:**

SPIRAL aims to enhance the connectivity between biodiversity research and policy making. Although conservation and the sustainable use of biodiversity are fundamental requisites of human well-being, the biodiversity issue raises unprecedented challenges regarding science-policy interfaces. The project proposes state of the art interdisciplinary research on science-policy interfaces for sustainability governance at the theoretical, methodological and practical levels. This will support the design, implementation and operation of the "real-life" institutional designs that are currently emerging to interface biodiversity research and sustainability policy. The project will also provide an opportunity for the main actual or potential policy actors and stakeholders in biodiversity science-policy interfaces to learn, share experiences and network. SPIRAL will deliver a series of practical products for the benefit of users involved in interfaces, including workshops, networking opportunities, handbooks, policy briefs, targeted synthetic reports, an internet pilot platform, and a dedicated website. Overall this will allow scientists, policy-makers and other stakeholders to capitalise on a better understanding of science-policy interfaces and implement better practices.

**Partners:**

| | | |
|---|---|---|
| 1 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 2 | Median SCP | ES |
| 3 | VLAAMS GEWEST | BE |
| 4 | HELSINGIN YLIOPISTO | FI |
| 5 | STICHTING KONINKLIJK NEDERLANDS INSTITUUT VOOR ZEEONDERZOEK (NIOZ) | NL |
| 6 | UNIVERSITATEA DIN BUCURESTI | RO |
| 7 | HELMHOLTZ-ZENTRUM FUER UMWELTFORSCHUNG GMBH - UFZ | DE |
| 8 | THE MACAULAY LAND USE RESEARCH INSTITUTE | UK |
| 9 | CENTRE DE COOPERATION INTERNATIONAL EN RECHERCHE AGRONOMIQUE POUR LE DEVELOPPEMENT | FR |

**Activity Code:** ENV.2009.4.2.3.1 **Funding Scheme:** CP **Duration (Months):** 48

**Title:** Assessing the role of economic instruments in policy mixes for biodiversity conservation and ecosystem services provision (POLICYMIX)

**Proposed EC Grant:** 3.458.312 €

**Abstract:**

POLICYMIX aims to contribute to achieving the EUs goals of reversing trends in biodiversity loss beyond 2010 through the use of cost-effective and incentive-compatible economic instruments. POLICYMIX focuses on the role of economic instruments in a mix of operational conservation policy instruments. To this end, POLICYMIX will develop an integrated evaluation framework that considers multiple policy assessment criteria – biodiversity and ecosystem service provision indicators; valuation of their economic benefit and policy implementation costs; social and distributional impacts; and legal and institutional constraints – at different levels of government. This multi-level approach is of paramount importance for effective biodiversity conservation policy given the overlap between ecological systems and systems of governance in practice. In particular, we evaluate the cost-effectiveness and benefits of a range of economic instruments vis-á-vis direct regulation through command-and-control in a variety of European and Latin American case studies. The suite of selected POLICYMIX case studies aims to provide complementary examples of innovative economic instruments such as Payments for Ecosystem Services (PES) and ecological fiscal transfers, and assess the possibilities for transfer of policy success stories, providing concrete learning possibilities for policy-makers. POLICYMIX actively uses advisory boards including land-users, local managers and national policy-makers, who collaborate with our researchers in the feasibility assessments of economic instruments. Based on this science-policy dialogue, POLICYMIX will develop a stepwise framework for carrying out policy assessment using available data, multi-criteria spatial targeting tools and tiered policy selection matrices. The POLICYMIX approach to policy design at multiple government levels is highly complementary with on-going EU ecological research on multi-scale conservation prioritization.

**Partners:**

| | | |
|---|---|---|
| 1 | STIFTELSEN NORSK INSTITUTT FOR NATURFORSKNING | NO |
| 2 | HELMHOLTZ-ZENTRUM FUER UMWELTFORSCHUNG GMBH - UFZ | DE |
| 3 | FUNDACAO DA FACULDADE DE CIENCIAS E TECNOLOGIA DA UNIVERSIDADE NOVA DE LISBOA. | PT |
| 4 | VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG | NL |
| 5 | International Institute for Environment and Development | UK |
| 6 | SUOMEN YMPARISTOKESKUS | FI |
| 8 | Rede de Desenvolvimento, Ensino e Sociedade | BR |
| 11 | FUNDACAO DE APOIO A PESQUISA AGRICOLA*FUNDAG FOUNDATION OF AGRICULTURAL RESEARCH SUPPORT | BR |
| 12 | CENTRO AGRONOMICO TROPICAL DE INVESTIGACION Y ENSENANZA CATIE | CR |

**Activity Code:** ENV.2009.4.2.3.2 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Enhancing connectivity Between Research and Policymaking in Sustainable Consumption

**Proposed EC Grant:** 1.482.292 €

**Abstract:**

The project “CORPUS - Enhancing Connectivity Between Research and Policymaking in Sustainable Consumption” aims to develop novel approaches to knowledge brokering (KB) between policy-making and research. It will foster evidence-based policy-making at the example of sustainable consumption by applying and testing a combination of online and offline KB methods. It will stimulate community-building across the involved researchers and policy-makers to arrive at a self-sustaining process of knowledge management in sustainable con-sumption policies. The CORPUS Web Platform is to become a central reference point for high quality information and networking among European professionals working with sustainable consumption. It will provide a space for incubating and nurturing knowledge to be shared among researchers and policy-makers through private domain, and scientific results to be disseminated in the public domain, and a transparent, effective interaction (dialogue) between scientists and policy-makers. The Interaction Exercises in three priority areas of sustainable consumption (food, mo-bility, housing) will explore novel modalities of knowledge brokerage through different forms of face-to-face dialogues. They provide specifically tailored arenas for personal exchange, infor-mation provision, and offline community-building. Since community-building is crucial for successful and ongoing knowledge exchange, a sepa-rate work package is dedicated to building of relationships, governing the network, and stimulat-ing engagement of participants. Another work package provides resources for initial fine-tuning and recurrent adaptations of the process and ensures the transferability of the projects results by systematically reflecting the empirical experiences against the background of knowledge management theory. Related to that, a built-in evaluation further enhances continued learning on the knowledge brokerage approach taken within CORPUS.

**Partners:**

| | | |
|---|---|---|
| 1 | INSTITUT FUR OKOLOGISCHE WIRTSCHAFTSFORSCHUNG GmbH -IOW | DE |
| 2 | Bundesministerium für Land- und Forstwirtschaft, Umwelt und Wasserwirtschaft | AT |
| 3 | COPENHAGEN BUSINESS SCHOOL | DK |
| 4 | Copenhagen Resource Institute | DK |
| 5 | VRIJE UNIVERSITEIT BRUSSEL | BE |
| 6 | Planète Publique | FR |
| 7 | REGIONAL ENVIRONMENTAL CENTER FOR CENTRAL AND EASTERN EUROPE -REC | HU |
| 8 | STRATEGIC DESIGN SCENARIOS SPRL | BE |
| 9 | STATENS INSTITUTT FOR FORBRUKSFORSKNING | NO |
| 10 | WIRTSCHAFTSUNIVERSITAT WIEN | AT |
| 11 | Ministry of the Environment | FI |

**Activity Code:** ENV.2010.4.2.2-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Compiling and Refining Environmental and Economic Accounts (CREEA)

**Proposed EC Grant:** 3.499.649 €

**Abstract:**

The main idea behind this project is to refine and elaborate economic and environmental accounting principles as discussed in the London Group and consolidated in the future SEEA 2012, to test them in practical data gathering, to troubleshoot and refine approaches, and show added value of having such harmonized data available via case studies. This will be done in priority areas mentioned in the call, i.e. waste and resources, water, forest and climate change / Kyoto accounting. In this, the project will include work and experiences from major previous projects focused on developing harmonized data sets for integrated economic and environmental accounting (most notably EXIOPOL, FORWAST, a series of Eurostat projects in Environment Accounting, and to a lesser extent EU KLEMS and WIOD). Where possible data gathered in the project will be consolidated in and enrich such existing databases (most notably the EXIOPOL and FORWAST databases). The project will be executed by a mix of National Statistical Institutes and top research institutes in this field Europe, of whom the majority was involved already in EXIOPOL, FORWAST and various EUROSTAT projects setting up environmental and economic accounts, or have dedicated expertise on key domain areas. The project has made special provisions for further engagement of (European) participants in the London Group.

**Partners:**

| | | |
|---|---|---|
| 1 | NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO | NL |
| 2 | JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION | BE |
| 3 | UNIVERSITEIT LEIDEN | NL |
| 4 | CENTRAAL BUREAU VOOR DE STATISTIEK | NL |
| 5 | NORGES TEKNISK-NATURVITENSKAPELIGE UNIVERSITET NTNU | NO |
| 6 | STATISTISKA CENTRALBYRAN | SE |
| 7 | UNIVERSITEIT TWENTE | NL |
| 8 | EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZURICH | CH |
| 9 | 2.-O LCA CONSULTANTS APS | DK |
| 10 | WUPPERTAL INSTITUT FUR KLIMA, UMWELT, ENERGIE GMBH. | DE |
| 11 | SERI - NACHHALTIGKEITSFORSCHUNGS UND -KOMMUNIKATIONS GmbH | AT |
| 12 | EUROPEAN FOREST INSTITUTE | FI |

**Activity Code:** ENV.2010.4.2.3-2 **Funding Scheme:** CSA **Duration (Months):** 36

**Title:** Producing a shared vision on how to harness Research & Development for Sustainable Development

**Proposed EC Grant:** 984.189 €

**Abstract:**

The main objective of VISION RD4SD is to ensure that Europe is able to contribute to a Sustainable Development of the world by formulating policies and decisions based on robust, up to date knowledge of highest scientific quality.The project focuses on a dialogue among European science policy-makers, administrators and those funding-policy makers in general who demand and need solutions from VISION RD4SD.The project will develop an overview of how research and development to support a sustainable development is being funded, supported and evaluated by science policy. This will be done by a number of state of the art studies. These studies will be carried out through desk research and interviews, on country, regional and European scale. The dialogue process will consist of a set of facilitated workshops. The results of these workshops will be synthesised in a shared vision of how to harness Research & Development for Sustainable Development.The final step of the project will disseminate the results to a broader target group in science policy as well as science communities working in support of Sustainable Development.

**Partners:**

| | | |
|---|---|---|
| 1 | FORSKNINGSRÅDET FÖR MILJÖ, AREELLA NÄRINGAR OCH SAMHÄLLSBYGGANDE | SE |
| 2 | Bundesamt fuer Umwelt | CH |
| 3 | THE ICELANDIC CENTRE FOR RESEARCH | IS |
| 4 | MINISTERIO DE CIENCIA E INNOVACION | ES |
| 5 | CONSORZIO PER LA GESTIONE DEL CENTRO DI COORDINAMENTO DELLE ATTIVITA DI RICERCA INERENTI IL SISTEMA LAGUNARE DI VENEZIA | IT |
| 6 | DEUTSCHES ZENTRUM FUER LUFT - UND RAUMFAHRT EV | DE |
| 7 | UNIVERSITEIT MAASTRICHT | NL |
| 8 | TURKIYE BILIMSEL VE TEKNOLOJIK ARASTIRMA KURUMU | TR |
| 9 | UNIVERSIDADE DE AVEIRO | PT |
| 10 | FOUNDATION OF SCIENCE AND TECHNOLOGY | MT |
| 11 | UMWELTBUNDESAMT | DE |
| 12 | KAUNO TECHNOLOGIJOS UNIVERSITETAS | LT |
| 13 | NATURVARDSVERKET | SE |
| 14 | SIHTASUTUS ARCHIMEDES | EE |
| 15 | GENIKI GRAMMATIA EREVNAS KAI TECHNOLOGIAS, YPOURGIO PAIDIAS, DIA VIOU MATHISIS & THRISKEVMATON | EL |
| 16 | PETER HELMUT MOLL | DE |
| 17 | JAGER JILL | AT |
| 18 | Ute Zander | DE |
| 19 | GROUNDSWELL RESEARCH ASSOCIATES LTD* | UK |
| 20 | Bundesministerium fuer Umwelt, Naturschutz und Reaktorsicherheit | DE |
| 21 | Joan David Tabara Villalba | ES |
| 22 | SERVICE PUBLIC FEDERAL DE PROGRAMMATION POLITIQUE SCIENTIFIQUE | BE |
| 24 | NATIONAL INSTITUTE OF METEOROLOGY AND HYDROLOGY OF THE BULGARIAN ACADEMY OF SCIENCES | BG |
| 25 | BUNDESMINISTERIUM FUR WISSENSCHAFT UND FORSCHUNG BMWF | AT |
| 26 | LATVIJAS ZINATNU AKADEMIJA | LV |
| 27 | MINISTERIE VAN INFRASTRUCTUUR EN MILIEU | NL |

**Activity Code:** ENV.2010.4.2.3-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Low Carbon at Work: Modelling agents and organisations to achieve transition to a low carbon Europe

**Proposed EC Grant:** 1.493.422 €

**Abstract:**

The project will provide a theoretically and empirically grounded analysis of everyday practices in the workplace, of the macro and micro-level processes which act as drivers for and constraints upon sustainable practices in different types of workplaces across different European countries, and the relationship between work and outside work practices.These analyses will constitute the empirical basis for developing: agent-based models, which will provide a detailed account of barriers to and drivers for cooperation in transitioning to a low-carbon Europe; and back-casting scenarios, which will allow the mapping out of different pathways to a desirable, future low-carbon Europe. These results will be translated into detailed, articulated descriptions of how to encourage cooperative interaction to reach a sustainable Europe.The project will focus on 6 European case studies of large-scale organizations operating under different national and international contexts and occupying different relevant positions in the sustainability debate (state and private). It will focus on three main categories of practices at work, responsible for the GHG emissions of each organization: consumption of materials and energy, generation of waste and waste management, and organization-related mobility. The project will follow a multi-method approach that will include both qualitative and quantitative methodologies (interviews, questionnaires, agent-based modelling etc.)The findings will provide European policy makers with a more integrated understanding of how the workplace can become a crucial centre for engaging individuals, collectives (e.g., trade unions) and management in new sustainability practices, and with recommendations for context-sensitive policies that would enhance successful cooperation among agents in the transition to a low-carbon Europe.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSIDADE DA CORUNA | ES |
| 2 | UMEA UNIVERSITET | SE |
| 3 | UNIVERSITATEA DE VEST DIN TIMISOARA | RO |
| 4 | UNIVERSITY OF SURREY | UK |
| 5 | THE MACAULAY LAND USE RESEARCH INSTITUTE | UK |
| 6 | RIJKSUNIVERSITEIT GRONINGEN | NL |
| 7 | UNIVERSITA DEGLI STUDI DI ROMA LA SAPIENZA | IT |

**Activity Code:** ENV.2010.4.2.1-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Enhancing Robustness and Model Integration for The Assessment of Global Environmental Change

**Proposed EC Grant:** 3.383.456 €

**Abstract:**

The development of interdisciplinary modelling tools and platforms to address the interactions between natural and socio-economic systems is an active research area in Europe. Nevertheless, notable gaps still exist in modelling capabilities, in particular, very little progress has been made to date in the direct coupling of models that resolve the spatial distribution of climate change with sectorally and regionally resolved economic models. Interactive couplings between climate and impact models are relatively underdeveloped. Likewise, the coupling of detailed economic models with impact and adaptation models is still at a relatively early stage. Finally, a coherent assessment of uncertainty is completely lacking in overall integrated assessments. The sustainability of agriculture and land-use policies and practices including water availability and the sustainability of climate policies that rely on high shares of bioenergy are critical applications that demand a spatially resolved representation of global environmental change including feedbacks between natural and socio-economic forces. ERMITAGE proposes to improve and extend existing modular frameworks for the coupling of intermediate complexity models of the natural and socio-economic systems to address the issues cited above. The resulting integrated assessment framework models will be applied to the analysis of post-2012 climate initiatives taking into account uncertainties and regional conflicts of interest in a coordinated way, propagating the analysis of uncertainty from climate simulation through to policy analysis, focusing particularly on the sustainability of agriculture, bioenergy and water resources.

**Partners:**

| | | |
|---|---|---|
| 1 | THE OPEN UNIVERSITY | UK |
| 2 | ORDECSYS SARL | CH |
| 3 | ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE | CH |
| 4 | UNIVERSITY OF EAST ANGLIA | UK |
| 5 | ENERIS Environment Energy Consultants S.L. | ES |
| 6 | POTSDAM INSTITUT FUER KLIMAFOLGENFORSCHUNG | DE |
| 7 | THE UNIVERSITY OF MANCHESTER | UK |

**Activity Code:** ENV.2010.4.2.3-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** InContext: Individuals in Context: Supportive Environments for Sustainable Living

**Proposed EC Grant:** 1.496.726 €

**Abstract:**

InContext will investigate drivers and barriers for sustainability and their interplay on an individual and collective level. InContext assumes that both individual and collective behaviours respond to an external context (like social norms, policies, and infrastructure) and an internal context (like needs, values and priorities). So far, initiatives to further sustainable development have focused mainly on external contexts. InContext argues that it is essential to address both sides and include factors like individual needs or subconscious aspects to successfully bridge the gap between awareness and action at individual and collective levels. InContext will:• Study internal and external contexts and the way individuals respond to them to identify drivers and barriers to actions advancing sustainable development.• Conduct participatory scenario development and back-casting exercises in three local communities to generate findings on innovative mechanisms for co-operation and the identification of agents for change.• Improve the understanding of the interplay between internal factors and external factors to behaviour, thereby generating results with regard to the interaction between structural and agent-based factors.• Improve the understanding of how policies at EU and local levels (as part of the external context) can help address the internal context in a way that supports sustainability-driven action.• Identify a set of innovative policy mixes for sustainability-driven action considering the roles of actors on different levels such as policy and opinion makers, business and civil society.InContext attaches great importance to the applicability and distribution of its research results. This concern is reflected in the project design by the integration of a network of local governments and the setting up of an interdisciplinary advisory board allowing for a permanent communication and reality-check by political as well as business professionals.

**Partners:**

| | | |
|---|---|---|
| 1 | ECOLOGIC INSTITUT gemeinnützige GmbH | DE |
| 2 | SERI - NACHHALTIGKEITSFORSCHUNGS UND -KOMMUNIKATIONS GmbH | AT |
| 3 | ERASMUS UNIVERSITEIT ROTTERDAM | NL |
| 4 | HELMHOLTZ-ZENTRUM FUER UMWELTFORSCHUNG GMBH - UFZ | DE |
| 5 | UNIVERSITE LIBRE DE BRUXELLES | BE |
| 6 | ICLEI EUROPEAN SECRETARIAT GMBH (ICLEI EUROPASEKRETARIAT GMBH)* | DE |
| 7 | TECHNISCHE UNIVERSITEIT DELFT | NL |
| 8 | Institute for Agricultural and Forest Environment, Polish Academy of Sciences | PL |

**Activity Code:** ENV.2010.4.2.3-3 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Knowledge brokerage to promote sustainable food consumption and production: linking scientists, policymakers and civil society organisations

**Proposed EC Grant:** 1.495.263 €

**Abstract:**

The policy issue central to this project is food as many of today's sustainability problems (e.g. water shortage, GHG emissions, pollution of soil and water, decrease of biodiversity, urban waste) are related to the prevailing pattern of food production and consumption (including processing and distribution). Hence, developing more sustainable food production and consumption patterns will have a significant impact on sustainable development in general. This project aims to develop and experiment with new integrative modalities of linking research to policy-making in the field of sustainable food consumption and production, thereby contributing to the establishment of new policy-relevant communities of researchers, policy makers & CSOs and enhancing the use of research insights in policies to promote sustainable food systems. Three different Communities of Practice will be developed, focusing on different dimensions of a newly emerging integrated territorial food geography: a) short food supply chains, b) sustainable public food procurement, and c) urban food strategies. Like the FOODLINKS consortium, each CoP will consist of researchers, policymakers and CSO representatives. In this project we will monitor and evaluate the knowledge brokerage activities in the CoPs, in order to propose new ways of linking research and policymaking in the food domain as well as in other public domains.

**Partners:**

| | | |
|---|---|---|
| 1 | WAGENINGEN UNIVERSITEIT | NL |
| 2 | FORSCHUNGSINSTITUT FUR BIOLOGISCHENLANDBAU STIFTUNG | CH |
| 3 | CARDIFF UNIVERSITY | UK |
| 4 | UNIVERSITA DI PISA | IT |
| 5 | NODIBINAJUMS BALTIC STUDIES CENTRE | LV |
| 6 | THE CITY UNIVERSITY | UK |
| 7 | INTERDISZIPLINARES FORSCHUNGSZENTRUM FUR TECHNIK, ARBEIT UND KULTUR | AT |
| 8 | MALMO STAD | SE |
| 9 | SCOTTISH GOVERNMENT | UK |
| 10 | NEIKER-INSTITUTO VASCO DE INVESTIGACION Y DESARROLLO AGRARIO SA | ES |
| 11 | FEDERATION REGIONALE DES CENTRES D'INITIATIVES POUR VALORISER L'AGRICULTURE ET LE MILIEU | FR |
| 12 | TUKUMA NOVADA DOME | LV |
| 13 | OBV-VIA CAMPESINA AUSTRIA-OSTERREICHISCHE BERGBAUERN UND BERGBAUERINNENVEREINIGUNG | AT |
| 14 | Limburg Province | NL |

**Activity Code:** ENV.2010.4.2.3-3 **Funding Scheme:** CP **Duration (Months):** 42

**Title:** linking RESearch and POlicy making for managing the contradictions of sustaiNable consumption anD Economic gRowth

**Proposed EC Grant:** 1.499.351 €

**Abstract:**

RESPONDER aims to develop, implement and evaluate a knowledge brokerage system on managing the contradictions of sustainable consumption and economic growth. Therefore the project will not just bridge the gap between science and policy, but will also improve the mutual understanding between what could be called the “pro-growth community” (i.e. economists and policy makers oriented towards the EU Lisbon Strategy) and the “beyond-growth community” (i.e. scientists oriented towards the limits to growth and policy makers involved in the sustainable development debate). In a series of EU dialogues a system map of sustainable consumption and economic growth will be developed together by researchers and policy makers in order to understand paradigmatic contradictions, conflicts of interest and trade-offs. The map will constitute the basis for systematizing empirical findings, questioning different assumptions, analysing policies and identifying new research questions. In a series of multinational knowledge brokerage events, the generic map will be applied to five policy areas (housing, energy, financial, transport and agricultural policies). An internet-based knowledge platform will support a continuous dialogue by “trading” information on facts, trends, policies and experiences based on system maps. Policy makers will benefit from RESPONDER by experiencing innovative forms of knowledge brokerage, by getting easy access to research findings and by networking. Researchers will benefit by understanding better the rationality of decision makers, by getting access to them, by improving the mutual understanding across different paradigms and by elaborating a joint research agenda. The consortium consists of 2 ministries, 5 universities and 3 research institutes, the Advisory Board consists of Members of the European Parliament, the business sector, NGOs and the OECD. RESPONDER is supported by policy makers from 20 European member states committing themselves to participate.

**Partners:**

| | | |
|---|---|---|
| 1 | WIRTSCHAFTSUNIVERSITAT WIEN | AT |
| 2 | INSTITUT FUR OKOLOGISCHE WIRTSCHAFTSFORSCHUNG GmbH -IOW | DE |
| 3 | SERI - NACHHALTIGKEITSFORSCHUNGS UND -KOMMUNIKATIONS GmbH | AT |
| 4 | UNIVERSITAT AUTONOMA DE BARCELONA | ES |
| 5 | DANMARKS TEKNISKE UNIVERSITET | DK |
| 6 | UNIVERSITY OF SURREY | UK |
| 7 | PROGNOSTICKY USTAV SLOVENSKEJ AKADEMIE VIED | SK |
| 8 | FUNDACAO DA FACULDADE DE CIENCIAS E TECNOLOGIA DA UNIVERSIDADE NOVA DE LISBOA. | PT |
| 9 | FEDERAL DEPARTMENT FOR ENVIRONMENT TRANSPORTS ENERGY AND COMMUNICATION | CH |
| 10 | Bundesministerium fuer Umwelt, Naturschutz und Reaktorsicherheit | DE |

**Activity Code:** ENV.2010.4.2.3-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** CReating Innovative Sustainability Pathways

**Proposed EC Grant:** 1.498.980 €

**Abstract:**

The core objective of this proposal is to identify potential paths to engaging on an integrated effort to support the transition, to a sustainable, low carbon Europe. The call text places much emphasis of using a scenario and backcasting approach that explicitly discerns individuals, organisations and the collective (societal and economic organisation), addresses the interaction of agency and structure, and analyses from there how individuals and collectives can be engaged on sustainable paths, and how new policy mixes and co-operation mechanisms can overcome barriers to change. In response, this project will:•build upon theories that explicitly link individual and organizational agency with structure and pathways of change (most notably Transition theory, that builds upon structuration and innovation theories) (WP1).•analyse practical (past) cases of change with this framework (WP2 and WP3) to additional understanding on the role of agency and structure and related barriers, drivers and pathways of change (WP4).•apply novel participatory scenario techniques, most notably transition scenario and backcasting methodologies, to develop sustainability visions WP5) and transition paths (WP6). These allow for specific analysis of processes in transition paths and the factors that drive and hinder such transitions (WP7).•Finally, on the basis of the analysis of the theoretical basis and cases (WP4) and the results of the scenario/backcasting exercise (WP7), the core question of the call can be answered (WP8): what novel policy mixes and co-operation mechanisms can help to overcome barriers for individuals and collectives to engage on sustainable paths.The project is completed by WPs on Management and Dissemination. The impact of the findings of the project is enhanced by its strong participatory approach and an elaborated dissemination program that includes a policy stakeholder panel.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITY OF SURREY | UK |
| 2 | KOZEP-EUROPAI EGYETEM | HU |
| 3 | RIJKSUNIVERSITEIT GRONINGEN | NL |
| 4 | STATENS INSTITUTT FOR FORBRUKSFORSKNING | NO |
| 5 | KAUNO TECHNOLOGIJOS UNIVERSITETAS | LT |
| 6 | NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO | NL |
| 7 | Technological Educational Institute of Piraeus | EL |

**Activity Code:** ENV.2011.4.2.3-1 **Funding Scheme:** BSG **Duration (Months):** 36

**Title:** The capacity of civil society organisations (CSOs) and their networks in community based environmental management

**Proposed EC Grant:** 1.846.660 €

**Abstract:**

The CiVi.net project aims to analyse, transfer and disseminate successful and sustainable community based solutions with regard to ecosystem service management in Latin America. The main focus is placed on institutional settings in terms of original rules and related governance models which help to prevent and resolve tensions arising from a necessary new repartition and use of natural resources. Thereby, the role of civil society organisations (CSOs) within these governance models is in the core of the research. To meet these challenges, CiVi.net takes an action research and case study approach.The project has chosen four case study regions in Brazil and Costa Rica where successful solutions have been worked out. These will be analysed with respect to the following questions:- What kinds of management instruments are used to solve environmental problems and how effective are they?- What kinds of original rules and institutional arrangements are implemented and which economic governance models have been established?- What crucial aspects must be considered when transferring these solutions to other communities that face similar problems?- What is the capacity of CSOs and their networks for contributing to finding, implementing and transferring such solutions?Based on the findings, CiVi.net wants to facilitate the transfer of successful solutions to at least one other community for each selected case study region confronted with similar environmental challenges. To do so, CiVi.net will develop an ex-ante assessment approach to test the transferability of institutional solutions and of successful governance models. One of the final outputs will be a manual to assist practitioners and scientists on how to design and manage the knowledge transfer. CiVi.net will put much emphasis on the dissemination of the produced knowledge. Thus, another of its final outputs will be an innovative web-based data portal for providing and trading knowledge.

**Partners:**

| | | |
|---|---|---|
| 1 | LEIBNIZ-ZENTRUM FUER AGRARLANDSCHAFTSFORSCHUNG (ZALF) e.V. | DE |
| 2 | INSTITUTO ECOLOGICA PALMAS ASSOCIACAO | BR |
| 3 | EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZURICH | CH |
| 4 | STICHTING VOOR DUURZAME ONTWIKKELING | NL |
| 5 | ORGANISATION FOR INTERNATIONAL DIALOGUE AND CONFLICT MANAGEMENT | AT |
| 6 | FUNDACION NEOTROPICA | CR |
| 7 | FUNDACAO DE APOIO A PESQUISA AGRICOLA*FUNDAG FOUNDATION OF AGRICULTURAL RESEARCH SUPPORT | BR |

**Activity Code:** ENV.2011.4.2.3-1 **Funding Scheme:** BSG **Duration (Months):** 36

**Title:** COmmunity-based Management of EnvironmenTal challenges in Latin America

**Proposed EC Grant:** 1.870.973 €

**Abstract:**

Current development models are leading to unprecedented environmental challenges, chief amongst them, climate change. How to respond to these challenges are key research questions. Although they are global problems, their effects are felt locally, especially by the communities that traditionally base their livelihoods in those natural resources. The relevance of these problems at global level has driven different initiatives to increase public awareness and to put in practice measures to improve them. However, many good conservation and management practices are done at local level. Research is needed to better understand local capabilities and to encourage and support potential locally-owned solutions. COMET-LA's objective is to identify sustainable community-based governance models for the management of natural resources that could be used in different social-ecological systems in a context of climate change and increasing competition for the use of these resources. A civil society-scientific partnership has been created to develop the project. Three Latin American civil society organizations, a global CSO and 7 research institutions (3 Latin American and 4 European) comprise this partnership. COMET-LA will create a space of interaction for CSOs, policy makers and research organizations, sharing local and scientific knowledge and contributing to a better knowledge of problems and potential solutions for current and future sustainable management of natural resources. Three different case studies will be analyzed: water and biodiversity systems in Colombia, forest systems in Mexico and marine and coastal areas in Argentina. Similar methods will be used to characterize the current and future ecosystem states, sustainable governance models and locally-tailored scenarios for future changes and challenges. The outcomes will be synthesized and up-scaled to deliver a potentially useful tool to other local communities facing current environmental challenges.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSIDAD DE CORDOBA | ES |
| 2 | NORSK INSTITUTT FOR LUFTFORSKNING | NO |
| 3 | THE JAMES HUTTON INSTITUTE LBG | UK |
| 4 | Sagremarisco-Viveiros de Marisco Lda | PT |
| 5 | PONTIFICIA UNIVERSIDAD JAVERIANA | CO |
| 6 | UNIVERSIDAD NACIONAL AUTONOMA DE MEXICO | MX |
| 7 | CONSEJO NACIONAL DE INVESTIGACIONES CIENTIFICAS Y TECNICAS | AR |
| 8 | FUNDACION AQUAMARINA-CECIM | AR |
| 9 | CONSEJO COMUNITARIO DE LA COMUNIDADNEGRA DE LA CUENCA BAJA DEL RIO CALIMA | CO |
| 10 | ESTUDIOS RURALES Y ASESORIA CAMPESINA ASOCIACION CIVIL | MX |
| 11 | COMITE ESPANOL DE LA UICN - UNION INTERNACIONAL PARA LA CONSERVACION DE LA NATURALEZA | ES |

**Activity Code:** ENV.2011.4.2.3-1 **Funding Scheme:** BSG **Duration (Months):** 36

**Title:** Assessing the effectiveness of community-based management strategies for biocultural diversity conservation

**Proposed EC Grant:** 1.897.883 €

**Abstract:**

The COMBIOSERVE consortium aims to identify the conditions and principles of successful community-based conservation in selected locations in Mexico, Brazil and Bolivia, working in partnership with local Civil Society Organisations (CSOs) and indigenous communities. Many Latin American and Caribbean rural and indigenous communities have historically developed strategies to regulate land use and conserve biodiversity whilst enhancing livelihoods and reducing conflicts. This has occurred while new panaceas for conservation and development, such as ecotourism, payments for environmental services, and biodiversity derivatives, have emerged and impacted community dynamics in ways that require urgent analysis. Our analysis will rely on the assessment of past and present trajectories and future scenarios of environmental change; an examination of individual and collective dependence on natural resources and ecosystem services, and analysis of people's capacity to adapt and be resilient to multiple stressors. We will also assess the cultural traditions, knowledge systems, and institutional arrangements that have allowed communities to devise collective conservation strategies, address social tensions, and resolve resource conflicts. The development of a co-enquiry/advocacy approach will provide significant benefits to local communities and CSOs. The project outcomes will strengthen community conservation and management of natural resources through the design and provision of locally-owned methods and data, and will provide the theoretical and empirical foundations for scaling-up in similar communities and environments. We will scientifically address the opportunities and challenges of biocultural diversity conservation and its role in the resilience of socio-ecological systems, and produce documents for policy and civil society audiences at European and international levels, using varied communication platforms and strategies.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITAET FUER BODENKULTUR WIEN | AT |
| 2 | THE GLOBAL DIVERSITY FOUNDATION LIMITED BY GUARANTEE | UK |
| 3 | UNIVERSITAT AUTONOMA DE BARCELONA | ES |
| 4 | VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG | NL |
| 5 | Instituto de Ecología, A.C. | MX |
| 6 | UNIVERSIDADE ESTADUAL DE FEIRA DE SANTANA | BR |
| 7 | UNIVERSIDAD MAYOR DE SAN SIMON | BO |
| 8 | CONSEJO REGIONAL INDIGENA Y POPULAR DE X PUJIL S.C | MX |
| 9 | ASSOCIACAO NACIONAL DE ACAO INDIGENISTA | BR |
| 10 | CENTRO BOLIVIANO DE INVESTIGACION Y DESARROLLO SOCIO INTEGRAL | BO |

**Activity Code:** ENV.2011.4.2.3-1 **Funding Scheme:** BSG **Duration (Months):** 36

**Title:** Local solutions for future challenges: Community Owned Best practice for sustainable Resource Adaptive management in the Guiana Shield, South America

**Proposed EC Grant:** 1.895.049 €

**Abstract:**

Novel funding initiatives are on the cusp of implementation across the developing world. Community owned solutions for the management of ecosystem services have the potential to act as showcases for determining the most effective and efficient use of these emerging funding streams in order to maximise social justice and ecological sustainability. The COBRA project brings together key South American and European CSOs that have extensive experience in enabling and disseminating grassroots solutions to complex problems in the Guiana Shield region of Brazil, Colombia, Venezuela, Guyana, Suriname and French Guiana. The RTDs on the project have scientific expertise to rigorously evaluate these grassroots solutions and determine their impact, while the SME brings with it the business and technical expertise for promoting the financial viability of these initiatives. The CSOs, RTDs and the SME have formed a partnership to help deliver effective community-led sustainable management of ecosystem services and to widely disseminate best practice. We therefore aim to: 1) review the emergence of novel social, economic and environmental challenges facing communities in the Guiana Shield region; 2) engage with established locally owned and developed solutions; 3) analyse and record these solutions in order to investigate their generic transferability; 4) test the approach in a wider range of communities confronting similar challenges; 5) facilitate communication between communities and governments to ensure local needs are addressed and emerging policies benefit local communities; and 6) develop a range of accessible communication and dissemination tools for engaging a wider global constituency. The COBRA project will be in a unique position to study the impact of new funding streams on the most marginalised sectors of society, how CSOs are able to respond positively, and to influence policy and implementation practices as these initiatives are rolled out in the rest of the world.

**Partners:**

| | | |
|---|---|---|
| 1 | ROYAL HOLLOWAY AND BEDFORD NEW COLLEGE | UK |
| 2 | INSTITUTE FOR ENVIRONMENTAL SECURITY | NL |
| 3 | STICHTING IUCN NEDERLANDS COMITE | NL |
| 4 | Equipe de Conservacao da Amazonia | BR |
| 5 | THE IWOKRAMA INTERNATIONAL CENTRE FOR RAIN FOREST CONSERVATION AND DEVELOPMENT | GY |
| 6 | POLITECNICO DI TORINO | IT |
| 7 | THE OPEN UNIVERSITY | UK |
| 8 | WILDFOWL & WETLANDS TRUST (CONSULTING) LTD | UK |

**Activity Code:** ENV.2011.4.2.2-1 **Funding Scheme:** CP **Duration (Months):** 30

**Title:** BRinging Alternative INdicators into POLicy

**Proposed EC Grant:** 1.358.901 €

**Abstract:**

In the last four years, Beyond GDP indicators have rapidly risen up the political agenda and enjoyed greater public awareness. High profile initiatives have included nef's Happy Planet Index, launched in 2006, the EU's Beyond GDP initiative – starting with the Beyond GDP conference in 2007, the OECD's Measuring the Progress of Societies project, and in 2009, the publication of the recommendations of the Commission on the Measurement of Economic Performance and Social Progress, led by economists Stiglitz, Sen and Fitoussi.Despite a growing number of critiques of GDP, and the emergence of an impressive array of alternative indicators, GDP maintains a central place amongst policy makers, planning offices, media and other target groups. Some data on what may be considered Beyond GDP indicators are being collected by official statistics offices, but they appear not to be considered in policy making or are given a peripheral role.The central assumption of the project is that indicators, if effectively embedded in the policy making process, are an effective transmission mechanism to connect research and policy. The aim of the project is therefore to enhance and speed up both the development and the effective use of indicators that can balance the use of GDP so as to support the sustainable development policy process in the EU.Ideally, indicator users need to be aware of the knowledge that exists, and vice versa indicator producers need to be aware of the context(s) in which the indicators will be used. Indicators should be developed as part of an interactive process with multiple feedbacks that ensure that user demands are taken up in the production of alternative indicators. Besides this knowledge gap, it needs also to be understood as part of a change process, in which one has to overcome various other barriers that prevent the existing research from being acted on.The BRAINPOoL project approaches this problem as a mismatch between demand and supply and aims to solve this via action research and knowledge brokerage activities. This is done by:•Structuring the research reservoir on Beyond GDP indicators by synthesising existing overviews of Beyond GDP indicators, and assessing the degree to which they have been taken up in policy making;•Increasing the understanding of the user context of Beyond GDP indicators;•Stimulating user-producer interactions by organising meetings, discussions and workshops and improving the relation between users and producers at different levels;•Consolidating and structuring a follow-up beyond the duration of BRAIN POoL by establishing institutional structures and/or feeds into existing ones in such a way that interactions between indicator producers and users will be sustained.Throughout the project linkages will be established with relevant target groups, such as policy makers on different levels, statistical offices, and planning agencies.

**Partners:**

| | | |
|---|---|---|
| 1 | NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO | NL |
| 2 | New Economics Foundation | UK |
| 3 | UNIVERSITE LIBRE DE BRUXELLES | BE |
| 4 | ERASMUS UNIVERSITEIT ROTTERDAM | NL |
| 5 | UNIVERZITA KARLOVA V PRAZE | CZ |
| 6 | UNIVERSITE DE TOULOUSE II - LE MIRAIL | FR |
| 7 | WORLD FUTURE COUNCIL STIFTUNG | DE |

**Activity Code:** ENV.2011.4.2.1-1 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** Assessment of Policy Impacts on Sustainability in Europe

**Proposed EC Grant:** 2.272.980 €

**Abstract:**

The EU has formulated ambitious environmental policy targets in a variety of sectors aimed at forming the basis for a sustainable European growth with increasing prosperity and reduced pressure on natural resources and the environment. The overall motivation of the APRAISE (Assessment of Policy Interrelationships and Impact on Sustainability in Europe) project is to improve the decision basis for EU and national policy makers for selecting an efficient environmental policy mix leading to the transition towards a sustainable European society, including appropriate support for environmental investments. APRAISE aims to provide an improved understanding of the efficiency, effectiveness and efficacy of environmental policies impacts and their interactions at both the European and Member State level by taking into consideration the social, environmental and economic dimensions of sustainable development. Furthermore, APRAISE will offer guidance on ex-ante policy impact assessment and come up with general policy recommendations. APRAISE will therefore assist policymakers in reducing inefficiencies in policy design and to create win-win situations whereby economic strength goes hand in hand with environmental protection and efficient use of natural resources.The strategy of APRAISE is to combine an empirical data collection and assessment component with model-based policy scenario analysis in order to achieve a synergetic use of a variety of empirical and model-based impact assessment tools using different sources of data. The empirical component consists of ex-post assessments of policy effects, costs and social implications as well as on an improved systems understanding including interactions between different policies. In addition, the effects of environmental policies on technology development and deployment will be empirically analyzed through the use of both top-down and bottom-up models. Furthermore, stakeholder consultations will provide input through their diverse perspectives that exist within industry and government and validate the relevance of the different model components, in particular the outputs from model-based scenario analysis. Exchanges between the empiric and model-based components and their results' integration of APRAISE will lead to methodological and policy recommendations .The overarching motivation of the APRAISE project is to contribute to the research and application of sustainability oriented policymaking by building a more comprehensive understanding of the policy systems at the sectoral level, the national level, and a pan-European level. Including interrelationships and trade offs within each level on different scales of observation is of crucial importance when designing efficient policy mixes that can lead Europe to more significant sustainable pathways. European and national policymakers need a more holistic understanding of these relationships in order to design efficient environmental policies.

**Partners:**

| | | |
|---|---|---|
| 1 | STICHTING JOINT IMPLEMENTATION NETWORK STICHTING | NL |
| 2 | JOANNEUM RESEARCH FORSCHUNGSGESELLSCHAFT MBH | AT |
| 3 | FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V | DE |
| 4 | UNIVERSITY OF SUSSEX | UK |
| 5 | NATIONAL TECHNICAL UNIVERSITY OF ATHENS | EL |
| 6 | CENTRE FOR EUROPEAN POLICY STUDIES | BE |
| 7 | VALTION TALOUDELLINEN TUTKIMUSKESKUS | FI |
| 8 | UNIVERZA V LJUBLJANI | SI |
| 9 | ESTONIAN INSTITUTE FOR SUSTAINABLE DEVELOPMENT,STOCKHOLM ENVIRONMENT INSTITUTE TALLINN CENTRE | EE |
| 10 | UNIVERSITY OF PIRAEUS RESEARCH CENTER | EL |

**Activity Code:** ENV.2011.4.2.3-1 **Funding Scheme:** BSG **Duration (Months):** 48

**Title:** Ecosystem-based strategies and innovations in water governance networks for adaptation to climate change in Latin American Landscapes

**Proposed EC Grant:** 1.899.000 €

**Abstract:**

International debates on climate change highlight the need to foster adaptation planning in Latin America where significant impacts are expected. However, little progress has been made due to the difficulty of managing environmental dynamics characterized by deep uncertainties and potential tensions at various scales.EcoAdapt is built on the outcomes of two rounds on regional consultation with Latin American civil society organizations (CSO) and scientists. It aims at increasing the capacity of local communities, CSOs, policy-makers and scientists to engage in inter-disciplinary action-research to increase their collective capacity to adapt to climate change. The EcoAdapt CSOs stated that watershed services were the most critical with respect to possible tensions and social conflicts that may arise due to climate change. The EcoAdapt team considers that 1) adaptation to climate change is not something that can be done in isolation, and 2) ecosystem-based management is a robust basis for successful adaptation to climate change in Latin America. Therefore in the project concept, watershed ecosystem services (WES) are mainstreamed in an overall adaptation strategy by a variety of players involved in science-policy-civil society networks across-scales.EcoAdapt will be implemented in “model forest” landscapes in Argentina, Bolivia, and Chile. Knowledge sharing forms the backbone of the project and provides scientists and policy-makers with an in-depth insight into local knowledge and issues, which will frame the research to be done. Based on this common understanding EcoAdapt will assist communities in developing their WES-based adaptation strategy. This will be achieved by combining exploratory scenario analysis, participatory backcasting, and social validation via hybrid forums. EcoAdapt will implement part of the strategy in pilot communities and build on existing networks for dissemination to other communities of Latin America and Europe.

**Partners:**

| | | |
|---|---|---|
| 1 | CENTRE DE COOPERATION INTERNATIONAL EN RECHERCHE AGRONOMIQUE POUR LE DEVELOPPEMENT | FR |
| 2 | CENTRO AGRONOMICO TROPICAL DE INVESTIGACION Y ENSENANZA CATIE | CR |
| 3 | SEI OXFORD OFFICE LIMITED*STOCKHOLMENVIRONMENT INSTITUTE OXFORD OFFICE SEI LTD | UK |
| 4 | INTERNATIONAL UNION OF FOREST RESEARCH ORGANIZATIONS | AT |
| 5 | FUNDACION INTERNATIONAL PARA LA PROMOCION DEL DESARROLLO SUSTENTABLE FUTURO LATINOAMERICANO | EC |
| 6 | ASOCIACION CIVIL BOSQUE MODELO JUJUY | AR |
| 7 | FUNDACION PARA LA CONSERVACION DELBOSQUE SECO CHIQUITANO | BO |
| 8 | SERVICIO EVANGELICO PARA EL DESARROLLO CORPORACION SIN FINES DE LUCRO | CL |
| 9 | FUNDACION CENTRO DE SERVICIOS Y PROMOCION FORESTAL Y DE SU INDUSTRIA DE CASTILLA Y LEON | ES |

**Activity Code:** ENV.2012.6.3-2 **Funding Scheme:** CP **Duration (Months):** 42

**Title:** Policy Options for a Resource-Efficient Economy

**Proposed EC Grant:** 2.928.069 €

**Abstract:**

The project will construct a theoretical framework for the analysis of resource efficiency, with detailed comparison of the trends and policies at EU and Member State (MS) level, cross-country econometric analysis to derive resource-reduction cost curves, and an analysis of business barriers to resource efficiency; thereby developing an enhanced understanding of the drivers of inefficient resource use.This will lead to an exploration of new concepts and paradigms that can bring about a radical increase in resource efficiency, and a vision for a resource-efficient economy in the EU, with suggestions also for new more resource-efficient business models for firms, and ideas for a global governance regime that can promote resource-efficient economies among the EU's trading partners and more widely will be explored. From its new vision for a resource-efficient Europe, the project will propose new policy mixes, business models and mechanisms of global governance through which resource-efficient economies may be promoted.This will lead in turn to intensive work on creating, modelling and visualising scenarios for the emergence of resource-efficient economies, through linking quantitative economic and ecological models, and simulating the policies and policy mixes derived in the earlier work, supplemented with appropriate LCA analysis for selected products and sectors, to ensure that the policies and business models in the scenarios lead to adequate absolute decoupling of economic activity from resource use and environmental degradation. The scenarios and associated policy analysis will be given an integrated interpretation across economic, ecological and social dimensions.The project will be explicitly geared to support policy efforts and initiatives on resource efficiency in the European Commission, and will involve a wide range of stakeholders from business, the policy world, and NGOs. The results will be widely disseminated in a variety of innovative ways.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITY COLLEGE LONDON | UK |
| 2 | WUPPERTAL INSTITUT FUR KLIMA, UMWELT, ENERGIE GMBH. | DE |
| 3 | NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO | NL |
| 4 | UNIVERSITEIT MAASTRICHT | NL |
| 5 | GESELLSCHAFT FUR WIRTSCHAFTLICH STRUKTURFORSCHUNG MBH | DE |
| 6 | SERI - NACHHALTIGKEITSFORSCHUNGS UND -KOMMUNIKATIONS GmbH | AT |
| 7 | POTSDAM INSTITUT FUER KLIMAFOLGENFORSCHUNG | DE |
| 8 | INTERNATIONAL SYNERGIES LTD | UK |

**Activity Code:** ENV.2012.6.3-4 **Funding Scheme:** CSA **Duration (Months):** 24

**Title:** An environmental Standards Information Portal for Europe

**Proposed EC Grant:** 992.746 €

**Abstract:**

The aim of SIPE is to promote and increase the use of research results in support of Standards (related to the compartments air, water, soil and waste) to stakeholders from RTD, Standardisation bodies, policy and enterprises/SMEs. A dedicated www-based Standards Information Portal (SIPE-RTD) will be developed and implemented. Easy transfer of information is facilitated by an input module (SIPIS) and a document repository.An Interfacing Group, consisting of stakeholders' representatives will be invited to comment on the initial concept and to steer the development of the portal. They shall be instrumental to ensure that SIPE-RTD develops into a fit-for-use and sustainable entity.EC FP-funded research projects in support of Standards and their results, and Standards related to the mentioned sectors will be listed. EC Directives in these areas and their policy tasks will be collated. The same set of keywords will be used to describe all data sets. This pool of (Standards related) keywords will be interlinked by algorithms into a 'Categorisation scheme of keywords'. This scheme will be the basis for the interactions within and between the stakeholder communities, and be used for gap analyses.Information on RTD projects (and their results), information on Standards and Directives will be entered into SIPE-RTD. Short descriptions in non–scientific language will be entered together with web-links.To maximise dissemination to all stakeholders the target audiences will be defined and their networks/professional organisations will be mapped. Dissemination will be two-way: inform all stakeholders on the activities of the SIPE project and inform all on the benefits of SIPE-RTD as an important tool in communication between different Standards communities. The Interfacing Group and a Stakeholder Network will test and validate SIPE-RTD and support dissemination to their respective audiences.

**Partners:**

| | | |
|---|---|---|
| 1 | HYDROSCAN NV | BE |
| 2 | MERMAYDE | NL |
| 3 | VZW WISE RTD | BE |
| 4 | KATHOLIEKE UNIVERSITEIT LEUVEN | BE |
| 5 | Quality Consult srl | IT |
| 6 | IVL SVENSKA MILJOEINSTITUTET AB | SE |

**Activity Code:** ENV.2012.6.3-2 **Funding Scheme:** CP **Duration (Months):** 36

**Title:** SERVICIZING POLICY FOR RESOURCE EFFICIENT ECONOMY

**Proposed EC Grant:** 2.399.663 €

**Abstract:**

The aim of SPREE project is to identify potential Servicizing Policies and simulate their effect on absolute decoupling of economic growth and resource use, while achieving societal benefits. Servicizing Systems facilitate the transition from selling products to providing services. Except for ICT, these are still quite rare. SPREE is dedicated to promote the implementation of Servicizing Systems in 3 different sectors: water, mobility and agri-food.We propose to use an advanced Agent Based Modelling (ABM) approach to structure and test options for Servicizing Systems and Policies. This provides a generic framework that allows exploring short and long term effects, and assessment of the 3 sectors in different countries. Based on the models' results and complementary qualitative analysis we will construct 'Servicizing Policy Packages' that take into account the environmental, economic and social dimensions and trade-offs between them. Thus, SPREE results will help to realize EU strategies particularly in the framework of EUROPE 2020.Based on conceptualization of Servicizing Systems, we use existing instruments and develop new tools that fit into the evaluation of emerging Servicizing Systems and policies' effects. We define more suitable dynamic tools needed for ex-ante assessment of newly created supply chains that can emerge out of Servicizing activities. Using ABM, we demonstrate how Servicizing Systems develop and test outcomes of proposed policies on the creation of successful Servicizing opportunities leading to absolute decoupling.The SPREE consortium consists of 10 partners from 7 different countries, and includes public bodies and research institutes to provide a sound base for both Servicizing Systems and Policy. The key deliverable is 'Servicizing Policy Packages' that exploit existing synergies to achieve a truly sustainable EU economy where economic growth is decoupled from environmental impact, society prospers and a global example is set.

**Partners:**

| | | |
|---|---|---|
| 1 | Lietuvos mokslo taryba | LT |
| 2 | THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF OXFORD | UK |
| 3 | UNIVERSITY OF SURREY | UK |
| 4 | LUNDS UNIVERSITET | SE |
| 5 | UNIVERSIDADE DE SANTIAGO DE COMPOSTELA | ES |
| 6 | SUOMEN YMPARISTOKESKUS | FI |
| 7 | TECHNISCHE UNIVERSITEIT DELFT | NL |
| 8 | JERUSALEM INSTITUTE FOR ISRAELI STUDIES | IL |
| 9 | TEL AVIV UNIVERSITY | IL |
| 10 | BEN-GURION UNIVERSITY OF THE NEGEV | IL |

**Activity Code:** ENV.2012.6.3-3 **Funding Scheme:** CP **Duration (Months):** 42

**Title:** DEvelopment of a System of Indicators for a Resource efficient Europe (DESIRE)

**Proposed EC Grant:** 2.899.520 €

**Abstract:**

DESIRE will develop and apply an optimal set of indicators to monitor European progress towards resource-efficiency. We propose a combination of time series of environmentally extended input output data (EE IO) and the DPSIR framework to construct the indicator set. Only this approach will use a single data set that allows for consistent construction of resource efficiency indicators capturing the EU, country, sector and product group level, and the production and consumption perspective including impacts outside the EU. The project willa)improve data availability, particularly by creating EE IO time series and now-casted data (WP5).b)improve calculation methods for indicators that currently still lack scientific robustness, most notably in the field of biodiversity/ecosystem services (WP7) and critical materials (WP6). We further will develop novel reference indicators for economic success ('Beyound GDP and Value added', WP8).c)explicitly address the problem of indicator proliferation and limits in available data that have a 'statistical stamp'. Via scientific analysis we will select the smallest set of indicators giving mutually independent information, and show which shortcuts in (statistical) data inventory can be made without significant loss of quality (WP8)The project comprises further Interactive policy analysis, indicator concept development via 'brokerage activities (WP2-4), Management (WP1), and Conclusions and implementation (WP10) including a hand over ofdata and indicators to the EU's Group of Four of EEA, Eurostat, DG ENV and DG JRC.Our team includes 4 UN Resource Panel members (WI, AAU-SEC, NTNU and LU-CML) and founders of the material flow analysis field (e.g. SERI). We further include TNO (global leader in EE IO via projects like EXIOPOL and CREEA), FFCUL (global top in biodiversity and ecosystem services) and RU (top player in sustainability impact assessment).

**Partners:**

| | | |
|---|---|---|
| 1 | NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO | NL |
| 2 | WUPPERTAL INSTITUT FUR KLIMA, UMWELT, ENERGIE GMBH. | DE |
| 3 | UNIVERSITAET KLAGENFURT | AT |
| 4 | UNIVERSITEIT LEIDEN | NL |
| 5 | SERI - NACHHALTIGKEITSFORSCHUNGS UND -KOMMUNIKATIONS GmbH | AT |
| 6 | NORGES TEKNISK-NATURVITENSKAPELIGE UNIVERSITET NTNU | NO |
| 7 | STICHTING KATHOLIEKE UNIVERSITEIT | NL |
| 8 | FUNDACAO DA FACULDADE DE CIENCIAS DA UNIVERSIDADE DE LISBOA | PT |

**Activity Code:** ENV.2012.6.3-2 **Funding Scheme:** CP **Duration (Months):** 40

**Title:** DYNAmic policy MIXes for absolute decoupling of environmental impact of EU resource use from economic growth

**Proposed EC Grant:** 2.853.623 €

**Abstract:**

DYNAMIX will propose dynamic and robust policy mixes to shift the EU onto a pathway to absolute decoupling of long-term economic growth from resource use and environmental impacts. DYNAMIX assumes that the tremendous task of reaching absolute decoupling will require paradigm shifts in the way production and consumption is organised and regulated. It will therefore assess how existing and emerging paradigms affecting absolute decoupling can inform concrete policy-making. Combined with an ex-post analysis of existing inefficiencies in resource use and inadequacy of current resource policies, this will allow identifying promising policy mixes for progressing towards decoupling. These policy mixes will then be tested in qualitative and quantitative ex-ante assessments for effectiveness (benchmarked against absolute resource and impact decoupling), efficiency, sustainability and contribution to eco-innovation, using innovative environmental and economic modelling. Although being powerful tools for assessing economic and environmental impacts in the EU and globally, models have limitations in representing various social, political and legal aspects, including factors influencing human behaviour. DYNAMIX will thus systematically integrate quantitative with qualitative assessments to fully assess the real-world performance of the proposed policy mixes. The primary target group for the project are EU- and national-level policy-makers directly involved in designing and implementing resource use policies. The project aims at strengthening their capacity to implement effective resource efficiency policy options in a 'real-world context'. To this purpose the policy-makers, together with other key stakeholders, will be involved in a systemic participatory learning process accompanying the whole project. Policy-makers will be able to shape the project's design based on their needs, thus ensuring that DYNAMIX provides tangible support to EU policy-making for resource efficiency.

**Partners:**

| | | |
|---|---|---|
| 1 | ECOLOGIC INSTITUT gemeinnützige GmbH | DE |
| 2 | BIO INTELLIGENCE SERVICE SA | FR |
| 3 | INSTITUTE FOR EUROPEAN ENVIRONMENTAL POLICY, LONDON | UK |
| 4 | IVL SVENSKA MILJOEINSTITUTET AB | SE |
| 5 | FONDAZIONE ENI ENRICO MATTEI | IT |
| 6 | WIRTSCHAFTSUNIVERSITAT WIEN | AT |
| 7 | THE UNIVERSITY OF WESTMINSTER | UK |
| 8 | FUNDACJA NAUKOWA INSTYTUT BADAN STRUKTURALNYCH | PL |

**Activity Code:** ENV.2012.6.3-5 **Funding Scheme:** CSA **Duration (Months):** 36

**Title:** Tackling European Water Challenges

**Proposed EC Grant:** 1.997.989 €

**Abstract:**

Water is a critical resource for the European society. Beside its main life function, freshwater also provides many other functions essential to our economy such as transport, energy provision, heat exchange, cleaning, washing, and constitutes a necessary raw material for many industries. Water availability in sufficient quantities and adequate quality is an issue of highest priority and represents a pan-European and global societal challenge. Water challenges cannot be successfully tackled through the isolated effort of individual national research and innovation programmes. A significant share (more than 70%) of public spending in water research and technology development is programmed, executed and evaluated at national level.Joint Programming Initiatives (JPI) aim at a coordinated and strategic approach to public national and regional research and innovation funding in Europe. Ten critical societal challenges have been identified in Europe and are being addressed through Joint Programming. “Water Challenges for a Changing World” (the Water JPI) is one of them. The Water JPI aims at achieving sustainable water systems for a sustainable economy in Europe and beyond.WatEUr will prepare and support the successful development and implementation of the Water JPI. WatEUr will permeate the structures of the Water JPI to impulse progress towards JPI objectives. Now that Water JPI Vision and Management Structure have been developed, actions are needed to sustain the current structures and to fasten progress in joint activities between national/regional programmes in Europe that will make the Water JPI instrumental to the Research, Development and Innovation community, and effective in tackling European water challenges. Examples of such joint activities include the recurrent mapping of national and regional RDI funding, institutions, programmes and projects, the iterative production of Strategic Research and Innovation Agendas, the undertaking of joint activities including the coordination of joint RDI agendas, joint call(s) on a variable geometry, coordination with water RDI activities within and outside Europe and joint dissemination.WatEUr and the Water JPI will benefit researchers, policy-makers, water authorities, utility operators, industry, farmers, and citizens by developing new solutions to water challenges. Solutions will include safe supply of clean drinking water, improved protection against new emerging water pollutants or pathogens and water hazards like floods and droughts, and a progressive shift towards a more water-efficient economy in Europe.Water knows neither political nor administrative borders. As a matter of fact, most of the European territory falls within transboundary watersheds. WatEUr will assist the Water JPI in addressing fragmentation, preventing duplication of efforts and guaranteeing sufficient critical mass.

**Partners:**

| | | |
|---|---|---|
| 1 | MINISTERIO DE ECONOMIA Y COMPETITIVIDAD | ES |
| 2 | FUNDACAO PARA A CIENCIA E A TECNOLOGIA | PT |
| 3 | INSTITUT NATIONAL DE RECHERCHE EN SCIENCES ET TECHNOLOGIES POUR L'ENVIRONNEMENT ET L'AGRICULTURE | FR |
| 4 | NATURAL ENVIRONMENT RESEARCH COUNCIL | UK |
| 5 | MINISTERIE VAN ECONOMISCHE ZAKEN, LANDBOUW EN INNOVATIE | NL |
| 6 | Istituto Superiore per la Protezione e la Ricerca Ambientale | IT |
| 7 | MILJOVERNDEPARTEMENTET | NO |
| 8 | SUOMEN AKATEMIA | FI |
| 9 | ENVIRONMENTAL PROTECTION AGENCY OF IRELAND | IE |
| 10 | Unitatea Executiva pentru Finantarea Invatamantului Superior, a Cercetarii, Dezvoltarii si Inovarii | RO |
| 11 | RESEARCH PROMOTION FOUNDATION | CY |
| 12 | OFFICE NATIONAL DE L EAU ET DES MILIEUX AQUATIQUES | FR |
| 13 | TURKIYE SU ENSTITUSU | TR |
| 14 | NORGES FORSKNINGSRAD | NO |
| 15 | BUREAU DE RECHERCHES GEOLOGIQUES ET MINIERES | FR |
| 16 | Ministry of Energy and Water Resources | IL |
| 17 | FORSCHUNGSZENTRUM JUELICH GMBH | DE |

**Activity Code:** ENV.2007.5.1.1.1. **Funding Scheme:** CSA **Duration (Months):** 60

**Title:** Environment NCPs cooperating to improve their effectiveness

**Proposed EC Grant:** 2.799.366 €

**Abstract:**

National Contact Points (NCPs) hold a key role in communication with the European Commission concerning executive matters and the scientific community. The quality of proposals submitted, for example, relies partially on an effective NCP network. This project is a set of coherent activities and tasks that will foster further cooperation between Environment NCPs from EU member States and Associated States. The main goal is to improve the services NCPs offer to potential proposers; within this goal, the integration of Environment NCPs from high potential International Cooperation Countries where NCP or similar networks for dissemination of information on FP7 exist will also be supported. The main outcomes will be: a) strengthened cooperation between NCPs across Europe by setting up new and effective means of communication, b) increased quality of services offered by NCPs to proposers with the aim to increase the number and quality of project proposals submitted in response to FP7 calls for proposal and c) integration of other non-EU NCPs into the EU NCP network in order to increase mutually beneficial research and technological development between Europe and International Partners Cooperation Countries.

**Partners:**

| | | |
|---|---|---|
| 1 | AUTORITATEA NATIONALA PENTRU CERCETARE STIINTIFICA | RO |
| 2 | OESTERREICHISCHE FORSCHUNGSFOERDERUNGSGESELLSCHAFT MBH | AT |
| 3 | AGENCE BRUXELLOISE POUR L'ENTREPRISE | BE |
| 4 | TECHNICAL UNIVERSITY OF SOFIA | BG |
| 5 | VEREIN EURESEARCH | CH |
| 6 | RESEARCH PROMOTION FOUNDATION | CY |
| 7 | TECHNOLOGICKE CENTRUM AKADEMIE VED CESKE REPUBLIKY | CZ |
| 8 | FORSCHUNGSZENTRUM JUELICH GMBH | DE |
| 9 | SIHTASUTUS ARCHIMEDES | EE |
| 10 | AGENCE DE L'ENVIRONNEMENT ET DE LA MAITRISE DE L'ENERGIE | FR |
| 11 | NEMZETI INNOVACIOS HIVATAL | HU |
| 12 | MATIMOP, ISRAELI INDUSTRY CENTER FOR RESEARCH & DEVELOPMENT | IL |
| 13 | AGENZIA PER LA PROMOZIONE DELLA RICERCA EUROPEA | IT |
| 14 | MOKSLO INOVACIJU IR TECHNOLOGIJU AGENTURA | LT |
| 15 | FOUNDATION OF SCIENCE AND TECHNOLOGY | MT |
| 16 | MINISTERIE VAN ECONOMISCHE ZAKEN, LANDBOUW EN INNOVATIE | NL |
| 17 | INSTYTUT PODSTAWOWYCH PROBLEMOW TECHNIKI POLSKIEJ AKADEMII NAUK | PL |
| 19 | NARODNE LESNICKE CENTRUM | SK |
| 20 | TURKIYE BILIMSEL VE TEKNOLOJIK ARASTIRMA KURUMU | TR |
| 21 | NATIONAL CENTER FOR SCIENTIFIC RESEARCH "DEMOKRITOS" | EL |
| 22 | LUXINNOVATION GIE | LU |
| 23 | BETA TECHNOLOGY LTD | UK |
| 24 | FORSKNINGSRÅDET FÖR MILJÖ, AREELLA NÄRINGAR OCH SAMHÄLLSBYGGANDE | SE |
| 26 | CENTRO PARA EL DESARROLLO TECNOLOGICO INDUSTRIAL. | ES |
| 27 | THE ICELANDIC CENTRE FOR RESEARCH | IS |
| 29 | MINISTARSTVO ZNANOSTI, OBRAZOVANJA I SPORTA | HR |
| 30 | INTERACTIVE TECHNOLOGY, SOFTWARE AND MEDIA ASSOCIATION | IN |
| 31 | AGENCIA DE INOVACAO - INOVACAO EMPRESARIAL E TRANSFERENCIA DE TECNOLOGIA | PT |

**Activity Code:** ENV **Funding Scheme:** CSA **Duration (Months):** 5

**Title:** Bridging the Gap conference

**Proposed EC Grant:** 200.000 €

**Abstract:**

The Environmental Agency of the Republic of Slovenia is delighted to host the 4th Bridging the Gap conference: Responding to Environmental Change – from Words to Deeds at the occasion of 10th anniversary of Bridging the Gap conferences. Conference will gather participants from policy, research, business and civil society communities. It will look at the past ten years of Bridging the Gap conference progress and will seek to close the gaps in most prioritised and emerging issues in European Union. It will address gaps in policy, research and in capacities of society to respond to emerging issues and uncertainties to be better prepared for the future and to move toward more sustainable development. Well being gaps will be addressed by looking at environment related impacts to human health and at the provision of ecosystem services. Three headline issues will be the common thread through five themes of the conference. The headline issues of the conference: • Need for urgent action • To put environment in the hearth of economic decision making • To improve communication between scientists, policy-makers, politicians, business and civil society Main themes of the conference: 1. Information gathering and sharing 2. Adaptation to climate change 3. Biodiversity and ecosystem services 4. Sustainable consumption and production 5. Energy and the environment Participants will have an opportunity to follow the conference through various ways of interaction: from listening to presentations and round table discussions of the most distinguished experts and high level politicians to participation at the café discussions in freely brainstorming style and five parallel topic sessions where they will be contributing to conclusions of the conference in respective theme.

**Partners:**

1 ENVIRONMENTAL AGENCY OF THE REPUBLIC OF SLOVENIA SI

**Activity Code:** ENV.2008.5.1.0.2. **Funding Scheme:** CSA **Duration (Months):** 30

**Title:** European Union and RussiA Link for S&T co-operation in the area of the environment

**Proposed EC Grant:** 652.956 €

**Abstract:**

The overall strategic objective of the E-URAL project is to improve in quantity and quality the participation of Russian researchers and SMEs in the “Environment (including climate change)” theme of the Seventh Framework Programme (FP7). This objective answers to specific gaps that hamper the participation of Russia, such as the lack of knowledge among researchers and multipliers from Russia on the FP7 and the Environment theme and the lack of know-how on submission procedures under EU-FPs, as well as of awareness in Europe of skilled potential partners from Russia to be involved in EU-FPs projects. E-URAL project, through its multi-skilled consortium composed of various leading and long experienced institutions from EU and Russia, addresses these major obstacles in 4 main lines of activity: mapping of research expertise and needs in Russia in the field of Environment; awareness raising and capacity building for multipliers and researchers in Russia through training activities and staff exchanges; promotion of co-operation opportunities between EU and Russia; liaison with Russian and European stakeholders in the field of concern. The achievement of these strategic and ambitious objectives is guaranteed by the effective structure of the work plan and the partnership of both Russian and European partners with long experience in environment research or in training activities. As a result, the project will create new research consortia, will raise the number of Russian participants in the Framework Programme and identify key RTD topics for further work programmes in the FP7 Environment theme.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITA CA' FOSCARI VENEZIA | IT |
| 2 | AGENZIA PER LA PROMOZIONE DELLA RICERCA EUROPEA | IT |
| 3 | FOUNDATION FOR RESEARCH AND TECHNOLOGY HELLAS | EL |
| 4 | UNIVERSITAET KASSEL | DE |
| 5 | VORONEZH STATE UNIVERSITY | RU |
| 6 | Sochi State University for Tourism and Recreation | RU |
| 8 | Arkhangelsk State Technical University | RU |
| 9 | FEDERAL STATE BUGETARY INSTITUTION CASPIAN MARINE SCIENTIFIC AND RESEARCH CENTRE | RU |
| 10 | INSTITUTE FOR WATER AND ENVIRONMENTAL PROBLEMS, SIBERIAN BRANCH OF THE RUSSIAN ACADEMY OF SCIENCES | RU |

**Activity Code:** ENV.2008.5.1.0.1. **Funding Scheme:** CSA **Duration (Months):** 36

**Title:** Organising dissemination on Results of projects on Chemical Evaluation, Spreading Techniques for Risk Assessment

**Proposed EC Grant:** 910.930 €

**Abstract:**

The project ORCHESTRA has the main aim to disseminate and exploit the European research activities dealing with computer models for the environment. These models have a huge potentiality for dissemination, for their nature, based on information technologies. This area is multidisciplinary, because it deals with environmental science, health, chemistry and information technology. The general impact of information technology is proceeding in an exponential way. Specific use is often limited by a poor knowledge about the availability of suitable tools, cultural scepticism, and lack of training. We will address the strategies for a broad, systematic dissemination and exploitation of the research results of a number of EU projects. Specific dissemination and exploitation measures will be identified for the different stakeholders, including regulators, industry, citizens, international bodies, scientific and other associations. Dissemination towards regulators of all EU member and associated states will be provided. We will also address industry, with special attention to SME, which may gain from the software we are dealing with. We will communicate to citizens, their associations, scientists and other publics with different tools. In the consortium we have representatives of all major stakeholders involved, and a number of partners expert in efficient communication strategies. A sustainable strategy will result from the project. The software products from the different projects will be organised in a web-based system open to the public for continuous access and promotion. Links with other initiatives will exploit results at the regulatory level and in the information technology community, making results living and evolving. The mathematic approach we will disseminate will be also useful to generate simple indicators of regulation impact. ORCHESTRA will promote a repository of software and databases, suitable for updated information on European research on chemicals.

**Partners:**

| | | |
|---|---|---|
| 1 | ISTITUTO DI RICERCHE FARMACOLOGICHE MARIO NEGRI | IT |
| 3 | PublicSpace Ltd | UK |
| 4 | POLITECNICO DI MILANO | IT |
| 5 | INSTITUT SYMLOG | FR |
| 6 | UNIVERSITY OF PATRAS | EL |
| 7 | Centro Reach S.r.l. | IT |
| 8 | UNIVERSITAET STUTTGART | DE |

**Activity Code:** ENV.2008.5.1.0.1. **Funding Scheme:** CSA **Duration (Months):** 48

**Title:** Communicating environmental impacts on water quality, availability and use

**Proposed EC Grant:** 871.620 €

**Abstract:**

The ComEnvir project aims to narrow the gap between EU sponsored environmental research and European citizens. Water (resources, quality, pollution and biodiversity issues) has been chosen as a common theme to be addressed by the project. It will cover environmental stressors, waste treatment, health effects, biodiversity, risks and therefore the role of water quality in its different environmental locations (fresh water, marine, soil, air). The project will last 48 months. The project will communicate results and activities of EU environmental research with two specific target groups. The primary target group are teachers and students. The second target group is the general public. The overall project objectives are to: • empower the European citizens to constructively engage in scientific dialogue and debate • inform European consumers of the latest scientific advances in the food sector • strengthen science education in classrooms and • promote scientific curiosity among the youth The ComEnvir project will achieve its set objectives through a number of innovative approaches and strategies that have already been piloted in 2006 and 2007. These approaches centre around three key elements: • creation of knowledge packages on EU environmental research and will include films, film clips, FAQs, news, background reading materials, a glossary and links • effective dissemination measures (broadcast media, DVDs and internet) and • thorough evaluation of on-going project deliverables The nine project members, located in Denmark, France, Germany, Italy, The Netherlands, Norway and the UK possess complementary expertise that assures successful project outcome. The project will last 48 months.

**Partners:**

| | | |
|---|---|---|
| 1 | LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN | DE |
| 2 | ProBio Partners VOF | NL |
| 3 | Visions Unlimited Medien | DE |
| 5 | Høgskolen i Hedmark | NO |
| 6 | ECT OEKOTOXIKOLOGIE GMBH | DE |
| 7 | CONSIGLIO NAZIONALE DELLE RICERCHE | IT |
| 8 | ECOLOGICAL CONSULTANCY SERVICES LIMITED | IE |
| 10 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |

**Activity Code:** ENV.2009.5.1.0.2 **Funding Scheme:** CSA **Duration (Months):** 24

**Title:** Mountain Sustainability: Transforming Research into Practice, regional development, new communication tools

**Proposed EC Grant:** 846.998 €

**Abstract:**

The goal of mountain.TRIP is to provide stakeholders, end-users and practitioners with readily accessible and understandable forms of research-based information relevant to sustainable development in mountain regions.Mountain.TRIP will start where other EU projects have finished, translating research findings into useful information and developing relationships between users and researchers. EU research projects generally focus on elucidating truths, not on communicating these truths to practitioners or the interested public. Research projects often produce valuable results, methods, tools and instruments, but at the end of the project neither time nor money remains to disseminate these results among practitioners and to the interested public. Furthermore, research results usually exist in forms recognized by the research community but not easily or quickly assimilated by communities of practice.Mountain.TRIP will close the gap that currently exists between EU project findings and the needs of policy- and decision-makers, stakeholders in economy and environment, planners and administrators, non governmental organisations, end-users, and other members of groups representing the interests of citizens and industry of the most important mountain regions of Europe, hereafter referred to in this proposal as "practitioners".Mountain.TRIP will not just disseminate research results but will rather synthesize results from multiple EU projects while adapting the format of that synthesis through continuous interaction with practitioners to meet their needs. The project uses multiple innovative mechanisms to ensure effective interaction with practitioners.

**Partners:**

| | | |
|---|---|---|
| 1 | OESTERREICHISCHE AKADEMIE DER WISSENSCHAFTEN | AT |
| 2 | UNIVERSITAET BERN | CH |
| 3 | UNIWERSYTET JAGIELLONSKI | PL |
| 4 | ECOLOGIC INSTITUT gemeinnützige GmbH | DE |
| 5 | Euromontana | FR |
| 6 | Perth College | UK |

**Activity Code:** ENV.2009.5.1.0.2 **Funding Scheme:** CSA **Duration (Months):** 49

**Title:** KNOwledge from Science to SOcitieS

**Proposed EC Grant:** 868.478 €

**Abstract:**

KNOSSOS seeks to address the gap between science and society in the field of environmental research with a focus on policy makers and civil society, who are the main recipients of the project. We propose to take stock of available research results that are useful for policy-making. KNOSSOS will then add a knowledge management system, with innovative tools to guarantee fast and easy access to relevant information. This initial phase will also yield collaborative workshops on evidence-based policy making and training for policy makers in the field of environmental research. KNOSSOS puts an emphasis on disseminating research findings beyond Europe: through a number of 'Knowledge Fairs' as side events of international conferences, but also by including DG Research findings in one of the world's largest collections of Environmental Science Research, the Online Access to Research in the Environment (OARE). In order to ensure swift uptake of European environmental research into policy making, KNOSSOS, with its partner IEEP, the Institute for European Environmental Policy, will issue monthly policy briefs for European, national and international policy makers. Aiming for enhanced visibility of European mission to raise public awareness about emerging environmental issues. KNOSSOS' strength lies in the composition of its consortium: UNEP, the world's leading environmental authority, joins forces with the Institute for European Environmental Policy, a renowned independent not-for-profit institute with a strong reputation in giving policy advice; and with GLOBE EU/Europe, an excellent partner in training policy-makers and disseminating deliverables. KNOSSOS will have an impact on both policy makers and civil society in and beyond Europe. Our goal is to make European environmental science not only understandable, but also actionable and a preferred reference for all who seek information to pressing ecological questions of our time.

**Partners:**

| | | |
|---|---|---|
| 1 | UNITED NATIONS ENVIRONMENT PROGRAMME | KE |
| 2 | The Club of Rome - European Support Centre | AT |
| 3 | INSTITUTE FOR EUROPEAN ENVIRONMENTAL POLICY, LONDON | UK |
| 4 | GLOBAL LEGISLATORS ORGANISATION FOR A BALANCED ENVIRONMENT-EU | BE |
| 5 | Global Legislators Organisation for a Balanced Environment Europe | BE |

**Activity Code:** ENV.2009.5.1.0.1 **Funding Scheme:** CSA **Duration (Months):** 36

**Title:** Scoping China's Environmental Research Excellence and major Infrastructure: Foresight, Potentials, and Roadmaps

**Proposed EC Grant:** 993.233 €

**Abstract:**

SPRING is a supporting action under EU FP7 Environment theme, with the main objective of creating and providing a solid basis for future EU-China collaboration in environmental research. SPRING will identify common needs and opportunities, analyse potential topics of research cooperation and initiatives, map competences and potentials of Chinese research organisations and major infrastructure, investigate strategic development plans and initiate roadmaps for future collaborations. SPRING will analyse the hurdles, barriers, and cornerstones that need to be addressed to enable better research engagement by EU researchers to China, and vice versa. It will improve the visibility of research initiatives and strengths of Chinese regions to a wider audience in Europe. The project will create and maintain a web portal that will serve as a bilateral contact point, showcasing past projects and present project, and also update strategic plans for EU-China cooperation.

**Partners:**

| | | |
|---|---|---|
| 1 | UNIVERSITY OF SURREY | UK |
| 2 | THE UNIVERSITY OF EXETER | UK |
| 4 | APPLIED RESEARCH AND COMMUNICATIONS FUND | BG |
| 5 | CICERO SENTER KLIMAFORSKNING STIFTELSE | NO |
| 6 | TSINGHUA UNIVERSITY | CN |
| 7 | Chinese Research Academy of Environmental Sciences | CN |
| 8 | China Institute of Water Resources and Hydropower Research | CN |
| 10 | Tianjin University | CN |
| 11 | UNIVERSITY OF BRISTOL | UK |
| 12 | PEKING UNIVERSITY | CN |

**Activity Code:** ENV.2009.5.1.0.2 **Funding Scheme:** CSA **Duration (Months):** 30

**Title:** European Marine Research Knowledge Transfer and Uptake of Results

**Proposed EC Grant:** 782.000 €

**Abstract:**

MarineTT is premised on the concept that knowledge is a major source of competitive advantage in business. Much potentially valuable knowledge, locked into inaccessible or non-user-friendly contexts, is unused because key stakeholders are not aware of its existence. MarineTT is concerned with marine environment research, an approach allowing coverage of other themes (climate change, biodiversity, earth observation and urban development) while also allowing important sub-topics (such as fisheries and aquaculture) to be included, given their relevance to the key area of the impacts of economic growth leading to environmental degradation, and the current ecosystem management approach supported by the EC. MarineTT will use the existing EurOcean info-base of European marine research funded projects as its initial basis, extending its functionality by introducing critical missing fields, making it a more efficient tool, focusing on knowledge outputs rather than a simple listing of research projects. The profiles will be updated to include new fields, such as: stated aims and objectives vs. actual outputs, research performers, research outcomes, research methodologies (effective and/or ineffective), products, and other relevant information. This knowledge can then be discharged through encouraging and accelerating commercial application of research results, through facilitating the transfer of knowledge for policy and senior decision makers, and through the promotion of research results to the public at large. MarineTT will make a real contribution to the call for improved access to EU research results for industry, multipliers, the civil society, and policy-makers. The project is divided into three phases: (1) Collect and Understand, refining and improving databases and info-bases; (2) Analyse (cost & benefit) and Consult, with key stakeholders and experts; and (3) Transfer and Connect; effective knowledge transfer

**Partners:**

| | | |
|---|---|---|
| 1 | AquaTT UETP Ltd | IE |
| 2 | FUNDACAO EUROCEAN | PT |

**Activity Code:** ENV.2009.5.1.0.2 **Funding Scheme:** CSA **Duration (Months):** 36

**Title:** Conservation Genetic Resources for Effective Species Survival

**Proposed EC Grant:** 991.810 €

**Abstract:**

Genetic biodiversity is recognised by the Convention on Biological Diversity and the EC Biodiversity Strategy as one of three essential elements of living diversity, yet it is poorly represented at the policy level, compared to the two other components, species and ecosystems. The CONGRESS consortium aims to rectify this situation by delivering dissemination tools which policy makers and conservation managers can conveniently use to incorporate genetic biodiversity into their policy framework. The six work packages of this project fall into two components. The first component comprises WPs 1 – 5 which will provide a one-stop, community-enabled web portal, including the following components. WP1 concerns web portal design and construction. WP2 will provide databases on academics and professional end-users, publications and genetic data for key European species of conservation concern. WP3 will provide a simulation tool for biodiversity managers to assess the power of genetic data to reveal processes which may result in genetic erosion. WP4 will provide a decision matrix module to allow end-users to establish optimal policy and management options given the genetic data which have been produced. WP5 will provide a knowledge pack and information leaflets, translated into the main European languages, which can be assembled into a manual. The second component is WP6, which comprises a series of dissemination and exchange workshops carried out across the European Union, including a transborder workshop and hands-on demonstration meeting in Eastern Europe. CONGRESS will integrate and enhance these work packages by using the workshops as forums to discuss the contents of the portal and will be guided by an end-user advisory group, who will oversee the development of these tools and ensure their utility for the community who will benefit from them.

**Partners:**

| | | |
|---|---|---|
| 1 | CARDIFF UNIVERSITY | UK |
| 2 | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE | FR |
| 3 | AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS | ES |
| 4 | UNIVERSITY OF DURHAM | UK |
| 5 | FONDAZIONE EDMUND MACH | IT |
| 6 | UNIVERSITA DEGLI STUDI DI FERRARA | IT |
| 7 | ALBERT-LUDWIGS-UNIVERSITAET FREIBURG | DE |
| 8 | KOBENHAVNS UNIVERSITET | DK |
| 9 | Koninklijke Maatschappij voor Dierkunde van Antwerpen | BE |
| 10 | STICHTING NATIONAAL NATUURHISTORISCH MUSEUM NATURALIS | NL |
| 11 | QUEEN MARY AND WESTFIELD COLLEGE, UNIVERSITY OF LONDON | UK |
| 12 | TURUN YLIOPISTO | FI |
| 13 | USTAV BIOLOGIE OBRATLOVCU AV CR, V.V.I. | CZ |

**Activity Code:** ENV.2010.5.1.0-1 **Funding Scheme:** CSA **Duration (Months):** 36

**Title:** Dissemination and uptake of FP water research results

**Proposed EC Grant:** 928.413 €

**Abstract:**

The implementation of the Water Framework Directive is not a “Business-as-usual approach”, and needs new knowledge and know-how, but it is demonstrated that the actual connection between research and policy is not efficient.The concept of the project is to add an intermediate step after research, like a marketing team in the industry.This “step-further” will be developed closely with the stakeholders, by involving them within a social network, the European Water Community, for promoting exchanges; the project will develop a process tailored to every typology of target groups, which are:•the practitioners, with decision-makers (basin authorities, municipalities), and “doers”, (suppliers of technologies, consultancies, operators) ;it is needed to convince both the ones who accept to “host innovation”, and those who take the risk to develop innovative processes.•the researchers, as individual knowledge holders, and as members of European consortiums, and the research funding bodies, at national level.The project will collect information on about 60 water-related FP6/FP7 research projects outputs, analyse their potential future in close collaboration with the research teams, design for each of them an Individualised Dissemination Strategy, and then support their transfer to the targeted stakeholders, with the support of Web 2.0 features, together with events designed for specific audiences.The e-infrastructure is a mix of social networking tools, to support a community of practices among the stakeholders, virtual seminars, and a permanent virtual fair of results.The project includes social events to help stakeholders to meet and share ideas, and future actions: brokerage events, seminars, summer schools.The consortium gather institutes from FR, DE, PL, RO, UK, IT, SP to do dissemination at EU scale.

**Partners:**

| | | |
|---|---|---|
| 1 | OFFICE INTERNATIONAL DE L'EAU | FR |
| 2 | GDANSKA FUNDACJA WODY | PL |
| 3 | FUNDATIA CENTRUL DE FORMARE SI PERFECTIONARE PROFESIONALA IN DOMENIUL APEI | RO |
| 4 | ECOLOGIC INSTITUT gemeinnützige GmbH | DE |
| 5 | THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF OXFORD | UK |
| 6 | CENTRO ITALIANO PER LA RIQUALIFICAZIONE FLUVIALE ASSOCIAZIONE | IT |
| 7 | AMPHOS 21 CONSULTING SL | ES |
| 8 | TRIPNITY | FR |

**Activity Code:** ENV.2010.5.1.0-2 **Funding Scheme:** CSA **Duration (Months):** 30

**Title:** Increasing the impact of Central-Eastern European environment research results through more effective dissemination and exploitation

**Proposed EC Grant:** 851.584 €

**Abstract:**

Based on indications from EC and FP7 statistics, the Central and Eastern European (CEE) countries participate at low rate in the FP7 Environment theme. On the other hand air pollution, chemical pollution and environmental risks should be handled with expressed interest in this region, due to severe environmental damages caused by decades of negligence and mishandling. CEE researchers have been conducting research in the mentioned fields since the middle of the 20th century, however, their results did not reach – and influence - either the policy makers of their own country, or their academic counterparts in EU-15.The main objective of ENVIMPACT is to enrich the EU knowledge base with the environment-related results of the CEE researchers, thus inducing new collaborations under FP7/FP8 which may lead to innovative solutions for the lasting protection of our environment.Using local contacts, knowledge and the insight of expert groups consisting of relevant academic, industrial/ETP and policy representatives, the innovative environmental research practices and results originating from Central and Eastern Europe will be identified, mapped and made available for the governmental, academic and industrial stakeholders all over Europe. After analysing the presently applied dissemination and exploitation practices of CEE research results (by SWOT analysis), good and bad practices will be presented in an online catalogue. Recommendations will be prepared for the development a taylor-made toolkit. To close the communication gap, CEE researchers will be offered trainings and online mentoring services, based on the recommendations for communication and exploitation of research results.Partners from 7 NMSs will ensure the availability of local research results, while representatives from 4 EU-15 countries will help to identify and match the needs in terms of communication of CEE/EU-15 researchers and will provide the expertise in reaching the relevant stakeholders.

**Partners:**

| | | |
|---|---|---|
| 1 | TUDOMANYOS ES TECHNOLOGIAI ALAPITVANY | HU |
| 2 | Steinbeis Innovation gGmbH | DE |
| 3 | AGENZIA PER LA PROMOZIONE DELLA RICERCA EUROPEA | IT |
| 4 | INTRASOFT INTERNATIONAL SA | LU |
| 5 | IPARFEJLESZTESI KOZALAPITVANY | HU |
| 6 | SOFIISKI UNIVERSITET SVETI KLIMENT OHRIDSKI | BG |
| 7 | AGENCE BRUXELLOISE POUR L'ENTREPRISE | BE |
| 8 | FIZIKALAS ENERGETIKAS INSTITUTS | LV |
| 9 | UNIVERZITA KARLOVA V PRAZE | CZ |
| 10 | INSTITUT JOZEF STEFAN | SI |
| 11 | EuroProjekts spolka z ograniczona odpowiedzialnoscia | PL |
| 12 | UNIVERSITATEA POLITEHNICA DIN BUCURESTI | RO |

**Activity Code:** ENV.2010.5.1.0-1 **Funding Scheme:** CSA **Duration (Months):** 24

**Title:** Science, Technology and Policy interfacing using WISE-RTD

**Proposed EC Grant:** 899.947 €

**Abstract:**

The aim of STEP-WISE is to promote and increase the use of FP environmental RTD results in the sector of environmental technologies focusing on water by diverse stakeholders: policy, scientists and industry.The WISE-RTD Web Portal (www.wise-rtd.info) has already been implemented to serve as a dissemination tool, linking diverse EC Water Framework Directive policy aspects to FP RTD (and LIFE) results, thus bridging the science policy gap in information exchange. Amendment of WISE-RTD to include also other (EC) Directives that relate to water policies will expand the current set of intricate algorithms that define science-policy interactions. In addition, the WISE-RTD structure will be expanded with environmental technologies focusing on water (WISE-RTD+ Web Portal).FP (and LIFE) funded environmental research projects and results with high EU added value will be identified and selected using preset criteria. By uploading these projects/RTD results using a dedicated tool WPIS (Web Portal Input System) to the WISE-RTD+ Web Portal, the information automatically become linked to the diverse sets of policy instruments (i.c. Directives).The WISE-RTD+ Web Portal will be used to evaluate whether policy questions have been answered by the RTD outcome (top down, scientific support to policy), and whether needs from identified stakeholders, e.g. from the environmental water technologies sector, are covered by policy issues (bottom-up). Merging of these two approaches will form the gap-analysis, recommendations towards a better uptake of FP environmental RTD results with tangible impact on economic growth and social welfare.The policy and science related contents of WISE-RTD+, and the two-way gap analyses will form the basis for dissemination using different user-friendly media. Innovative dissemination tools and activities will direct to different audiences/stakeholders at targeted national and/or international level including policy makers, researchers and industries.

**Partners:**

| | | |
|---|---|---|
| 1 | HYDROSCAN NV | BE |
| 2 | MERMAYDE | NL |
| 3 | VZW WISE RTD | BE |
| 4 | KATHOLIEKE UNIVERSITEIT LEUVEN | BE |
| 5 | XPRO CONSULTING LIMITED | CY |
| 6 | Quality Consult srl | IT |
| 7 | Hydro International plc | UK |

**Activity Code:** ENV.2010.5.1.0-1 **Funding Scheme:** CSA **Duration (Months):** 24

**Title:** Sustainable Technologies and Research for European Aquatic Management

**Proposed EC Grant:** 590.000 €

**Abstract:**

The EU has invested considerable resources over the last decade to support the development of water technologies. As it often is the case with innovative technologies, there are currently few resources to pursue this process in the needed scale, and the uptake potential of water technologies and other environmental technologies resulting from EU-funded research seems limited due to insufficient awareness of their developments and the opportunities they offer. Raising awareness among researchers, policy makers, businessmen and industries, as well as the large public, young people in particular is paramount to the full exploitation of these technologies which are able to boost economic growth and social welfare.The STREAM project intends to tackle this issue by bringing water technologies to the interest of potential uptakers through a diversified series of dissemination and communication actions tailored to the needs of the different categories of stakeholders. These include Policy Seminars to be held in 3 different countries and also streamed online, a Final Symposium at the European Parliament in Brussels, 2 Summer Schools, e-learning courses, audiovisual materials, including videos and interviews, webinars for research events and participation in sectorial events. A web platform will be set up from the very start of the project serving as a repository for all its activities and for the updated documentation material on latest research and policy progress in the field of water.A group of highly qualified actors need to be involved in such an ambitious proposal to perform all variety of activities foreseen: STREAM consortium gathers partners with specific capabilities and backgrounds and established relations in the field, like specialists in water issues, experts in communicating science and carrying out innovative dissemination activities to transfer the knowledge gathered to the target audiences.

**Partners:**

| | | |
|---|---|---|
| 1 | MINERVA CONSULTING & COMMUNICATION | BE |
| 2 | THE EUROPEAN WATER PARTNERSHIP AISBL | BE |
| 3 | EUROPE FOR BUSINESS LTD | UK |
| 4 | RESEAU MENON E.E.I.G. | BE |

**Activity Code:** ENV.2010.5.1.0-2 **Funding Scheme:** CSA **Duration (Months):** 30

**Title:** PROmotion and coordination of environmental research in Central and Eastern Europe for a sustainable Development with the support of the Enterprise Europe Network

**Proposed EC Grant:** 729.923 €

**Abstract:**

PROCEED focuses on the communication and dissemination of environmental research results and practices originating in Central and Eastern European Countries (CEEC) towards industry, policy makers and public and private research centres (including Academia),with the aim to enhance the uptake of research results and foster the participation of CEEC in EU-funded research projects through S&T cooperation with other European partners.The specific research sectors on which PROCEED will focus are Air pollution,Chemical pollution, Environmental Technologies.The partners will create a data base of all innovative environmental research practices and results originating in CEEC and will lead a SWOT analysis of the existing channels and tools used to communicate environmental research results in Europe with specific focus to Academia, policy makers and industry.The PROCEED communication system will be made of personal communication in national and international workshops and a web 2.0-based research social network, an interactive communication channel specifically targeted at creating research opportunitiesAmong other, results will be the signing of TT agreements and the collaborative participation in FP environment project proposalsThe project partnership covers 9 CEEC (6 new Member States and 3 Associated countries) and 3 EU-15 Member statesAll 12 project countries are represented by at least one partner member of the Enterprise Europe Network which will be the main communication channel in the project, with its 600 members present in all European countries and beyond (including China and United States) and an extended network of contacts and partners.Partners will engage other EEN members, the Fp7 National Contact Points Network and other relevant FP7 coordination and support actions to create an integrated communication system.Partners will plan the exploitation of the project after its lifetime through the integration of PROCEED tools in the EEN activities.

**Partners:**

| | | |
|---|---|---|
| 1 | CAMERA DE COMERT, INDUSTRIE SI AGRICULTURA A JUDETULUI ARAD ASOCIATIE | RO |
| 2 | INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE PENTRU PROTECTIA MEDIULUI | RO |
| 3 | UNIONE REGIONALE DELLE CAMERE DI COMMERCIO INDUSTRIA ARTIGIANATO E AGRICOLTURA DEL VENETO | IT |
| 4 | Sogesca s.r.l. | IT |
| 5 | BULGARIAN CHAMBER OF COMMERCE AND INDUSTRY | BG |
| 6 | PLOVDIV CHAMBER OF COMMERCE AND IND USTRY* | BG |
| 7 | GOSPODARSKA ZBORNICA SLOVENIJE - CHAMBER OF COMMERCE AND INDUSTRY OF SLOVENIA | SI |
| 8 | TERA TEHNOPOLIS DOO ZA PROMICANJE NOVIH TEHNOLOGIJA INOVACIJA I PODUZETNISTVA | HR |
| 9 | FOUNDATION FOR MANAGEMENT AND INDUSTRIAL RESEARCH SKOPJE | MK |
| 10 | INSTITUT MIHAJLO PUPIN | RS |
| 11 | EMPORIKO KAI VIOMICHANIKO EPIMELITIRIO HERAKLIOU | EL |
| 12 | LATVIJAS TEHNOLOGISKAIS CENTRS NODIBINAJUMS | LV |
| 13 | VIESOJI ISTAIGA LIETUVOS INOVACIJU CENTRAS | LT |
| 14 | UNIWERSYTET WARSZAWSKI | PL |
| 15 | AGRO BUSINESS PARK AS | DK |

**Activity Code:** ENV.2011.5.1.0-1 **Funding Scheme:** CSA **Duration (Months):** 36

**Title:** Uptake of Climate related Research Results through Knowledge Platforms with African Collaboration Partners

**Proposed EC Grant:** 999.884 €

**Abstract:**

The main aim of the AfriCAN Climate project is the development, operation and promotion of a web-based Knowledge Platform for efficient dissemination of climate change research results and good practices, to encourage users for uptake of success stories and research knowledge in new projects. Thereby, the project will contribute to mitigate climate change impacts on African regions and help communities to adapt to the changing climatic conditions.Emphasis will be placed on a variety of innovative and creative web functionalities (“e-tools”) when developing the interactive, multimedia, pan-continental, multi-lingual and interdisciplinary AfriCAN Climate Platform. The new platform visitors, the already registered users and the members of the online communities will be facilitated by the editorial team to actively participate in knowledge exchange and uptake of research results. The high profile consortium includes a large variety of experienced EU and African organizations, corresponding to the diversity of target audience addressed by the call. The experts in the consortium achieve full thematic, linguistic and geographical coverage to serve the African continent’s climate change knowledge needs. They will jointly build and continuously update a knowledgebase to feed the platform. Country fact sheets on climate change impacts will be developed for all 54 African countries.Strategic networking meetings with information multipliers and FP7 National Contact Points will be held on a regular base to encourage them to become active on the Platform by building climate change interest communities, or joining existing communities. On a yearly base, large promotional events will be organized, hosting the AfriCAN Climate Music/Art and Good Practice Award. Technical tours to good practice sites and workshops on uptake of lessons learn in good practice projects and financing will complement the networking activities and improve South-South Cooperation amongst African regions.

**Partners:**

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|---|---|---|
| 1 | WIRTSCHAFT UND INFRASTRUKTUR GMBH & CO PLANUNGS KG | DE |
| 2 | IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE | UK |
| 3 | PAU EDUCATION SL | ES |
| 4 | DANMARKS TEKNISKE UNIVERSITET | DK |
| 5 | PRACTICAL ACTION | UK |
| 6 | ENVIRONNEMENT ET DEVELOPPEMENT DU TIERS MONDE ORGANISATION INTERNATIONALE | SN |
| 7 | FOOD AGRICULTURE AND NATURAL RESOURCES POLICY ANALYSIS NETWORK | ZA |
| 8 | UNIVERSITY OF THE WITWATERSRAND JOHANNESBURG | ZA |
| 9 | INTERNATIONAL CENTRE FOR RESEARCH IN AGROFORESTRY | KE |
| 10 | IGAD CENTRE FOR CLIMATE PREDICTION AND APPLICATION | KE |


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