



EUROPEAN
COMMISSION

Community research

COOPERATION
Theme 6 - Environment
(Including Climate Change)

Catalogue of projects call FP7-ENV-2007-1

deadline 2 May 2007



10/06/2008



European Commission
Directorate-General for Research
Environment Directorate

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Catalogue of projects - Table of Contents

N°	Acronym and title	Type	Page
Activity: 6.1 CLIMATE CHANGE, POLLUTION, AND RISKS			
Sub-Activity: 6.1.1. PRESSURES ON ENVIRONMENT AND CLIMATE			
212643	THOR Thermohaline Overturning - at Risk?	CP-IP	6
212095	CITYZEN megaCITY - Zoom for the ENvironment	CP-FP	7
212520	MEGAPOLI Megacities: Emissions, urban, regional and Global Atmospheric POLLution and climate effects, and Integrated tools for assessment and mitigation	CP-FP	8
211384	EPOCA European Project on Ocean Acidification	CP-IP	9
211894	ClimateWater Bridging the gap between adaptation strategies of climate change impacts and European water policies	CSA-SA	10
212250	ACQWA Assessment of Climatic change and impacts on the Quantity and quality of Water	CP-IP	11
212492	CLARIS LPB A Europe-South America Network for Climate Change Assessment and Impact Studies in La Plata Basin	CP-SICA	13
212774	ClimateCost Full Costs of Climate Change	CP-FP	14
212535	CCTAME Climate Change - Terrestrial Adaption and Mitigation in Europe	CP-FP	15
Activity: 6.1 CLIMATE CHANGE, POLLUTION, AND RISKS			
Sub-Activity: 6.1.2. ENVIRONMENT AND HEALTH			
211488	HITEA Health Effects of Indoor Pollutants: Integrating microbial, toxicological and epidemiological approaches	CP-FP	16
212502	CONTAMED Contaminant mixtures and human reproductive health - novel strategies for health impact and risk assessment of endocrine disrupters	CP-FP	17
212844	DEER Developmental effects of environment on reproductive health	CP-FP	18
212885	REEF Reproductive effects of environmental chemicals in females	CP-FP	19
211250	ESCAPE European Study of Cohorts for Air Pollution Effects	CP-IP	20
212854	HEREPLUS HHealth Risk from Environmental Pollution Levels in Urban Systems	CSA-CA	21
Activity: 6.1 CLIMATE CHANGE, POLLUTION, AND RISKS			
Sub-Activity: 6.1.3. NATURAL HAZARDS			
202798	MICORE Morphological Impacts and COastal Risks induced by Extreme storm events	CP-FP	22
211590	MOVE Methods for the improvement of Vulnerability Assessment in Europe	CP-FP	23
212045	ENSURE Enhancing resilience of communities and territories facing natural and na-tech hazards	CP-FP	24
211393	MIAVITA Mitigate and assess risk from volcanic impact on terrain and human activities	CP-SICA	25
211837	XEROCHORE An Exercise to Assess Research Needs and Policy Choices in Areas of Drought	CSA-SA	26
Activity: 6.2 SUSTAINABLE MANAGEMENT OF RESOURCES			
Sub-Activity: 6.2.1. CONSERVATION AND SUSTAINABLE MANAGEMENT OF NATURAL AND MAN-MADE RESOURCES AND BIODIVERSITY			
212300	WETwin 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	CP-SICA	27
211732	MIRAGE Mediterranean Intermittent River Management	CP-FP	28
213154	VIVACE Vital and viable services for natural resource management in Latin America	CSA-SA	29

211779	SOILSERVICE	Conflicting demands of land use, soil biodiversity and the sustainable delivery of ecosystem goods and services in Europe	CP-FP	30
212631	PALMS	Palm harvest impacts in tropical forests	CP-FP	31
211392	LiveDiverse	Sustainable Livelihoods and Biodiversity in Riparian Areas in Developing Countries	CP-SICA	32
212160	HUNT	Hunting for Sustainability	CP-SICA	33
213015	HighARCS	Highland aquatic resources conservation and sustainable development	CP-SICA	34
211345	BRIDGE	sustainaBle uRban plannng Decision support accountinG for urban mEtabolism	CP-FP	35
212034	SUME	Sustainable Urban Metabolism for Europe	CP-FP	36

Activity: 6.2 SUSTAINABLE MANAGEMENT OF RESOURCES
Sub-Activity: 6.2.2. MANAGEMENT OF MARINE ENVIRONMENTS

212133	EELIAD	European Eels in the Atlantic: Assessment of Their Decline	CP-FP	37
212529	SALSEA-Merge	Advancing understanding of Atlantic Salmon at Sea: Merging Genetics and Ecology to resolve Stock-specific Migration and Distribution patterns	CP-FP	38
213144	CoralFISH	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	CP-IP	39
212085	MEECE	Marine Ecosystem Evolution in a Changing Environment	CP-IP	40
211700	CAREX	Coordination Action for Research Activities on Life in Extreme Environments	CSA-CA	41
211288	CASPINFO	Caspian Environmental and Industrial Data & Information Service	CSA-SA	42

Activity: 6.3 ENVIRONMENTAL TECHNOLOGIES
Sub-Activity: 6.3.1 ENVIRONMENTAL TECHNOLOGIES FOR OBSERVATION, SIMULATION, PREVENTION, MITIGATION, ADAPTATION, REMEDIATION AND RESTORATION OF THE NATURAL AND MAN-MADE ENVIRONMENT

211534	AquaFit4use	Water in Industry, Fit-for-Use Sustainable Water Use in Chemical, Paper, Textile and Food Industry	CP-IP	43
212790	HydroNet	Floating Sensorised Networked Robots for Water Monitoring	CP-FP	44
211386	iSOIL	Interactions between soil related sciences - Linking geophysics, soil science and digital soil mapping	CP-FP	45
211523	DIGISOIL	Integrated system of data collection technologies for mapping soil properties	CP-FP	46
212663	SoilCAM	Soil Contamination: Advanced integrated characterisation and time-lapse Monitoring	CP-FP	47
212781	iSoil (*)	Contaminant-specific isotope analyses as sharp environmental-forensics tools for site characterisation, monitoring and source apportionment of pollutants in soil (*) The proposal acronym will be modified during the project negotiation	CP-FP	48
213161	ModelPROBE	Model driven Soil Probing, Site Assessment and Evaluation	CP-FP	49
211888	SORT IT	Recovered Paper Sorting with Innovative Technologies	CP-FP	50
212782	W2Plastics	Magnetic Sorting and Ultrasound Sensor Technologies for Production of High Purity Secondary Polyolefins from Waste	CP-FP	51
211873	ISSOWAMA	Integrated Sustainable Solid Waste Management in Asia	CSA-CA	52
212531	LoRe-LCA	Low Resource consumption buildings and constructions by use of LCA in design and decision making	CSA-CA	53
212998	PERFECTION	Performance Indicators for Health, Comfort and Safety of the Indoor Environment	CSA-CA	54

Activity: 6.3 ENVIRONMENTAL TECHNOLOGIES
Sub-Activity: 6.3.2. PROTECTION, CONSERVATION AND ENHANCEMENT OF CULTURAL HERITAGE, INCLUDING HUMAN HABITAT

212218	popart	Strategy for the preservation of plastic artefacts in museum collections	CP-FP	55
212458	TeACH	Technologies and Tools to prioritize assessment and diagnosis of air pollution impact on immovable and movable Cultural Heritage	CP-FP	56
212939	SMooHS	Smart Monitoring of Historic Structures	CP-FP	57
213026	CHRESP	Cultural Heritage Research meets practice	CSA-SA	58
Activity: 6.3 ENVIRONMENTAL TECHNOLOGIES				
Sub-Activity: 6.3.3. TECHNOLOGY ASSESSMENT, VERIFICATION AND TESTING				
201724	MIDTAL	Microarrays for the Detection of Toxic Algae	CP-FP	59
212668	CADASTER	Case studies on the Development and Application of in-Silico Techniques for Environmental hazard and Risk assessment	CP-FP	60
Activity: 6.4 EARTH OBSERVATION AND ASSESSMENT TOOLS FOR SUSTAINABLE DEVELOPMENT				
Sub-Activity: 6.4.1. EARTH AND OCEAN OBSERVATION SYSTEMS AND MONITORING METHODS FOR THE ENVIRONMENT AND SUSTAINABLE DEVELOPMENT				
212196	COCOS	Coordination Action Carbon Observation System	CSA-CA	61
212322	EBONE	European Biodiversity Observation Network; a project to design and test a biodiversity observation system integrated in time and space	CP-FP	62
202955	EuroSITES	Integration and enhancement of key existing European deep-ocean observatories	CP-FP	63
212887	ACOBAR	Acoustic Technology for observing the interior of the Arctic Ocean	CP-FP	64
211578	e-SOTER	Regional pilot platform as EU contribution to a Global Soil Observing System	CP-FP	65
212545	AEGOS	African-European Georesources Observation System	CSA-SA	66
212921	CEOP-AEGIS	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	CP-SICA	67
211307	DevCoCast	GEONETCast for and by Developing countries	CSA-SA	68
Activity: 6.4 EARTH OBSERVATION AND ASSESSMENT TOOLS FOR SUSTAINABLE DEVELOPMENT				
Sub-Activity: 6.4.2. FORECASTING METHODS AND ASSESSMENT TOOLS FOR SUSTAINABLE DEVELOPMENT TAKING INTO ACCOUNT DIFFERING SCALES OF OBSERVATION				
212304	TESS	Transactional Environmental Support System	CP-FP	69
212345	PRIMA	Prototypical Policy Impacts on Multifunctional Activities in rural municipalities	CP-FP	70
213091	SUST-RUS	Spatial-economic-ecological model for the assessment of sustainability policies of Russia	CP-SICA	71
211759	IN-STREAM	INtegrating MainSTREAM Economic Indicators with those of Sustainable Development	CP-FP	72
212236	POPP	Policies to promote sustainable consumption patterns (POPP)	CP-FP	73
211662	SustainergyNet	Integrating civil, scientific and stakeholder knowledge towards African sustainable energy policy	CSA-CA	74
212237	ESDinds	The development of indicators & assessment tools for CSO values-based projects in education for sustainable development	BSG-CSO	75
212269	CSS	Civil Society for Sustainability	BSG-CSO	76
212457	CSOContribution2SC	Partnering to Enhance Civil Society Organisations' Contribution to Research in Sustainable Consumption & Production	CSA-SA	77
213106	ENCI-LowCarb	European Network engaging Civil society in Low Carbon scenarios	CSA-SA	78
Activity: 6.5 HORIZONTAL ACTIONS				
Sub-Activity: 6.5.1. DISSEMINATION AND HORIZONTAL ACTIVITIES				
212494	ENV-NCP-TOGETHER	Environment NCPs cooperating to improve their effectiveness	CSA-CA	79

Activity Code ENV.2007.1.1.1.1.

Funding Scheme: CP-IP

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

Proposed EC Grant: 9.275.955 €

Duration (Months): 48

Abstract:

THOR will establish an operational system that will monitor and forecast the development of the North Atlantic THC on decadal time scales and assess 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:

N.	Partner Legal Name	Country
1	University of Hamburg	DE
2	Max-Planck-Gesellschaft zur Förderung der Wissenschaften e.V.	DE
3	Met Office	UK
4	Université Pierre et Marie Curie	FR
5	Universitetet i Bergen	NO
6	The University of Reading	UK
7	European Centre for Medium-Range Weather Forecasts	UK
8	Leibniz Institute of Marine Sciences at the University of Kiel	DE
9	Royal Netherlands Meteorological Institute	NL
10	Danish Meteorological Institute	DK
11	Fiskirannsóknarstofan	FO
12	Finnish Institute of Marine Research - Merentutkimuslaitos	FI
13	Marine Research Institute	IS
14	Stichting Koninklijk Nederlands Instituut voor Onderzoek der Zee	NL
15	The Secretary of State for Environment, Food and Rural Affairs acting through the Centre for Environment, Fisheries and Aquaculture Science	UK
16	Scottish Association for Marine Science	UK
17	Natural Environment Research Council	UK
18	Stockholms universitet	SE
19	Nansen Environmental and Remote Sensing Center	NO
20	Centre National de la Recherche Scientifique	FR
21	Commissariat à l'Énergie Atomique	FR

Activity Code ENV.2007.1.1.2.1.**Funding Scheme:** CP-FP**Title:** **megaCITY - Zoom for the ENvironment****Proposed EC Grant:** 2.915.000 €**Duration (Months):** 36**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 hotspots, 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:

N.	Partner Legal Name	Country
1	Meteorologisk institutt	NO
2	Peking University	CN
3	Centre National de la Recherche Scientifique	FR
4	Institut National de l'Environnement Industriel et des Risques	FR
5	Universitaet Bremen	DE
6	Rhenish Institute for Environmental Research at the University of Cologne	DE
7	Forschungszentrum Jülich GmbH	DE
8	University of Crete	EL
9	Consiglio Nazionale delle Ricerche	IT
10	Norsk Institutt for Luftforskning	NO
11	Universitetet i Oslo	NO
12	Institute of Marine Sciences-Middle East Technical University	TR
13	University of Leicester	UK

Activity Code ENV.2007.1.1.2.1.

Funding Scheme: CP-FP

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

Proposed EC Grant: 3.399.000 €

Duration (Months): 36

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:

N.	Partner Legal Name	Country
1	Danish Meteorological Institute	DK
2	Foundation for Research and Technology - Hellas	EL
3	Max-Planck-Gesellschaft zur Förderung der Wissenschaften e.V.	DE
4	Arianet S.r.l.	IT
5	Aristotle University of Thessaloniki	EL
6	Centre National de la Recherche Scientifique	FR
7	Finnish Meteorological Institute	FI
8	European Commission DG Joint Research Center	IT
9	The Abdus Salam International Center for Theoretical Physics	IT
10	King's College London	UK
11	Stiftelsen Nansen Senter for Fjernmaaling – Nansen Environmental and Remote Sensing Center	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	University of Hamburg	DE
17	Helsingin yliopisto	FI
18	University of Hertfordshire	UK
19	Universität Stuttgart	DE
20	World Meteorological Organization	CH
21	Charles University in Prague, Faculty of Mathematics and Physics	CZ
22	Leibniz Institute for Tropospheric Research	DE
23	The Chancellor, Masters and Scholars of the University of Cambridge	UK

Activity Code ENV.2007.1.1.3.1.

Funding Scheme: CP-IP

Title: **European Project on Ocean Acidification**

Proposed EC Grant: 6.549.000 €

Duration (Months): 48

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:

N.	Partner Legal Name	Country
1	Centre National de la Recherche Scientifique	FR
2	Universitetet i Bergen	NO
3	Leibniz Institut für Meereswissenschaften	DE
4	Natural Environment Research Council	UK
5	Alfred-Wegener Institut für Polar- und Meeresforschung	DE
6	The Chancellor, Masters and Scholars of the University of Cambridge	UK
7	Commissariat à l'Energie Atomique	FR
8	Plymouth Marine Laboratory	UK
9	Scottish Association for Marine Science	UK
10	Max-Planck-Gesellschaft zur Förderung der Wissenschaften e.V.	DE
11	Marine Biological Association	UK
12	Göteborgs universitet	SE
13	Stichting Koninklijk Nederlands Instituut voor Onderzoek der Zee	NL
14	Utrecht University	NL
15	Koninklijke Nederlandse Akademie van Wetenschappen - Nederlands Instituut voor Ecologie	NL
16	Sir Alister Hardy Foundation for Ocean Science	UK
17	GKSS-Forschungszentrum Geesthacht GmbH	DE
18	Universität Bern	CH
19	Université Libre de Bruxelles	BE
20	Philippe Saugier international educational projects	FR
21	Vrije Universiteit Amsterdam	NL
22	Swiss Federal Institute of Technology Zürich	CH
23	The Marine Research Institute	IS
24	University of Southampton	UK
25	University of Plymouth	UK
26	Intergovernmental Oceanographic Commission of UNESCO	FR
27	University of Bristol	UK
28	International Atomic Energy Agency	AT

Activity Code ENV.2007.1.1.5.1.

Funding Scheme: CSA-SA

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

Proposed EC Grant: 956.967 €

Duration (Months): 36

Abstract:

The Project WaterClimate 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:

N.	Partner Legal Name	Country
1	VITUKI, Environmental Protection and Water Management Research Institute	HU
2	University of Debrecen, ATC, Faculty of Technology	HU
3	Consiglio Nazionale delle Ricerche	IT
4	University of Osnabrück	DE
5	National Institute of Marine Geology and Geo-Ecology	RO
6	Geonardo Environmental Technologies	HU
7	Universitaet Wien	AT
8	University of Leicester	UK
9	Slovenský hydrometeorologický ústav	SK
10	SOGREAH Consultants SAS	FR
11	Malta Resources Authority	MT

Activity Code ENV.2007.1.1.5.2.

Funding Scheme: CP-IP

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

Proposed EC Grant: 6.495.000 €

Duration (Months): 60

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:

N.	Partner Legal Name	Country
1	University of Geneva	CH
2	Agroscope Reckenholz-Tänikon	CH
3	Agenzia Regionale per la Protezione Ambientale del Piemonte	IT
4	Agenzia Regionale per la Protezione dell'Ambiente della Valle d'Aosta	IT
5	Universität für Bodenkultur Wien - University of Natural Resources and Applied Life Sciences, Vienna	AT
6	Centro de Estudios Avanzados en Zonas Áridas	CL
7	Centro de Estudios Científicos	CL
8	Meteo-France / Centre National de Recherches Météorologiques	FR
9	Instituto Torcuato di Tella	AR
10	CESI Ricerca SpA	IT
11	CETEMPS Center of Excellence of University of L'Aquila	IT
12	Centre National de la Recherche Scientifique	FR
13	Centre National de la Recherche Scientifique	FR
14	Consejo Superior de Investigaciones Científicas	ES
15	Compagnia Valdostana delle Acque - Compagnie Valdotaïne des Eaux S.p.A.	IT
16	ENEL Produzione S.p.a.	IT
17	Eidgenössische Technische Hochschule Zürich	CH
18	Fondation Montagne Sûre	IT
19	The Abdus Salam International Centre for Theoretical Physics	IT
20	Consiglio Nazionale delle Ricerche (CNR)	IT
21	Institut Universitaire Kurt Bösch	CH
22	National Academy of Sciences of the Kyrgyz Republic	KG
23	Laboratoire de Glaciologie et Geophysique de l'Environnement CNRS	FR
24	Commissariat à l'Energie Atomique	FR
25	Monterosastar S.r.l.	IT
26	Max-Planck-Gesellschaft zur Förderung der Wissenschaften e.V.	DE
27	Ente Parco Nazionale Gran Paradiso	IT
28	Politecnico di Milano	IT
29	Universität Bern	CH
30	The University of Birmingham	UK

31	University of Fribourg	CH
32	University of Geneva	CH
33	UNEP/DEWA/GRID Europe	CH
34	Graduate Institute of International Studies	CH
35	Université de Genève	CH
36	Universität Graz	AT
37	University of Dundee	UK

Activity Code ENV.2007.1.1.5.3.

Funding Scheme: CP-SICA

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

Proposed EC Grant: 3.359.000 €

Duration (Months): 48

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:

N.	Partner Legal Name	Country
1	Institut de Recherche pour le Développement	FR
2	University of East Anglia	UK
3	Leibniz-Centre for Agricultural Landscape Research e.V.	DE
4	Max-Planck-Gesellschaft zur Förderung der Wissenschaften e.V.	DE
5	Centro Euro-Mediterraneo per i Cambiamenti Climatici S.c.a.r.l.	IT
6	Alma Mater Studiorum - Università di Bologna	IT
7	Universidad de Castilla-La Mancha, Vicerrectorado de Investigación	ES
8	Swedish Meteorological and Hydrological Institute	SE
9	Instituto Nacional de Pesquisas Espaciais	BR
10	Instituto de Astronomia, Geofísica e Ciências Atmosféricas da USP	BR
11	Universidade Federal de Santa Catarina	BR
12	Universidade Federal do Paraná	BR
13	Consejo Nacional de Investigaciones Científicas y Técnicas	AR
14	Universidad de Buenos Aires	AR
15	Instituto Nacional de Tecnología Agropecuaria	AR
16	Instituto Nacional del Agua	AR
17	Universidad de la República	UY
18	Centre National de la Recherche Scientifique	FR
19	CESI Ricerca SpA	IT

Activity Code ENV.2007.1.1.6.1.

Funding Scheme: CP-FP

Title: Full Costs of Climate Change

Proposed EC Grant: 3.499.999 €

Duration (Months): 30

Abstract:

There is increasing interest in the economics of climate change to: (1) inform the policy debate on long-term targets and mitigation policies, (2) provide important information on the costs of inaction (the economic effects of climate change), and (3) assess the costs and benefits of adaptation. The objectives of this proposal are to advance knowledge across all three areas, i.e. for the full economic costs of climate change. This proposal will: 1. Identify and develop consistent scenarios for climate change and socio-economic development, including mitigation scenarios; 2. Quantify in physical terms, and value as economic costs, the effects of future climate change (the 'costs of inaction') under different future scenarios (as developed above) for the EU and other major negotiator countries. It will also address the 'costs of adaptation'. It will quantify and value the 'benefits' that adaptation can achieve in reducing the 'costs of inaction', assessed using the same detailed dis-aggregated analysis with benefits analysed in terms of physical effects and monetary terms. This will allow the estimation of the costs and benefits of adaptation, and the 'residual costs of climate change' after adaptation. 3. Expand the analysis of the costs of climate change to cover the most important catastrophic events (major events / climate discontinuities) and major socially contingent effects. This will use scenario analysis to model these events in terms of physical effects and economic damages for the first time. 4. Update the mitigation (abatement) costs of greenhouse gas (GHG) emission reductions, consistent with medium and long-term reduction targets / stabilisation goals for the mitigation scenarios (linked to the scenarios above). This will include (induced) technological change and include non CO2 greenhouse gases and sinks and recent abatement technologies. 5. Quantify the ancillary air quality benefits of mitigation policies, using a spatially detailed dis

Partners:

N.	Partner Legal Name	Country
1	AEA Technology plc	UK
2	Commission of the European Communities - Joint Research Centre	BE
3	Danish Meteorological Institute	DK
4	Potsdam Institute for Climate Impact Research	DE
5	University of Southampton	UK
6	Fondazione Eni Enrico Mattei	IT
7	International Institute for Applied System Analysis	AT
8	Metroeconomica Ltd	UK
9	Institute of Communication and Computer Systems	EL
10	Katholieke Universiteit Leuven	BE
11	SEI Oxford Office Ltd	UK
12	European Community represented by the European Commission - Directorate General Joint Research Centre	BE
13	Universidad Politécnica de Madrid	ES
14	Paul Watkiss Associates Limited	UK
15	Economic and Social Research Institute	IE
16	Centre National de la Recherche Scientifique	FR
17	London School of Hygiene and Tropical Medicine	UK
18	Zentrum für Europäische Wirtschaftsforschung GmbH (ZEW) Mannheim	DE
19	University of the Aegean	EL
20	University of East Anglia	UK
21	Univerzita Karlova v Praze	CZ
22	The Energy and Resources Institute	IN
23	Energy Research Institute	CN

Activity Code ENV.2007.1.1.6.3.

Funding Scheme: CP-FP

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

Proposed EC Grant: 3.499.518 €

Duration (Months): 36

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 UNFCCC. Close interactions with policymakers and stakeholders will ensure the policy relevance of CC-TAME results.

Partners:

N.	Partner Legal Name	Country
1	International Institute for Applied Systems Analysis	AT
2	Universität für Bodenkultur Wien - University of Natural Resources and Applied Life Sciences Vienna	AT
3	Universität Hamburg	DE
4	Institut National de la Recherche Agronomique	FR
5	Joanneum Research Forschungsgesellschaft mbH	AT
6	Center for Ecological Research and Forestry Applications	ES
7	Comenius University	SK
8	Výskumný ústav pôdoznalectva a ochrany pôdy	SK
9	Commission of the European Communities - Directorate General Joint Research Center	BE
10	EuroCARE GmbH	DE
11	Technical University of Denmark	DK
12	The University Court of The University of Aberdeen	UK
13	Finnish Forest Research Institute	FI
14	Max-Planck-Gesellschaft zur Förderung der Wissenschaften e.V.	DE

Activity Code ENV.2007.1.2.1.1.

Funding Scheme: CP-FP

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

Proposed EC Grant: 2.756.000 €

Duration (Months): 60

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:

N.	Partner Legal Name	Country
1	Kansanterveyslaitos (National Public Health Institute)	FI
2	Universiteit Utrecht	NL
3	Fundació Centre de Recerca en Epidemiologia Ambiental	ES
4	GSF - Forschungszentrum fuer Umwelt und Gesundheit, GmbH	DE
5	University of Kuopio	FI
6	Universität für Bodenkultur Wien - University of Natural Resources and Applied Life Sciences, Vienna	AT
7	Lunds Universitet	SE

Activity Code ENV.2007.1.2.1.2.

Funding Scheme: CP-FP

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

Proposed EC Grant: 3.499.602 €

Duration (Months): 42

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:

N.	Partner Legal Name	Country
1	The School of Pharmacy, University of London	UK
2	National Food Institute, Danish Technological University	DK
3	University of Sussex, Research and Regional Development Division	UK
4	Universidad de Granada	ES
5	Erasmus university Medical Center	NL
6	GREEN Tox GmbH	CH
7	Faust und Backhaus Environmental Consulting GbR	DE
8	University of Bristol	UK

Activity Code ENV.2007.1.2.1.2.

Funding Scheme: CP-FP

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

Proposed EC Grant: 3.499.034 €

Duration (Months): 48

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:

N.	Partner Legal Name	Country
1	University of Turku	FI
2	Rigshospitalet	DK
3	Medical Research Council	UK
4	Universidad de Córdoba	ES
5	Université de Rennes 1	FR
6	Bulgarian Academy of Sciences	BG
7	Danmarks Tekniske Universitet (Technical University of Denmark)	DK
8	Ecole Nationale Vétérinaire de Nantes	FR
9	University of Rochester	US

Activity Code ENV.2007.1.2.1.2.**Funding Scheme:** CP-FP**Title:** **Reproductive effects of environmental chemicals in females****Proposed EC Grant:** 2.924.083 €**Duration (Months):** 36**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:

N.	Partner Legal Name	Country
1	The University Court of The University of Aberdeen	UK
2	Macaulay land Use Research Institute	UK
3	Institut National de la Recherche Agronomique	FR
4	Martin Luther University Halle-Wittenberg	DE
5	University of Nottingham	UK
6	Università degli Studi di Milano	IT

Activity Code ENV.2007.1.2.2.2.

Funding Scheme: CP-IP

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

Proposed EC Grant: 5.859.350 €

Duration (Months): 48

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:

N.	Partner Legal Name	Country
1	Utrecht Universiteit	NL
2	National and Kapodestrian University of Athens	EL
3	University of Crete	EL
4	Azienda Unità Sanitaria Locale Roma E	IT
5	University of Basel	CH
6	Fundació Centre de Recerca en Epidemiologia Ambiental	ES
7	Imperial College of Science, Technology and Medicine	UK
8	The University of Manchester	UK
9	GSF - Forschungszentrum für Umwelt und Gesundheit, GmbH	DE
10	Institut für Umweltmedizinische Forschung	DE
11	University of Duisburg-Essen	DE
12	University of Ulm	DE
13	Danish Cancer Society	DK
14	Norwegian Institute of Public Health	NO
15	Karolinska Institutet	SE
16	Umea University	SE
17	Institut de Veille Sanitaire	FR
18	Institut National de la Santé et de la Recherche Médicale	FR
19	National Public Health Institute	FI
20	Vytautas Magnus University (VMU)	LT
21	National Institute of Environmental Health	HU
22	Institute of Occupational Medicine	UK
23	National Institute for Public Health and the Environment	NL
24	Medical Research Council	UK
25	National Taiwan University	TW

Activity Code ENV.2007.1.2.3.2.

Funding Scheme: CSA-CA

Title:

HEalth Risk from Environmental Pollution Levels in Urban Systems

Proposed EC Grant: 1.400.000 €

Duration (Months): 30

Abstract:

HEREPLUS will: 1) 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; 2) 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; 3) 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; 4) 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:

N.	Partner Legal Name	Country
1	Consorzio Sapienza Innovazione	IT
2	Università degli Studi di Roma La Sapienza	IT
3	Technische Universität Dresden	DE
4	European Commission, Directorate General Joint Research Centre, Institute for Health and Consumer Protection	BE
5	Academy of Athens	EL
6	Centro de Investigaciones Energéticas Medioambientales y Tecnológicas	ES
7	University of Belgrade School of Medicine	RS
8	University of Keele	UK

Activity Code ENV.2007.1.3.1.1.

Funding Scheme: CP-FP

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

Proposed EC Grant: 3.499.954 €

Duration (Months): 36

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:

N.	Partner Legal Name	Country
1	Consorzio Ferrara Ricerche	IT
2	Agenzia Regione Emilia Romagna Prevenzione e Ambiente	IT
3	Regione Emilia Romagna	IT
4	Universidade do Algarve	PT
5	Fundação da Faculdade de Ciências da Universidade de Lisboa	PT
6	Universidad de Cadiz	ES
7	BRGM	FR
8	International Marine and Dredging Consultance	BE
9	University of Plymouth	UK
10	Uniwersytet Szczecinski	PL
11	Institute of Oceanology - Bulgarian Academy of Sciences	BG
12	Stichting Waterloopkundig Laboratorium	NL
13	Delft University of Technology	NL
14	Natural environment Research Council	UK

Activity Code ENV.2007.1.3.2.1.

Funding Scheme: CP-FP

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

Proposed EC Grant: 2.083.427 €

Duration (Months): 36

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:

N.	Partner Legal Name	Country
1	Università degli Studi di Firenze	IT
2	BRGM	FR
3	Paris-Lodron-Universität Salzburg	AT
4	Europäische Akademie Bozen / Accademia Europea Bolzano	IT
5	ATLAS Innoglobe Tervező és Szolgáltató Kft.	HU
6	King's College Londion	UK
7	Stiftelsen Norges Geotechniske Institutt	NO
8	Rupprecht Consult Forschung und Beratung GmbH	DE
9	Centre Internacional de Mètodes Numèrics en Enginyeria	ES
10	United Nations University, Institute for Environment and Human Security	DE
11	Universität Dortmund	DE
12	Faculdade de Letras da Universidade do Porto	PT
13	Universität Wien	AT

Activity Code ENV.2007.1.3.2.1.

Funding Scheme: CP-FP

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

Proposed EC Grant: 1.388.634 €

Duration (Months): 30

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:

N.	Partner Legal Name	Country
1	BRGM	FR
2	Università degli Studi di Napoli Federico II	IT
3	International Institute for Geo-information Science and Earth Observation	NL
4	Université de Genève	CH
5	Harokopio University of Athens	EL
6	Tel Aviv University	IL
7	Middlesex University Higher Education Corporation	UK
8	T6 Ecosystems srl	IT
9	Politecnico di Milano	IT
10	Potsdam Institut für Klimafolgenforschung	DE

Activity Code ENV.2007.1.3.3.1.

Funding Scheme: CP-SICA

Title:

Mitigate and assess risk from volcanic impact on terrain and human activities

Proposed EC Grant: 3.498.938 €

Duration (Months): 48

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:

N.	Partner Legal Name	Country
1	BRGM	FR
2	Istituto Nazionale di Geofisica e Vulcanologia	IT
3	Instituto Superior Tecnico	PT
4	UMR 8591 Laboratoire de Géographie Physique	FR
5	Norwegian Institute for Air Research	NO
6	Kell s.r.l.	IT
7	Instituto de Engenharia de Sistemas e Computadores - Investigação e Desenvolvimento em Lisboa	PT
8	Universität Hohenheim	DE
9	The Chancellor, Masters and Scholars of the University of Cambridge	UK
10	Direction de la Défense et de la Sécurité Civile	FR
11	Dipartimento della Protezione Civile	IT
12	Instituto Nacional de Meteorologia e Geofísica	CV
13	Ministere de l'Industrie, Mines, Developpement Technologique	CM
14	Center for Volcanology and Geological Hazard Mitigation	ID
15	Philippine Institute of Volcanology and Seismology	PH

Activity Code ENV.2007.1.3.3.3.

Funding Scheme: CSA-SA

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

Proposed EC Grant: 1.500.889 €

Duration (Months): 18

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:

N.	Partner Legal Name	Country
1	Fondazione Eni Enrico Mattei	IT
2	Wageningen Universiteit	NL
3	Water Management Center 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	DG Joint Research Centre, European Commission	IT
10	Centre National du Machinisme Agricole du Génie Rural, des Eaux et des Forêts	FR
11	The International Union for Conservation of Nature and Natural Resources	CH

Activity Code ENV.2007.2.1.2.2.

Funding Scheme: CP-SICA

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: 2.386.849 €

Duration (Months): 36

Abstract:

The general objective of the project is to develop a methodological framework for the sustainable management and development of freshwater wetlands with the aim to contribute to the global fight against poverty, insecurity, climate change, pollution and ecological degradation. The methodology will focus on providing solutions for: • More sustainable local livelihood for people living on or influenced by wetlands, with emphasizes on drinking water, sanitation, security and sustainable land uses, while not deteriorating environmental functions. • Integrating wetlands into national, international water management policies/plans. Integrating wetlands into existing or envisaged river basin management plans (RBMPs). • Resolving potential conflicts that might emerge among the different objectives. The project will work on 'twinned' case study wetlands from Europe, Africa and South-America. Management solutions will be worked out for this wetlands with the aim of enhancing their drinking water supply, sanitation and livelihood functions, while sustaining (and improving if possible) their ecological values. Knowledge and experiences gained from these case studies will be summarized in general guidelines. Stakeholder participation, capacity building and dissemination will be essential elements of the project in order to ensure the optimal utilization of project results.

Partners:

N.	Partner Legal Name	Country
1	Environmental Protection and Water Management Research Institute	HU
2	Soresma NV	BE
3	Potsdam Institute for Climate Impact Research	DE
4	WasserKluster Lunz- biologische station GmbH	AT
5	UNESCO-IHE Institute for Water Education	NL
6	Stichting Wetlands International	NL
7	National Water and Sewerage Corporation, Uganda	UG
8	International Water Management Institute	LK
9	Escuela Superior Politécnica del Litoral	EC

Activity Code ENV.2007.2.1.2.3.

Funding Scheme: CP-FP

Title: **Mediterranean Intermittent River Management**

Proposed EC Grant: 3.499.783 €

Duration (Months): 36

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:

N.	Partner Legal Name	Country
1	Leibniz Universität Hannover	DE
2	Technical University of Crete	EL
3	Commission of the European Communities - Directorate General Joint Research Center	BE
4	Consiglio Nazionale delle Ricerche	IT
5	Consejo Superior de Investigaciones Científicas	ES
6	Universitat de Barcelona	ES
7	Universidad de Murcia	ES
8	Université de Montpellier 2	FR
9	University of Leeds	UK
10	Natural Environment Research Council	UK
11	Eidgenössische Anstalt für Wasserversorgung, Abwasserreinigung und Gewässerschutz	CH
12	IMAR - Instituto do Mar, Departamento de Zoologia, Faculdade de Ciências e Tecnologia, Universidade de Coimbra	PT
13	Hellenic Centre for Marine Research	EL
14	Faculty of Sciences and Technology	MA
15	Autorità di Bacino della Puglia	IT
16	Prefecture of Lakonia	EL

Activity Code ENV.2007.2.1.2.4.

Funding Scheme: CSA-SA

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

Proposed EC Grant: 850.000 €

Duration (Months): 42

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:

N.	Partner Legal Name	Country
1	Universität für Bodenkultur, Wien	AT
2	Lettinga Associates Foundation	NL
3	Politecnico di Bari	IT
4	Instituto Internacional de medio Ambiente y Desarrollo- America Latina	AR
5	Instituto Nacional del Agua	AR
6	Insatituto Mexicano de Tecnología del Agua	MX

Activity Code ENV.2007.2.1.4.1.

Funding Scheme: CP-FP

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 €

Duration (Months): 36

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:

N.	Partner Legal Name	Country
1	Lunds universitet	SE
2	Swedish Institute for Food and Agricultural Economics	SE
3	Netherlands Institute of Ecology of the Royal Dutch Academy of Arts and Sciences	NL
4	Justus-Liebig-University of Giessen	DE
5	Wageningen Universiteit	NL
6	Helsingin yliopisto	FI
7	Copenhagen University	DK
8	Lancaster Universty	UK
9	The University of Reading	UK
10	Aristotle University of Thessaloniki	EL
11	Biology Centre Academy of Sciences of the Czech Republic v.v.i.	CZ

Activity Code ENV.2007.2.1.4.2.

Funding Scheme: CP-FP

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

Proposed EC Grant: 3.145.880 €

Duration (Months): 60

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 understood. 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 disseminated 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:

N.	Partner Legal Name	Country
1	Aarhus Universitet	DK
2	Institut de Recherche pour le Développement	FR
3	Real Jardín Botánico de Madrid	ES
4	Freie Universität Berlin	DE
5	Royal Botanic Gardens, Kew	UK
6	Universidad Mayor de San Andrés	BO
7	Universidad Nacional Mayor de San Marcos	PE
8	Pontificia Universidad Católica del Ecuador	EC
9	Universidad Nacional de Colombia	CO
10	Dansk Institut for Internationale Studier og Menneskerettigheder	DK

Activity Code ENV.2007.2.1.4.3.

Funding Scheme: CP-SICA

Title:

Sustainable Livelihoods and Biodiversity in Riparian Areas in Developing Countries

Proposed EC Grant: 2.418.160 €

Duration (Months): 36

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:

N.	Partner Legal Name	Country
1	Linköpings universitet	SE
2	National Institute for Agricultural Planning and Projection	VN
3	Society for Promoting Participative Ecosystem Management	IN
4	South African Council for Science and Industrial Research	ZA
5	Universidad Nacional Costa Rica	CR
6	Institute for Environmental Studies, Vrije Universiteit Amsterdam	NL
7	University of Dundee	UK
8	Commission of the European Communities - Directorate General Joint Research Center	BE

Activity Code ENV.2007.2.1.4.3.

Funding Scheme: CP-SICA

Title: **Hunting for Sustainability**

Proposed EC Grant: 2.929.304 €

Duration (Months): 30

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:

N.	Partner Legal Name	Country
1	Macaulay Land Use Research Institute	UK
2	Frankfurt Zoological Society	DE
3	Tanzania Wildlife Research Institute	TZ
4	Oromia Agriculture and Rural Development Bureau	ET
5	Universitat Autònoma de Barcelona	ES
6	Consejo Superior de Investigaciones Científicas	ES
7	University of Ljubljana	SI
8	University of Zagreb	HR
9	Norsk Institutt for Naturforskning	NO
10	Umea University	SE
11	Imperial College of Science, Technology and London	UK
12	University of Stirling	UK

Activity Code ENV.2007.2.1.4.3.

Funding Scheme: CP-SICA

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

Proposed EC Grant: 1.455.676 €

Duration (Months): 42

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 (Guangzhou, China; Uttarakhand 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:

N.	Partner Legal Name	Country
1	University of Essex	UK
2	Centre for the Development of Human Initiatives	IN
3	Institute of Environmental Studies and Wetland Management	IN
4	Research Institute for Aquaculture No. 1	VN
5	GB Pant Institute of Himalayan Environment & Development	IN
6	IUCN - The World Conservation Union	CH
7	Roskilde University	DK
8	FishBase Information and Research Group, Inc.	PH
9	South China Agricultural University	CN
10	University of Stirling	UK

Activity Code ENV.2007.2.1.5.1.

Funding Scheme: CP-FP

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

Proposed EC Grant: 3.100.000 €

Duration (Months): 36

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:

N.	Partner Legal Name	Country
1	Foundation for Research and Technology - Hellas	EL
2	King's College London	UK
3	Consiglio Nazionale delle Ricerche	IT
4	Instytut Ekologii Terenów Uprzemysłowych	PL
5	Universidad Politécnica de Madrid	ES
6	Universidade do Aveiro	PT
7	UBAS	CH
8	The Provost, Fellows and Scholars of the College of the Holy and Undivided Trinity of Queen Elizabeth, near Dublin (hereinafter called TCD)	IE
9	Helsingin yliopisto	FI
10	National and Kapodistrian University of Athens	EL
11	Centro Euro-Mediterraneo per i Cambiamenti Climatici S.c.a.r.l.	IT
12	Météo France	FR
13	Alterra B.V.	NL
14	University of Southampton	UK

Activity Code ENV.2007.2.1.5.1.

Funding Scheme: CP-FP

Title: **Sustainable Urban Metabolism for Europe**

Proposed EC Grant: 2.867.960 €

Duration (Months): 36

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:

N.	Partner Legal Name	Country
1	Austrian Institute for Regional Studies and Spatial Planning	AT
2	Faculdade de Engenharia da Universidade do Porto	PT
3	Nordic Centre for Spatial Development	SE
4	Foundation for Research and Technology - Hellas	EL
5	University of Newcastle upon Tyne	UK
6	Delft University of Technology	NL
7	Klagenfurt University	AT
8	Institute of Automation, China Academy of Sciences	CN
9	Warsaw School of Economics	PL

Activity Code ENV.2007.2.2.1.2.

Funding Scheme: CP-FP

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

Proposed EC Grant: 2.634.712 €

Duration (Months): 48

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:

N.	Partner Legal Name	Country
1	Sec. State for Environment, Food & Rural Affairs Centre Env., Fish. and Aquaculture Science	UK
2	Tecnical University of Denmark	DK
3	Norwegian Institute for Nature Research	NO
4	Central Fisheries Board	IE
5	Marine Institute	IE
6	Institut Français de Recherche pour l'Exploration de la Mer	FR
7	Cemagref	FR
8	Fiskeriverket	SE
9	Muséum National d'Histoire Naturelle,	FR
10	Laboratoire de Mathématiques Appliquées (CNRS UMR 5142)	FR
11	Université de Perpignan	FR
12	Consejo Superior de Investigaciones Cientificas	ES

Activity Code ENV.2007.2.2.1.2.

Funding Scheme: CP-FP

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 €

Duration (Months): 36

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 salmon's 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:

N.	Partner Legal Name	Country
1	Institute of Marine Research	NO
2	Marine Institute	IE
3	The Scottish Ministers acting through Fisheries Research Services	UK
4	Norwegian Institute for Nature research	NO
5	University of Exeter	UK
6	University College Cork	IE
7	Queen's University Belfast	UK
8	University of Wales Swansea	UK
9	Technical University of Denmark	DK
10	Institute of Freshwater Fisheries	IS
11	University of Turku	FI
12	University of Oviedo	ES
13	Genindexe	FR
14	Finnish Game and Fisheries Research Institute	FI

Activity Code ENV.2007.2.2.1.3.

Funding Scheme: CP-IP

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: 6.500.000 €

Duration (Months): 48

Abstract:

In 2006, the UN General Assembly Resolution (AL61/L38) 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) incorporate 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 Area 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:

N.	Partner Legal Name	Country
1	National University of Ireland Galway	IE
2	Institute of Marine Research	NO
3	Marine Research Institute (Hafrannsóknastofnunin)	IS
4	Institut Français de Recherche pour l'Exploitation de la Mer	FR
5	Instituto do Mar - Centro dos Açores, Departamento de Oceanografia e Pescas	PT
6	Hellenic Centre for Marine Research	EL
7	Consorzio Nazionale Interuniversitario per le Scienze del Mare	IT
8	Koninklijke Nederlandse Akademie van Wetenschappen - Nederlands Instituut voor Ecologie	NL
9	Zoological Society of London, Institute of Zoology	UK
10	Universitetet i Tromsø	NO
11	The University Court of The University of Aberdeen	UK
12	Stichting Koninklijk Nederlands Instituut voor Onderzoek der Zee	NL
13	O'Malley Fisheries	IE
14	Friedrich-Alexander-Universität Erlangen-Nürnberg	DE
15	National University of Ireland, Cork - University College Cork	IE
16	Universitaet Bremen	DE

Activity Code ENV.2007.2.2.1.4.

Funding Scheme: CP-IP

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

Proposed EC Grant: 6.500.000 €

Duration (Months): 48

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:

N.	Partner Legal Name	Country
1	Plymouth Marine Laboratory	UK
2	Unifob AS	NO
3	Universitaet Hamburg	DE
4	Fundación AZTI - AZTI Fundazioa	ES
5	Alma Mater Studiorum - Universita' di Bologna	IT
6	Wageningen IMARES B.V.	NL
7	The Secretary of State for Food, Environment, and Rural Affairs acting through the Centre for Environment, Fisheries and Aquaculture Science	UK
8	Natural Environment Research Council	UK
9	Institut de Recherche pour le Développement	FR
10	Technical University of Denmark, Danish Institute for Fisheries Research	DK
11	Institute of Marine Research	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	Università del Piemonte Orientale, DiSAV	IT
17	Klaipeda university	LT
18	Bolding & Burchard Hydrodynamics	DK
19	Instituto Español de Oceanografía	ES
20	Commissariat à l'Energie Atomique	FR

Activity Code ENV.2007.2.2.1.6.

Funding Scheme: CSA-CA

Title:

Coordination Action for Research Activities on Life in Extreme Environments

Proposed EC Grant: 1.199.587 €

Duration (Months): 36

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:

N.	Partner Legal Name	Country
1	Natural Environment Research Council	UK
2	Centre National de la Recherche Scientifique	FR
3	Consiglio Nazionale delle Ricerche	IT
4	Deutsches Zentrum für Luft- und Raumfahrt e. V.	DE
5	Fondation Européenne de la Science	FR
6	Institut Français de Recherche pour l'Exploitation de la Mer	FR
7	Academy of Sciences of the Czech Republic	CZ
8	Centro de Astrobiología-Instituto Nacional de Técnica Aeroespacial	ES
9	Matis ohf.	IS

Activity Code ENV.2007.2.2.1.8.

Funding Scheme: CSA-SA

Title: **Caspian Environmental and Industrial Data & Information Service**

Proposed EC Grant: 800.697 €

Duration (Months): 30

Abstract:

CASPINFO is aiming at improving of cooperation between marine scientists, oil & gas industry and governments in the Caspian Sea region through: · Initiation and establishment of a co-operative Caspian Sea, trans-national partnership (Data & Information Network consisting of representatives of marine environmental data & information centres/services, governmental stakeholders, oil & gas industries and commercial oriented data brokerages), that will strengthen the quality, service and overall performance of marine environmental and industrial data & information management, both on regional, national and international level. · Development and establishment of an Internet based Caspian Data & Information Service to improve the implementation of integrated (environmental, industrial and administrative) management information, and to provide a tool for effective exchange of information, accessibility of data & and information, and communication · Development of marketing and business opportunities and strategies for commercial industrial and environmental data for sustainable exploitation of these partly commercial and partly non-commercial data: the extra challenge of the project is to deal with a mix of commercial and non commercial data. CASPINFO will result in: · Improved and sustainable data & information exchange between (public and private) environmental, industrial and governmental stakeholders within the Caspian Sea region · Direct involvement of the main data and information stakeholders

Partners:

N.	Partner Legal Name	Country
1	Mariene Informatie Service 'MARIS' BV	NL
2	Sumgayit Center for Environmental Rehabilitation	AZ
3	Institute of Geography	AZ
4	«Institute of Geography» Center of Sciences about the Earth, Metallurgy and Enrichment, Committee of a Science of the Ministry of Education and a Science of Re	KZ
5	Caspian Environment Programme, Programme Coordination Unit	IR
6	State oceanographic Institute	RU
7	Severtsov Institute of Ecology and Evolution	RU
8	P.P.Shirshov Institute of Oceanology, Russian Academy of Science	RU
9	State Institution "Caspian Marine Scientific Research Center"	RU
10	Institute of Environmental Geoscience RAS	RU
11	JSC Geo Hazar	RU
12	Black Sea Commission	TR
13	Hellenic National Oceanographic Data Centre, Hellenic Centre for Marine Research	EL
14	Consiglio Nazionale delle Ricerche	IT
15	State Oil Company of Azerbaijan Republic	AZ
16	Joint Stock Company National Company KazMunaiGas	KZ
17	Dagestan University	RU
18	Moscow State University, Faculty of Geography	RU
19	Intergovernmental Oceanographic Commission of UNESCO	FR

Activity Code ENV.2007.3.1.1.1.

Funding Scheme: CP-IP

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

Proposed EC Grant: 9.650.000 €

Duration (Months): 48

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-sectoral technologies and approach. Waster 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. Intensive co-operation between the industries, the knowledge and the technologies developed in this project will be broadly transferred and implemented. This AquaFit4Use proposal is based on the work of the Working group "Water in Industry" of the ÉU 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 if 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:

N.	Partner Legal Name	Country
1	Nederlandse Organisatie voor Toegepast - Natuurwetenschappelijk Onderzoek TNO	NL
2	Papiertechnische Stiftung	DE
3	Universidad Complutense de Madrid	ES
4	Flemish Institute for Technological Research	BE
5	Centro de Estudios e Investigaciones Tecnicas de Gipuzkoa	ES
6	VEOLIA Environnement	FR
7	Univerza v Maribor, Fakulteta za strojništvo	SI
8	Ente per le Nuove Tecnologie l'Energia e l'Ambiente	IT
9	Holmen Paper	SE
10	Nestle Waters Management and Technology	FR
11	Perstorp Specialty Chemicals AB	SE
12	DHI	DK
13	Conservas Hijos de Manuel Sánchez Besarte S.A.	ES
14	Asistencia Tecnológica Medioambiental S.A.	ES
15	sappi Maastricht B.V.	NL
16	Delta NV	NL
17	TNO	PT
18	Unilever Research and Development Vlaardingen B.V.	NL
19	Vermicon	DE
20	EnviroChemia Polska sp.zo.o.	PL
21	Wedeco GmbH	DE
22	MOSTforWATER	BE
23	BASF Antwerpen NV	BE
24	Tekstina d.d., Tekstilna industrija Ajdovščina	SI
25	Svilanit, d.d.	SI
26	Aquatest a.s.	CZ
27	Alpro UK Ltd	UK
28	Smurfit Kappa C.D. Haupt Papier- und Pappenfabrik GmbH & Co.KG	DE

Activity Code ENV.2007.3.1.1.2.

Funding Scheme: CP-FP

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

Proposed EC Grant: 2.929.813 €

Duration (Months): 36

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:

N.	Partner Legal Name	Country
1	Scuola Superiore Sant'Anna	IT
2	Synapsis - Societa' a Responsabilita' Limitata	IT
3	University of Science of Central Switzerland, Lucerne School of Engineering and Architecture	CH
4	Jožef Stefan Institute	SI
5	Lumex-marketing JSC	RU
6	Norsk Institutt for Luftforskning	NO
7	Univerza v Ljubljani	SI
8	The Hebrew University of Jerusalem	IL
9	Inštitut za fizikalno biologijo d.o.o.	SI
10	RoboTech srl	IT

Activity Code ENV.2007.3.1.2.1.

Funding Scheme: CP-FP

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

Proposed EC Grant: 3.420.623 €

Duration (Months): 42

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:

N.	Partner Legal Name	Country
1	Helmholtz - Zentrum für Umweltforschung GmbH - UFZ	DE
2	Geophysical Institute at the Bulgarian Academy of Sciences	BG
3	Allied Associates Geophysical Ltd.	UK
4	Allsat GmbH network+services	DE
5	Crop Research Institute	CZ
6	Czech University of Life Sciences of Prague	CZ
7	Eijkelpamp Agrisearch Equipment	NL
8	European Committee of Standardization	BE
9	Geo-Infometric GmbH	DE
10	European Commission - DG Joint Research Centre	IT
11	Forschungszentrum Jülich GmbH	DE
12	The Soil Company BV	NL
13	University of Bern	CH
14	University of Cranfield	UK
15	Christian-Albrechts-Universität zu Kiel	DE
16	University of Padova	IT
17	University of Tübingen	DE
18	University of Wageningen, Alterra	NL
19	Joanneum ResearchForschungsgesellschaft mbH	AT

Activity Code ENV.2007.3.1.2.1.

Funding Scheme: CP-FP

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

Proposed EC Grant: 3.401.260 €

Duration (Months): 36

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:

N.	Partner Legal Name	Country
1	BRGM	FR
2	Institut National de la Recherche Agronomique	FR
3	University Catholique de Louvain	BE
4	Forschungszentrum Jülich GmbH	DE
5	DG Joint Research Centre	IT
6	Geological Institute of Romania	RO
7	University of Pannonia	HU
8	ABEM Instrument AB	SE
9	Galileo Avionica SpA	IT
10	Università degli Studi di Firenze	IT

Activity Code ENV.2007.3.1.2.2.

Funding Scheme: CP-FP

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

Proposed EC Grant: 3.177.095 €

Duration (Months): 42

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:

N.	Partner Legal Name	Country
1	The Norwegian Institute for Agricultural and Environmental Research	NO
2	AMRA scarl	IT
3	Politecnico di Torino	IT
4	Wageningen University	NL
5	Friedrich-Schiller-Universität Jena	DE
6	Lancaster University	UK
7	The National Research-Development Institute for Environmental Protection - ICIM Bucharest	RO
8	Research Institute for Soil Science and Agricultural Chemistry of the Hungarian Academy of Sciences	HU
9	Umweltanalytische Mess-Systeme GmbH	DE
10	IRIS Instruments	FR

Activity Code ENV.2007.3.1.2.2.

Funding Scheme: CP-FP

Title:

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

Proposed EC Grant: 2.102.133 €

Duration (Months): 36

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 iSoil 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 iSoil 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 ($^{13}\text{C}/^{12}\text{C}$, $2\text{H}/^{1}\text{H}$, $^{15}\text{N}/^{14}\text{N}$ and $^{37}\text{Cl}/^{35}\text{Cl}$) for improved site-specific characterization and monitoring of microbial and abiotic degradation, b) applications of CSIA "isotopic fingerprinting" ($^{14}\text{C}/^{12}\text{C}$, $2\text{H}/^{1}\text{H}$, $^{37}\text{Cl}/^{35}\text{Cl}$, and $^{81}\text{Br}/^{79}\text{Br}$) 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:

N.	Partner Legal Name	Country
1	Stockholms universitet	SE
2	Tyréns AB	SE
3	ALS Laboratory Group	SE
4	Hellenic Centre for Marine Research	EL
5	Eidgenössische Technische Hochschule Zürich	CH
6	Masaryk University	CZ
7	Earth Tech CZ s.r.o.	CZ
8	Politechnika Lodzka (Technical University of Lodz)	PL
9	University of Bristol	UK
10	FQS Poland Sp. z o.o.	PL
11	MakoLab M. i K. Sopek Spolka Jawna	PL

Activity Code ENV.2007.3.1.2.2.

Funding Scheme: CP-FP

Title: **Model driven Soil Probing, Site Assessment and Evaluation**

Proposed EC Grant: 3.397.609 €

Duration (Months): 42

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:

N.	Partner Legal Name	Country
1	Helmholtz - Zentrum für Umweltforschung GmbH - UFZ	DE
2	Università degli Studi di Padova	IT
3	Battelle Memorial Institute	CH
4	Consiglio Nazionale delle Ricerche	IT
5	Danmarks Tekniske Universitet	DK
6	Earth Tech CZ s.r.o.	CZ
7	Forschungszentrum Jülich GmbH	DE
8	Lancaster University	UK
9	Aarhus Universitet	DK
10	Queens University Belfast, School of Planning	UK
11	Université catholique de Louvain	BE
12	La Sapienza Università di Roma CERI	IT
13	Saint-Petersburg State University	RU
14	CREATEC	IT
15	Christian-Albrechts-Universität zu Kiel	DE

Activity Code ENV.2007.3.1.3.2.

Funding Scheme: CP-FP

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

Proposed EC Grant: 2.868.969 €

Duration (Months): 36

Abstract:

SORT IT is a European research project proposing to the call "New Technologies for Waste Sorting" in the 7th Research Framework Programme of the European Union. The project will provide the technology for paper recovery from various collection systems. Future sorting shall provide secondary raw materials with high yield and quality from unsorted waste streams as well as from separately collected streams. SORT IT will provide a breakthrough in sensor based sorting. New sensor technologies will allow improved identification of unwanted materials as well as characterisation of the final output from recovered paper sorting. Combined image analysis, colour measurement and near-infrared sensor units will enable secure identification of materials and paper converting. Chemometrics will allow detailed characterisation of the sorted raw materials and provide the information on the optimal future utilisation. SORT IT includes the research and development on improved separation of unwanted materials. State-of-the-art sorting equipment as well as new and improved solutions will be assessed for establishing the highest possible sorting efficiency. This will lead to significant increase in yield and a further improved purity of recovered paper. SORT IT contributes to lowering the environmental impacts in paper related processes. Improved quantities and controlled quality of recovered paper will reduce resource use in transportation, stock preparation, papermaking and further processing. The impacts of sorting will be evaluated in a complete Life Cycle study package, including costing and social studies.

Partners:

N.	Partner Legal Name	Country
1	Papiertechnische Stiftung	DE
2	Centre Technique de l'Industrie des Papiers, Cartons et Celluloses	FR
3	STFI-Packforsk AB	SE
4	Universitatea Tehnica "Gheorghe Asachi" din Iasi	RO
5	Instituto Tecnológico del Embalaje Transporte y Logística	ES
6	Bumaga BV	NL
7	Bollegraaf Recycling Machinery	NL
8	EVK DI Kerschhaggl GmbH	AT
9	Rauch Recycling Dienstleistungs GmbH	AT
10	Vrancart S.A. Adjud	RO
11	GREGOIRE SA	FR
12	Norske Skog	NO
13	RTT Systemtechnik GmbH	DE
14	Papeles y Cartones de Europa S.A.	ES

Activity Code ENV.2007.3.1.3.2.

Funding Scheme: CP-FP

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

Proposed EC Grant: 2.831.000 €

Duration (Months): 48

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:

N.	Partner Legal Name	Country
1	Delft University of Technology	NL
2	Università di Roma	IT
3	Technical University of Denmark	DK
4	Universitatea Transilvania din Brasov	RO
5	Barcelona Supercomputing Center	ES
6	Budapest University of Technology and Economics - Advanced Vehicles and Vehicle Control Knowledge Center	HU
7	AKG Polymers bv	NL
8	Bakker Magnetics B.V.	NL
9	Recycling Avenue vof	NL
10	Alcufer Ipari Kereskedelmi és Szolgáltató Kft.	HU
11	S.C. Urban S.A. Ramnicu Valcea	RO
12	Oldelft BV	NL
13	DV srl	IT

Activity Code ENV.2007.3.1.3.3.

Funding Scheme: CSA-CA

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

Proposed EC Grant: 989.524 €

Duration (Months): 30

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:

N.	Partner Legal Name	Country
1	Verein zur Förderung des Technologietransfers an der Hochschule Bremerhaven e. V.	DE
2	Eidgenössische Anstalt für Wasserversorgung, Abwasserreinigung und Gewässerschutz	CH
3	Wageningen University	NL
4	Stichting Waste	NL
5	Bioazul S.L.	ES
6	Winrock International India	IN
7	The Energy and Resources Institute	IN
8	Anna University	IN
9	National Engineering Services Pakistan (Pvt.) Ltd.	PK
10	Khulna University of Engineering and Technology (KUET)	BD
11	Dhaka City Corporation	BD
12	Tsinghua University	CN
13	China Association of Environmental Protection Industries	CN
14	King Mongkut's University of Technology Thonburi	TH
15	Asian Institute of Technology	TH
16	Center for Environmental Technology and Management	VN
17	Phnom Penh Municipality	KH
18	Royal University of Phnom Penh	KH
19	Demographic Institute at the Faculty of Economics 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	International Solid Waste Association	DK
23	Construction and Development Corporation	PH
24	ZKK Foundation, Inc.	PH

Activity Code ENV.2007.3.1.5.1.

Funding Scheme: CSA-CA

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

Proposed EC Grant: 841.650 €

Duration (Months): 36

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:

N.	Partner Legal Name	Country
1	Stiftelsen for industriell og teknisk forskning ved Norges tekniske høgskole	NO
2	Association pour la Recherche et le Développement des Méthodes et Processus Industriels	FR
3	Fundación CIRCE - Centro de Investigación de Recursos y Consumos Energéticos	ES
4	Interdisziplinäres Forschungszentrum für Technik, Arbeit und Kultur	AT
5	Sofia Energy Centre	BG
6	EMI Non-profit Company for Quality Control and Innovation in Building	HU
7	Ecofys Netherlands B.V	NL

Activity Code ENV.2007.3.1.5.2.

Funding Scheme: CSA-CA

Title:

Performance Indicators for Health, Comfort and Safety of the Indoor Environment

Proposed EC Grant: 1.600.000 €

Duration (Months): 30

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:

N.	Partner Legal Name	Country
1	Belgian Building Reseach Institute	BE
2	Valtion Teknillinen Tutkimuskeskus	FI
3	Apintech Ltd	EL
4	Czech Technical University in Prague	CZ
5	Association pour la Recherche et le Développement des Méthodes et Processus Industriels	FR
6	Bauphysikbüro Prof. Kornadt und Partner	DE
7	Interdisciplinary Center for Technological Analysis and Forecasting	IL
8	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	UK

Activity Code ENV.2007.3.2.1.1.

Funding Scheme: CP-FP

Title: **Strategy for the preservation of plastic artefacts in museum collections**

Proposed EC Grant: 2.100.000 €

Duration (Months): 42

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. There 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:

N.	Partner Legal Name	Country
1	Centre National de la Recherche scientifique ile-de-France Est CNRS	FR
2	Centre National de la Recherche Scientifique	FR
3	Victoria and Albert Museum	UK
4	National Museum of Denmark	DK
5	Consiglio Nazionale delle Ricerche	IT
6	Instituut Collectie Nederland	NL
7	Polymer Institute	SK
8	IoSys - Dr. Timur Seidel e.K.	DE
9	ARC-Nucleart	FR
10	SolMateS BV, The Netherlands	NL
11	Morana RTD d.o.o.	SI
12	University of Ljubljana	SI

Activity Code ENV.2007.3.2.1.1.

Funding Scheme: CP-FP

Title: **Technologies and Tools to prioritize assessment and diagnosis of air pollution impact on immovable and movable Cultural Heritage**

Proposed EC Grant: 1.650.000 €

Duration (Months): 36

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:

N.	Partner Legal Name	Country
1	Consiglio Nazionale delle Ricerche	IT
2	Istituto Cooperativo per l'Innovazione	IT
3	Tecno Penta	IT
4	Fundación Labein	ES
5	Acciona Infraestructuras, S.A.	ES
6	University of Antwerp	BE
7	Norwegian Institute for Air Research	NO
8	Belhadj Enterprise	DZ
9	University of Ljubljana	SI
10	Metropolitankapitel der Hohen Domkirche Köln - Dombauverwaltung	DE
11	National Museum in Krakow	PL

Activity Code ENV.2007.3.2.1.1.

Funding Scheme: CP-FP

Title: **Smart Monitoring of Historic Structures**

Proposed EC Grant: 1.405.000 €

Duration (Months): 36

Abstract:

Historic structures are often of extraordinary architecture, design or material. The conservation of such structures for next generations of European population is one of the main tasks, monument conservators are responsible for. To conserve historic structures it is more and more required to understand the deterioration processes mainly caused by the environment. To obtain more detailed information about the deterioration processes in certain cases continuous monitoring systems have been installed. However, most of these monitoring systems were just weather or air pollution data acquisition systems and just basic models for data analysis are used. 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 and smart monitoring systems using wireless sensor networks, new miniature sensor technologies (e.g. MEMS) for minimally invasive installation as well as smart data processing. With using these new technologies advanced material and lifetime prognosis models have to be developed or known models have to be extended. Comparative tests will be conducted to validate the models as well as the monitoring data, which is acquired during 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 restorer, owner of cultural heritage and public authorities.

Partners:

N.	Partner Legal Name	Country
1	Universitaet Stuttgart	DE
2	Arbeitsgemeinschaft der Restauratoren Bärbel Dieruff und Karl Fiedler	DE
3	Universitaet Stuttgart	DE
4	Europäische Akademie Bozen / Accademia Europea Bolzano	IT
5	Alma Mater Studiorum – Università di Bologna	IT
6	National Museums Berlin	DE
7	Instytut Katalizy i Fizykochemii Powierzchni Polskiej Akademii Nauk	PL
8	Käferhaus GmbH	AT
9	TTI GmbH - TGU Smartmote	DE
10	METALMOBILE S.R.L.	IT
11	Artemis srl, c/o Dipartimento Architettura, DACS Università Politecnica delle Marche, Costruzioni e Strutture	IT
12	Consorzio Cetma	IT
13	Riwaq - Centre for architectural conservation	IL
14	University of Zagreb, Faculty of Civil Engineering	HR
15	Department of Antiquities	JO

Activity Code ENV.2007.3.2.2.2.

Funding Scheme: CSA-SA

Title: **Cultural Heritage Research meets practice**

Proposed EC Grant: 165.000 €

Duration (Months): 16

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 demonstration of new technologies tools and devices developed by the SMEs and industry in close cooperation with scientists and for benefit of end-users, conservators and restorers, managers and owners of the cultural patrimony. The objectives will be reached by oral presentations, posters, demonstration activities and training workshops focusing on presentation of research results relating to 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 integration of EC funded research with other similar funding schemes, in particular COST and Eureka, as well as pooling of expertise of key players in the field, such as FACH, ICOM-CC, ICOMOS, EUROPA NOSTRA, and others. Dissemination activities will heavily rely on 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:

N.	Partner Legal Name	Country
1	Narodna in univerzitetna knjižnica	SI
2	Slovenski Gradbeni Grozd - GIZ	SI
3	University of Ljubljana	SI

Activity Code ENV.2007.3.3.1.1.**Funding Scheme:** CP-FP**Title:** **Microarrays for the Detection of Toxic Algae****Proposed EC Grant:** 2.234.851 €**Duration (Months):** 45**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:

N.	Partner Legal Name	Country
1	AWI	DE
2	Stazione Zoologica Anton Dohrn	IT
3	University of Kalmar	SE
4	Instituto Español de Oceanografía	ES
5	National University of Ireland, Galway	IE
6	University of Oslo	NO
7	University of Westminster	UK
8	Toxispot A/S	DK
9	Instituto Tecnológico para o Control do Medio Mariño de Galicia	ES
10	University of Rhode Island	US

Activity Code ENV.2007.3.3.1.1.

Funding Scheme: CP-FP

Title: **CAse studies on the Development and Application of in-Silico Techniques for Environmental hazard and Risk assessment**

Proposed EC Grant: 2.767.034 €

Duration (Months): 48

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:

N.	Partner Legal Name	Country
1	National Institute of Public Health and the Environment	NL
2	Public Health Institute Maribor	SI
3	Universita' degli Studi dell'Insubria	IT
4	IVL Swedish Environmental Research Institute Ab	SE
5	Högskolan i Kalmar (University of Kalmar)	SE
6	GSF - Forschungszentrum für Umwelt und Gesundheit, GmbH	DE
7	Ideaconsult Ltd.	BG
8	Radboud University Nijmegen	NL
9	Mike Comber Consultancy	BE

Activity Code ENV.2007.4.1.1.1.

Funding Scheme: CSA-CA

Title: **Coordination Action Carbon Observation System**

Proposed EC Grant: 1.747.683 €

Duration (Months): 36

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:

N.	Partner Legal Name	Country
1	Vrije Univ., "Vereniging v. christelijk hoger onderwijs, weten. onderzoek patiëntenzorg	NL
2	Max-Planck-Gesellschaft zur Förderung der Wissenschaften e.V.	DE
3	Universitetet i Bergen	NO
4	Università degli Studi della Tuscia	IT
5	Leibniz-Institut für Meereswissenschaften an der Universität Kiel	DE
6	University of Liège	BE
7	Commissariat à l'Energie Atomique	FR
8	Alfred-Wegener Institut für Polar- und Meeresforschung	DE
9	University of East Anglia	UK
10	Food and Agriculture Organization of the United Nations	IT
11	United Nations Educational, Scientific and Cultural Organization	FR
12	Commissariat à l'Energie Atomique	FR

Activity Code ENV.2007.4.1.1.2.

Funding Scheme: CP-FP

Title: **European Biodiversity Observation Network; a project to design and test a biodiversity observation system integrated in time and space**

Proposed EC Grant: 2.701.987 €

Duration (Months): 48

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. A further work package will provide a

Partners:

N.	Partner Legal Name	Country
1	Alterra Wageningen UR	NL
2	Natural Environment Research Council	UK
3	Helmholtz-Centre for Environmental Research - UFZ	DE
4	European Community represented by the European Commission - Directorate General Joint Research Centre	BE
5	Umweltbundesamt GmbH	AT
6	University of Bucharest	RO
7	Centre d'Etude du Machinisme Agricole et du Génie Rural des Eaux et Forêts	FR
8	Research Institute for Nature and Forest	BE
9	The University of Edinburgh	UK
10	Israel Nature and Parks Authority	IL
11	Stiftelsen Norsk institutt for naturforskning	NO
12	Institute of Landscape Ecology of the Slovak Academy of Sciences	SK
13	Aristotle University of Thessaloniki	EL
14	Eesti Maaülikool	EE
15	Universidad Politécnica de Madrid	ES
16	University of Stellenbosch	ZA
17	Sveriges Lantbruksuniversitet	SE

Activity Code ENV.2007.4.1.3.2.

Funding Scheme: CP-FP

Title: **Integration and enhancement of key existing European deep-ocean observatories**

Proposed EC Grant: 3.499.568 €

Duration (Months): 36

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:

N.	Partner Legal Name	Country
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	IT
5	Consiglio Nazionale delle Ricerche	IT
6	Leibniz-Institut für Meereswissenschaften an der Universität Kiel	DE
7	The University Court of The University of Aberdeen	UK
8	Centre National de la Recherche Scientifique	FR
9	Institut Français de Recherche pour l'Exploitation de la Mer	FR
10	SOPAB/Océanopolis	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.2007.4.1.3.2.

Funding Scheme: CP-FP

Title: **Acoustic Technology for observing the interior of the Arctic Ocean**

Proposed EC Grant: 3.000.000 €

Duration (Months): 48

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 alternative methods the ARGO system, which cannot be used in ice-covered seas, based on platforms located under the sea ice, for data collection and transmission from the water column, the seafloor and the subseafloor. ACOBAR 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 in the Fram Strait and the Arctic Ocean basin. Acoustic tomography 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 are presently tested in DAMOCLES IP. The acoustic technologies in ACOBAR aim to be used for transmission of multidisciplinary data from underwater observatories under development in ESONET NoE. Transfer of technology and know-how from USA to Europe 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:

N.	Partner Legal Name	Country
1	Nansen Environmental and Remote Sensing Center	NO
2	Alfred-Wegener Institut für Polar- und Meeresforschung	DE
3	Université Pierre et Marie Curie - Paris 6	FR
4	University of California at San Diego	US
5	Woodshole Oceanographic Institution	US
6	OPTIMARE Sensorsysteme AG	DE
7	ENSIETA	FR
8	Aquatec Telemetry Limited	UK
9	ACSA	FR

Activity Code ENV.2007.4.1.3.3.

Funding Scheme: CP-FP

Title: **Regional pilot platform as EU contribution to a Global Soil Observing System**

Proposed EC Grant: 2.600.000 €

Duration (Months): 42

Abstract:

Soil and land information are often inaccessible, incomplete, or out of date. e-SOTER addresses the felt need for a global soil and terrain database. 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 include: quantitative mapping of landforms; soil characterization and pattern recognition by remote sensing; standardization of measures to convert legacy data. Major research thrusts involve: 1) improvement of the current SOTER methodology at scale 1:1 million in four windows in Europe, China and Morocco, using optical remote sensing and legacy data; 2) within 1:250 000-scale pilot areas, advanced remote sensing applications. Airborne radiometrics and electromagnetics, and image spectrometry together with field spectrometry will also be applied in a single, data-rich super site to link with field measurements. 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 pilot; 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:

N.	Partner Legal Name	Country
1	International Soil Reference and Information Centre	NL
2	Miskolci Egyetem	HU
3	Bundesanstalt für Geowissenschaften und Rohstoffe	DE
4	European Commission - DG Joint Research Centre, Institute for Environment and Sustainability - Land Management and Natural Hazards Unit	IT
5	Cranfield University	UK
6	Alterra B.V.	NL
7	Szent Istvan University	HU
8	scilands GmbH - Gesellschaft zur Bearbeitung digitaler Landschaften	DE
9	Institut National de la Recherche Agronomique	FR
10	University of Nottingham	UK
11	Ceska zemedelska universita v Praze	CZ
12	Institute of Soil Science, Chinese Academy of Sciences	CN
13	Ecole Nationale d'Agriculture de Meknès	MA
14	Wageningen Universiteit	NL

Activity Code ENV.2007.4.1.4.1.

Funding Scheme: CSA-SA

Title: **African-European Georesources Observation System**

Proposed EC Grant: 1.930.996 €

Duration (Months): 30

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:

N.	Partner Legal Name	Country
1	BRGM	FR
2	Groupement Nature	BE
3	Czech Geological Survey	CZ
4	Geological Survey of Finland	FI
5	Centre International pour la Formation et les Echanges en Géosciences	FR
6	Institut de Recherche pour le Développement	FR
7	Federal Institute for Geosciences and Natural Resources	DE
8	Beak Consultants GmbH	DE
9	Natural Environment Research Council	UK
10	Polish Geological Institute	PL
11	Netherlands Organisation of Applied Scientific Research	NL
12	Instituto Nacional de Engenharia, Tecnologia e Inovação, I.P.	PT
13	European Community represented by the European Commission - Directorate General Joint Research Centre	BE
14	The Southern and Eastern African Mineral centre	TZ
15	Union Economique et Monetaire Ouest Africaine	BF
16	Geological Survey of Namibia	NA
17	Council for Geoscience	ZA
18	Geological Survey and Mines	UG
19	Direction des Mines et de la Geologie	SN
20	Geology Department, School of Mines, University of Zambia	ZM
21	Geological Survey of Ethiopia	ET
22	Institute of Resource Assessment	TZ

Activity Code ENV.2007.4.1.4.2.

Funding Scheme: CP-SICA

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 €

Duration (Months): 48

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:

N.	Partner Legal Name	Country
1	Laboratoire des Sciences de l'Image, de l'Informatique et de la Télédétection, ULP	FR
2	International Institute for Geo_Information Science and Earth Observation	NL
3	Ariespace s.r.l.	IT
4	Universität Bayreuth	DE
5	Alterra B.V.	NL
6	Universitat de Valencia, Estudi General	ES
7	Institute of Tibetan Plateau Research, the Chinese Academy of Sciences	CN
8	China Meteorological Administration	CN
9	Beijing Normal University	CN
10	National Institute of Hydrology	IN
11	University of Tsukuba	JP
12	WaterWatch b.v.	NL
13	Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences	CN
14	Università degli Studi di Ferrara	IT
15	Institute of Geographic Sciences and Natural Resources Research	CN
16	Institute of Remote Sensing Applications, Chinese Academy of Sciences	CN

Activity Code ENV.2007.4.1.4.3.

Funding Scheme: CSA-SA

Title: **GEONETCast for and by Developing countries**

Proposed EC Grant: 1.852.546 €

Duration (Months): 36

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:

N.	Partner Legal Name	Country
1	Vlaams Instituut voor Technologisch Onderzoek NV	BE
2	African Centre of Meteorological Applications for Development	NE
3	Centre Régional Agrhymet	NE
4	Companhia Nacional de Abastecimento	BR
5	Centro de Relevamiento y Evaluación de Recursos Agrícolas y Naturales	AR
6	CSIR	ZA
7	Danish Meteorological Institute	DK
8	Brazilian Agriculture Research Corporation	BR
9	European Organisation for the Exploitation of Meteorological Satellites	DE
10	Instituto Nacional de Pesquisas Espaciais	BR
11	Instituto Nacional de Tecnología Agropecuaria	AR
12	International Institute for Geo-Information Science and Earth Observation	NL
13	European Community represented by the European Commission - Directorate General Joint Research Centre	BE
14	University of Cape Town	ZA
15	Medias	FR
16	Natural Environment Research Council	UK
17	Plymouth Marine Laboratory	UK
18	Southern Africa Development Community (SADC)	BW
19	Universidade Estadual de Campinas	BR

Activity Code ENV.2007.4.2.1.1.

Funding Scheme: CP-FP

Title: **Transactional Environmental Support System**

Proposed EC Grant: 1.801.112 €

Duration (Months): 30

Abstract:

TESS will assist policy makers to integrate knowledge from the 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. By achieving its goal, TESS will enable the efficient and effective design and implementation of Cohesion and Structural Funds policies, leading to sustainable rural development.

Partners:

N.	Partner Legal Name	Country
1	Aristotle University of Thessaloniki	EL
2	Bournemouth University Higher Education Corporation	UK
3	NERC Centre for Ecology and Hydrology	UK
4	Anatrack Ltd.	UK
5	ERENA, Ordenamento e Gestão de Recursos Naturais Ltd.	PT
6	Tero Ltd	EL
7	European Sustainable Use Specialist Group of IUCN/SSC	BE
8	Federation of Associations for Hunting and Conservation of the EU	BE
9	Pro-Biodiversity Service	PL
10	Centre for Cartography of Fauna and Flora	SI
11	Szent István University	HU
12	Institute of Sustainable Technology at Tallinn University of Technology	EE
13	Institutul National de Cercetare-Dezvoltare Delta Dunarii	RO
14	Dogal Hayati Koruma Vakfi	TR

Activity Code ENV.2007.4.2.1.1.

Funding Scheme: CP-FP

Title:

Prototypical Policy Impacts on Multifunctional Activities in rural municipalities

Proposed EC Grant: 1.999.335 €

Duration (Months): 36

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:

N.	Partner Legal Name	Country
1	Centre National du Machinisme Agricole du Génie Rural, des Eaux et des Forêts	FR
2	University of Dortmund, Department of Spatial Planning	DE
3	University for National and World Economy	BG
4	Universitetet for miljø- og biovitenskap	NO
5	Landbouw-Economisch Instituut (LEI) B.V.	NL
6	University of Newcastle upon Tyne	UK
7	Leibniz Institute of Agricultural Development in Central and Eastern Europe	DE
8	University of Groningen	NL
9	Netherlands Environmental Assessment Agency	NL
10	Vyzkumný ústav zemědělské ekonomiky	CZ
11	Agromoski fakultet Sveučilišta u Zagrebu, Faculty of Agriculture University of Zagreb	HR

Activity Code ENV.2007.4.2.1.3.

Funding Scheme: CP-SICA

Title: **Spatial-economic-ecological model for the assessment of sustainability policies of Russia**

Proposed EC Grant: 1.237.189 €

Duration (Months): 36

Abstract:

The objective of the study is to develop and implement for Russia an integrated spatio-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:

N.	Partner Legal Name	Country
1	Centre for Economic and Financial Research	RU
2	Transport and Mobility Leuven	BE
3	Zentrum für Europäische Wirtschaftsforschung (ZEW) GmbH	DE
4	The Institute for the Economy in Transition	RU
5	Ural State University	RU
6	Voronezh State University	RU
7	Far Eastern Center for Economic Development	RU
8	Statistics Norway	NO

Activity Code ENV.2007.4.2.2.1.

Funding Scheme: CP-FP

Title: **Integrating MainSTREAM Economic Indicators with those of Sustainable Development**

Proposed EC Grant: 1.208.536 €

Duration (Months): 36

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:

N.	Partner Legal Name	Country
1	Ecologic - Institute for International and European Environmental Policy gGmbH	DE
2	The University of Bath	UK
3	Fondazione Eni Enrico Mattei	IT
4	Univerzita Karlova v Praze	CZ
5	Institute for European Environmental Policy	UK
6	Universitaet Stuttgart	DE
7	International Institute for Applied Systems Analysis	AT
8	Zentrum für Europäische Wirtschaftsforschung GmbH (ZEW) Mannheim	DE

Activity Code ENV.2007.4.2.3.1.

Funding Scheme: CP-FP

Title: **Policies to promote sustainable consumption patterns (POPP)**

Proposed EC Grant: 1.437.425 €

Duration (Months): 36

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:

N.	Partner Legal Name	Country
1	Öko-Institut e.V. - Institute for Applied Ecology	DE
2	Kuluttajatutkimuskeskus	FI
3	University College London	UK
4	Association Baltijas Vides Forums (engl. Baltic Environmental Forum)	LV
5	Associació Ecoinstitut d'Ecologia Aplicada	ES

Activity Code ENV.2007.4.2.3.2.

Funding Scheme: CSA-CA

Title: **Integrating civil, scientific and stakeholder knowledge towards African sustainable energy policy**

Proposed EC Grant: 548.832 €

Duration (Months): 24

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:

N.	Partner Legal Name	Country
1	Organisation for International Dialogue and Conflict Management	AT
2	Groupe de recherche et d'échanges technologiques (GRET)	FR
3	Österreichisches Institut für Internationale Politik	AT
4	Technische Universität Dresden	DE
5	Afrepren/FWD Energy, Environment and Development Network for Africa	KE
6	Cairo University	EG
7	Université de Yaoundé II/Faculté de Sciences Juridiques et Politiques	CM

Activity Code ENV.2007.4.2.3.2.

Funding Scheme: BSG-CSO

Title:

The development of indicators & assessment tools for CSO values-based projects in education for sustainable development

Proposed EC Grant: 814.569 €

Duration (Months): 24

Abstract:

This proposed FP7 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 three 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. To assist this, a considerable range of value-based projects will be considered, involving SMEs, communities and school-aged children. These 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. Some schools of thought suggest changing 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 and their projects generally focus on social issues more than environmental ones. In this proposal the RTDs will be asked to outline possibilities to increase the projects' environmental impact within their current context. Overall this will lead 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 for both aims.

Partners:

N.	Partner Legal Name	Country
1	University of Brighton	UK
2	Earth Charter Initiative	SE
3	European Baha'i Business Forum	FR
4	Alliance of Religions and Conservation	UK
5	Baha'i Agency for Social and Economic Development - UK	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-CSO

Title: **Civil Society for Sustainability**

Proposed EC Grant: 852.000 €

Duration (Months): 36

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 (thus balancing individual and collective goals), 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 thus both more efficiency as well as efficacy); and a lack of institutionalisation within existing institutional frameworks of governance provide not sufficient leverage to influence policy making (politics, administrative/legislative processes).

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:

N.	Partner Legal Name	Country
1	Gemeinnützige Gesellschaft für Kommunikations- und Kooperationsforschung	DE
2	Ulmer Initiativkreis nachhaltige Wirtschaftsentwicklung e.V.	DE
3	Mutadis Consultants	FR
4	Regional Environmental Center for Central and Eastern Europe	SI
5	Institute of Sociology at Hungarian Academy of Sciences	HU
6	Energia Klub Környezetvédelmi Egyesület	HU

Activity Code ENV.2007.4.2.3.2.

Funding Scheme: CSA-SA

Title: **Partnering to Enhance Civil Society Organisations' Contribution to Research in Sustainable Consumption & Production**

Proposed EC Grant: 583.454 €

Duration (Months): 22

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:

N.	Partner Legal Name	Country
1	UNEP/Wuppertal Institute Collaborating Centre on Sustainable Consumption and Production (CSCP) gGmbH	DE
2	Northern Alliance for Sustainability	NL
3	Stiftelsen the Stockholm Environment Institute	SE
4	Sustainable Europe Research Institute	AT
5	WWF-UK	UK

Activity Code ENV.2007.4.2.3.2.**Funding Scheme:** CSA-SA**Title:** **European Network engaging Civil society in Low Carbon scenarios****Proposed EC Grant:** 717.980 €**Duration (Months):** 30**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:

N.	Partner Legal Name	Country
1	Réseau Action Climat - France	FR
2	International Network for Sustainable Energy - Europe	DK
3	Germanwatch Nord-Süd-Initiative e.V.	DE
4	Centre National de Recherche Scientifique	FR
5	Potsdam Institut für Klimafolgenforschung	DE

Activity Code ENV.2007.5.1.1.1.

Funding Scheme: CSA-CA

Title: **Environment NCPs cooperating to improve their effectiveness**

Proposed EC Grant: 2.799.568 €

Duration (Months): 60

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:

N.	Partner Legal Name	Country
1	Autoritatea Nationala pentru Cercetare Stiintifica	RO
2	Österreichische Forschungsförderungsgesellschaft mbH	AT
3	Agence Bruxelloise pour l'Entreprise	BE
4	Technical University of Sofia	BG
5	Euresearch	CH
6	Research Promotion Foundation	CY
7	Technology Centre AS CR	CZ
8	Forschungszentrum Jülich GmbH	DE
9	Archimedes Foundation	EE
10	Agence de l'Environnement et de la Maîtrise de l'Energie	FR
11	National Office for Research and Technology	HU
12	MATIMOP-ISERD	IL
13	Agenzia per la Promozione della Ricerca Europea	IT
14	Agency for International Science and Technology Development Programmes	LT
15	Malta Council for Science and Technology	MT
16	SenterNovem	NL
17	Instytut Podstawowych Problemow Techniki PAN	PL
18	Gabinete de Relações Internacionais da Ciência e do Ensino Superior	PT
19	National Forest Centre	SK
20	Turkiye Bilimsel ve Teknolojik Arastirma Kurumu	TR
21	National Centre for Scientific Research Demokritos	EL
22	Luxinnovation	LU
23	Beta Technology Limited	UK
24	The Swedish research Council for Environment, Agricultural Sciences and Spatial Planning	SE
25	Danish Agency for Science, Technology and Innovation	DK
26	Centro Para el Desarrollo Tecnológico Industrial	ES



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