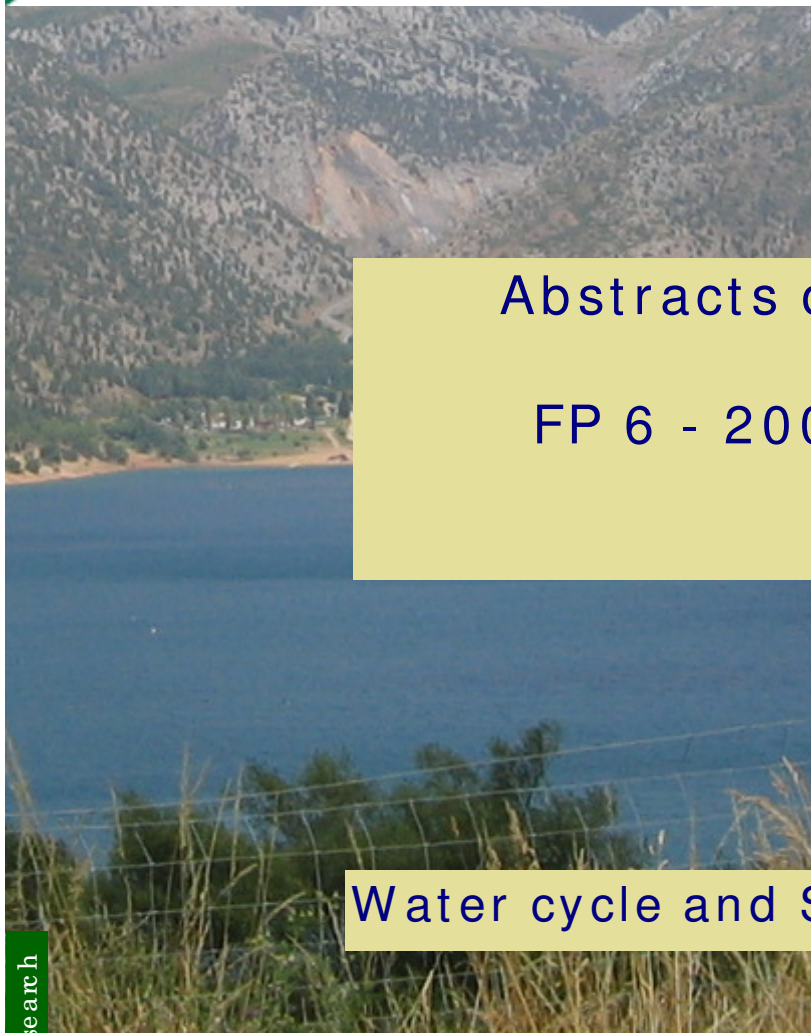




EUROPEAN
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Community research



Abstracts of Water and soil
related contracts
FP 6 - 2002 - Global 1 and
Policies - 1

Water cycle and Soil-related aspects

European Water Research

GLOBAL CHANGE AND ECOSYSTEMS





Activity code: SUSTDEV-2002-3.II.3.1.a Instrument: CA Contract strat date: 1/01/2004 Duration: 48 months

Title: TWINBASINXN : Promoting Twinning of River Basins for Developing Integrated Water Resources Management Practices

Project total cost: 1.710.000 €

Proposed funding: 900.000 €

Co-ordinator Mr Alain Bernard

Organisation Office International de l'Eau
FR-75008 Paris

Abstract:

A Basin Organisation is generally regarded as one of the best solutions to adopt for developing an Integrated Water Resources Management (IWRM) at a catchment level. There have then been many types of BO, some of them existing for several decades, and a lot in a development process ; they present a great diversity of legal statutes and economic schemes. None of these examples can be regarded as a model ; but, by facilitating direct exchanges on best practices, and as well on failed experiments, twinning can help Basin Organisations to improve their effectiveness : BO can profit from peers, regarding administrative, technical and institutional matters, or a quicker diffusion of the research outputs in the real life. The main goal of TWINBASINXN is to support effective use of research and development in the field of IWRM by promoting twinning of BO. This will be achieved by creating a world-wide forum dedicated to identifying and sharing knowledge and best practices. A Memorandum of Understanding (MoU) takes the form of a co-operation framework signed by a wide range of organisations, both public and private, which have an interest in the deployment of IWRM practices ; it is a voluntary agreement, entered into by organisations, prepared to be active participants in developing consensus on issues of common interest, and who are willing to commit both human and financial resources for this purpose, by participating in the operation of Specific Interest Groups (SIGs). This MoU implies public commitments from signatories, from which : to co-operate in the production of recommendations and guidelines for developing twinning and related services by co-operating in the specification of twinning activities - exchange of information, exchange of personnel - and of common knowledge representation systems and dissemination practices. The project will support staff mobility between twinned BO, for enhancing peer-to-peer exchanges and hands-on periods (0,5 to 2 months).

Partners

Nb	Organisation	Town	Country
1	Office International de l'Eau	Paris	FR
2	Agence de l'Eau Seine Normandie	Nanterre	FR
3	Réseau International des Organismes de Bassin - International Network of Basin Organisations	Paris	FR
4	EA groupement des professionnels du secteur de l'eau en Provence	AIX EN PROVENCE	FR
5	Red Mediterranea de Organismos de Cuenca	Valencia	ES
6	Secretaria de Recursos Hidricos - Ministerio do Meio Ambiente	Brasilia - Distrito Federal	BR
7	Global Water Partnership	Stockholm	SE
8	TECHWARE - TECHnology for WAtER RESources	Brussels	BE
9	University of Pretoria - African Water Issues Research Unit	Cape Town	ZA
10	Országos Vízügyi Főigazgatóság	Budapest	HU
11	Scientific-Information Center of Interstate Water Coordination Commission of Central Asia	Tashkent	UZ
12	Jasa Tirta I Public Corporation	Malang	ID
13	NIGER BASIN AUTHORITY	Niamey	NE
14	AGENCE DE BASSIN HYDROGRAPHIQUE ALGEROIS - HODNA - SOUMMAM	KOUBA ALGER	DZ
15	Agence de Bassin Hydraulique du Sebou	Fez	MA
16	Organisation pour le Mise en Valeur du Senegal	Dakar	SN
17	Comision Nacional del Agua	Mexico DF	MX
18	Administratia Nationala APELE ROMANE	Bucharest	RO

Activity code: Support to policies-1.5 Instrument: STR Contract strat date: 1/12/2003 Duration: 36 months

Title: Relationships between ecological and chemical status of surface waters

Project total cost: 7.445.996 €

Proposed funding: 3.997.952 €

Co-ordinator: Dr Seppo Rekolainen

Organisation: Suomen ympäristökeskus (Finnish Environment Institute)
FI-00251 Helsinki

Abstract:

The strategic objective of the REBECCA proposal is to provide relevant scientific support for the implementation of the Water Framework Directive (WFD). The two specific aims of the project are, firstly, to establish links between ecological status of surface waters and physico-chemical quality elements and pressures from different sources, and, secondly, to develop and validate tools that member states can use in the process of classification, in the design of their monitoring programs, and in the design of measures in accordance with the requirements of the WFD. These objectives will be achieved by collating existing knowledge and analyzing knowledge gaps, and using this information as a basis for analyzing the dose-response relationships between pressures and chemical/biological quality elements based on existing data. Furthermore, REBECCA will explore, develop and improve models and statistical tools, which can be used in assessing the links between the ecological and chemical quality elements; or to assess critical/target loads and other objectives for pressures. These tools will be validated in selected test sites. The results of the project will be disseminated throughout the project life-time to stakeholders at EU and national levels, particularly to the Working Groups of the Common Implementation Strategy (CIS) for the WFD, and used to develop a Toolbox containing detailed information of the methods, tools and models.

Partners

Nb	Organisation	Town	Country
1	Suomen ympäristökeskus (Finnish Environment Institute)	Helsinki	FI
2	European Commission DG Joint Research Centre	Ispra (VA)	IT
3	Norsk Institutt for Vannforskning (Norwegian Institute for Water Research)	Oslo	NO
4	Danmarks Miljøundersøgelser (National Environmental Research Institute)	Roskilde	DK
5	DHI - Institut for Vand og Miljø (DHI Water & Environment)	Hoersholm	DK
6	Stichting Waterloopkundig Laboratorium	Delft	NL
7	Natural Environment Research Council	Swindon	UK
8	CEMAGREF, Centre National du Machinisme Agricole, du Génie Rural, des Eaux et des Forêts	Antony	FR
9	National Research Council - Water Research Institute	Rome	IT
10	IVL Svenska Miljöinstitutet AB (IVL Swedish Environmental Research Institute Ltd.)	Stockholm	SE
11	The Provost, Fellows and Scholars of the College of the Holy and Undivided Trinity of Queen Elizabeth, near Dublin hereinafter called TCD	DUBLIN	IE
12	Slovenský hydrometeorologický ústav	Bratislava	SK
13	Instituto Nacional de Investigação Agrária e das Pescas	Lisboa	PT
14	Universiteit Antwerpen	Wilrijk	BE
15	Institutul National de Cercetare Dezvoltare Delta Dunarii (Danube Delta National Institute for Research & Development)	Tulcea	RO
16	Stiftelsen norsk institutt for naturforskning	Trondheim	NO
17	Rijksinstituut voor Integraal Zoetwaterbeheer en Afvalwaterbehandeling (Institute for Inland Water Management and Waste Water Treatment)	Lelystad	NL
18	Tallinna Tehnika Uelikool (Tallinn Technical University)	Tallinn	EE
19	SVERIGES LANTBRUKSUNIVERSITET	Uppsala	SE



Activity code: Support to policies-1.5 Instrument: STR Contract strat date: 1/10/2003 Duration: 36 months

Title: Horizontal Standards on Organic Micropollutants for Implementation of EU Directives on Sludge, Soil and Treated Bio-waste

Project total cost: 2.674.949 €

Proposed funding: 1.627.652 €

Co-ordinator Dr. Hans A. Van der Sloot

Organisation ENERGIEONDERZOEK CENTRUM NEDERLAND
NL-1755 ZG PETTEN

Abstract:

The working documents on revision of the Sewage Sludge Directive (86/278/EEC) and on Biowaste and the Soil Protection Communication call for standards for sampling and analysis of sludges, treated biowastes and soils. They list hygienic and biological parameters, and inorganic and organic contaminants. The European Directives are intended to prevent unacceptable release of contaminants, impairment of soil function, or exposure to pathogens, and to protect crops, human and animal health, the quality of water and the wider environment when sludges and treated biowastes are used on land. Analytical results are to some extent defined by the methods of determination, it is therefore desirable that methods are defined before setting limit values. The European Commission wishes to cite European (CEN) standards in order that there is harmonised application of the directives and that reports from Member States (MS) can be compared. This proposal to develop standards for organic compounds in sludge, soil and biowaste, presented by the consortium under the name "HORIZONTAL-ORG", will be carried out under the umbrella of the main project HORIZONTAL "Development of horizontal standards for soil, sludge and biowaste". This ensures full integration in the CEN system through a BT Task Force specially set up in for this project and direct supervision by DG ENV and MS, which form the Steering Committee of HORIZONTAL. HORIZONTAL-ORG's objective is to produce standardised methods for sampling and analysing organic micropollutants in sludges, treated biowastes and soils written in CEN format. Where possible these will be horizontal across the different media. Validation of the methods is an essential part of the development as it quantifies performance in terms of repeatability and reproducibility. The consortium is very well connected in CEN and ISO and thus provides an excellent basis for implementation of the deliverables.

Partners

Nb	Organisation	Town	Country
1	ENERGIEONDERZOEK CENTRUM NEDERLAND	PETTEN	NL
2	European Commission DG Joint Research Centre	Ispra (VA)	IT
4	The University of Reading	Reading	UK
5	Consejo Superior de Investigaciones Cientificas	MADRID	ES
6	INSTYTUT UPRAWY, NAWOZENIA I GLEBOZNAWSTWA	Pulawy	PL
7	Umweltbundesamt	Berlin	DE
8	Eurofins Danmark A/S	Galten	DK
9	Eurofins Danmark A/S	Galten	DK
10	Bundesanstalt für Materialforschung und -Prufung	BERLIN	DE
11	Alterra bv	WAGENINGEN	NL
12	GIE ANJOU RECHERCHE	PARIS	FR
13	Umweltbundesamt GmbH	WIEN	AT
14	DIN Deutsches Institut fuer Normung e.V.	Berlin	DE
15	Tim Evans Environment	Ashtead	UK
16	"Fodor Jozsef" Orszagos Kozegeszsegugyi Kozpont Orszagos Kozegeszsegugyi Intezet	Budapest	HU
17	Vyskumny Ustav Podoznalectva a Ochrany Pody	Bratislava	SK



Activity code: Support to policies-1.5 Instrument: STR Contract strat date: 1/01/2004 Duration: 36 months

Title: Screening method for Water data Information in support of the implementation of the Water Framework Directive

Project total cost: 6.735.725 €

Proposed funding: 4.034.000 €

Co-ordinator Mme Catherine GONZALEZ

Organisation Association pour la Recherche et le Développement des Méthodes et Processus Industriels
FR-75272 Paris

Abstract:

The monitoring requirements for successfully implementing the WFD will directly depend upon available measurement techniques of demonstrated quality, which will be able to deliver reliable data at an affordable cost. Besides the necessary "classical" laboratory analyses, screening methodologies will play a key role in the WFD implementation, in particular for the detection of accidental pollution or the control of water bodies at risk. The WFD will represent a powerful management tool only if monitoring data are of reliable and comparable quality. The costs of wrong decisions based on erroneous data could be tremendous, which justifies that Community efforts are made to ensure that data are produced according to a proper quality assurance regime. In the light of the above, the objectives of SWIFT-WFD should focus on the production of quality control tools for validation purposes of screening methods, an inventory of existing screening test (chemical and biological) methods through laboratory-based (tank experiments) and/or field interlaboratory studies based on a selection of reference aquatic ecosystems at European scale, and with classical laboratory-based analyses to validate their results and demonstrate their equivalence for parameters regulated by the WFD. In parallel, the project should consider the development of new "low-cost", innovative, screening techniques (both for chemical and biological parameters) and their validation using the same approach (interlaboratory testing and comparison with laboratory-based methods). In addition, exchange of knowledge, transfer of technologies and training related to water monitoring will represent a key issue for ensuring the comparability of data produced by screening methods

Partners

Nb	Organisation	Town	Country
1	Association pour la Recherche et le Développement des Méthodes et Processus Industriels	Paris	FR
2	University of Portsmouth Higher Education Corporation	Portsmouth	UK
3	Ente Per le Nuove Tachnologie l'Energia e l'Ambiente'	Rome	IT
4	Bureau de Recherche Géologique et Minière	Paris	FR
5	Ecologic Institut fur Internationale und Europäische Umweltpolitik gGmbH	Berlin	DE
6	Consejo Superior de Investigaciones Cientificas	Madrid	ES
7	Alcontrol UK Ltd	ROTHERHAM	UK
8	Universidad Complutense de Madrid	Madrid	ES
9	Mermayde	BERGEN	NL
10	Chalmers tekniska hogskola AB	Goteborg	SE
11	Veszpremi Egyetem	VESZPREM	HU
12	LGC limited	Teddington Middlesex	UK
13	ACTeon	ORBEY	FR
14	Vrije Universiteit Brussel	BRUSSELS	BE
15	Universidade de Aveiro	AVEIRO	PT
16	Universitat de Barcelona	BARCELONA	ES
17	Netherlands Institute for Fisheries Research	IJMUIDEN	NL
18	University of Sofia " St. Kliment Ohridski"	Sofia	BG
19	Technische Universitat Wien	Vienna	AT
20	Sciences, Territoires et Sociétés	MONTPELLIER	FR



21	Joint Research Centre	Brussels	BE
22	Szent Istvan Egyetem	Gödöllő	HU
23	Centre National de Recherche Scientifique Delegation Regionale 15	Talence	FR
24	Universidad de Oviedo	OVIEDO	ES
25	Lithos Geosciences	RANCO VA	IT
26	University of Bordeaux 1	TALENCE	FR
27	Rijksinstituut voor Integraal Zoetwaterbeheer en Afvalwaterbehandeling	Lelystad	NL
28	State Geological Institute of Dionyz Stur	Bratislava	SK
29	Technische Universität Graz	GRAZ	AT
30	Ceska zemedelska univerzita v Praze	PRAGUE 6-SUCHDOL	CZ
31	Politechnika Warszawska	WARSAW	PL
32	Associazione per lo Sviluppo della Qualita' Ambientale'	ROME	IT
33	XPRO Consulting Ltd	NICOSIA	CY
34	Technische Universitat Munchen	Munchen	DE
35	SECOMAM	Domont	FR
36	Institutul National de Cercetare - Dezvoltare Pentru Protectia Mediului	Bucharest	RO
37	Povodi Labe, Statni podnik	Hradec Kralove 3	CZ
38	Latvijas Universitate	Riga	LV
39	Latvijas Vides A"entpra"	Jurmala	LV
40	Aquametrus	Liverdun	FR



Activity code: SUSTDEV-2002-3.II.3.1.a Instrument: STR Contract strat date: 1/12/2003 Duration: 36 months

Title: Twinning European and third countries river basins for development of integrated water resources management methods

Project total cost: 2.175.068 €

Proposed funding: 1.389.893 €

Co-ordinator Dr. Sam Ekstrand

Organisation IVL Swedish Environmental Research Institute Ltd
SE-100 31 Stockholm

Abstract:

Strategic objectives: 1. To fill gaps in knowledge and methods in order to enable implementation of a harmonised IWRM approach that addresses the European Water Initiative, in five river basins. 2. To enable and perform assessment of vulnerability to climate change and anthropogenic development, and produce integrated river basin management plans, that includes optimal combinations of actions. To reach the strategic objectives of TWINBAS, a number of research tasks on hydrology, modelling of pollution flow, impact assessment, socio-economics, scenario analyses and action efficiency have to be carried through. For all these activity areas, the goal is to bring knowledge to a level where IWRM can be implemented for the five twinned river basins; Okavango (Botswana), Nura (Kazakhstan), Bio Bio (Chile) Thames (UK) and Norrstrom (Sweden). TWINBAS will have an important strategic impact by creating the practical means for implementing the EU Water Initiative 'Water for Life'. The nature and width of the gaps in knowledge vary between the different case study rivers, and therefore the research required differs between the river basins. The research and the IWRM components of TWINBAS are organised according to the EU Water Framework Directive (WFD) so that the WFD guideline documents can be utilised. The proposal also addresses the EU Water Initiative, which promotes development that is demand led from the less developed countries. The strong component of public participation and stakeholder involvement will ensure that each component has local ownership and addresses priorities identified within the region. The river basins selected represent a wide variety of water use problems, and a variety of political and societal systems. Thus, the applicability of the WFD approach will vary for the third country basins, and methodology applied will be a modification of the WFD process. TWINBAS aims at enabling development of water management action plans.

Partners

Nb	Organisation	Town	Country
1	IVL Swedish Environmental Research Institute Ltd	Stockholm	SE
2	DHI Water and Environment	Hoersholm	DK
3	University of Southampton	Southampton	UK
4	Comisión Nacional del Medio Ambiente	Santiago de Chile	CL
5	Almaty Institute of Power Engineering and Telecommunication	Almaty	KZ
6	Natural Environment Research Council - Centre for Ecology and Hydrology - Wallingford	Swindon	UK
7	Rhodes University (Institute of Water Research)	Grahamstown	ZA

Activity code: SUSTDEV-2002-3.II.3.3.a Instrument: STR Contract strat date: 1/06/2004 Duration: 36 months

Title: Sustainable Management of Water Resources by Automated Real-Time Monitoring

Project total cost: 3.475.818 €

Proposed funding: 2.400.000 €

Co-ordinator Dr Richard D Ogilvy

Organisation Natural Environment Research Council (NERC)

UK-SN2 1EU Swindon

Abstract:

ALERT aims to develop a radically different strategy for monitoring and managing the impact of climatic change and land-use practice on scarce water resources. Innovative ALERT technology will be designed that will allow the near real-time measurement of geoelectric, hydrology and hydrochemical properties, virtually "on demand", thereby giving early warning of potential threats to ecosystems, and vulnerable water systems. The project will focus primarily on coastal zones where aquifers are under threat from over-exploitation, rising sea levels, anthropogenic pollutants and seawater intrusion. New and proven sensors and data capture devices will be permanently deployed in-situ, within a unified platform (ALERT hydro-station) at a test site in Almeria, Spain. The site will be interrogated from the office by novel modem/telemetric and satellite links to provide volumetric images of the subsurface at regular intervals; thereby obviating the need for expensive repeat surveys and manual intervention. New 3D/4D time-lapse image reconstruction algorithms will be developed for distributed buried and borehole arrays. The volumetric electrical images (in space and time) will be transformed into hydrology properties and processes through the further development of mathematical relationships, derived from controlled laboratory studies. These datasets will be used to constrain a predictive hydrogeological modelling capability. Innovative statistical techniques will be developed to assist up-scaling from the site model to catchment scale. A web-based GIS will be designed with new data fusion, risk analysis and decision support tools to facilitate the sustainable management of water resources in coastal zones. Scenario modelling based on stochastic and Bayesian networks will address the wider societal implications of the proposed work, including the economic, cultural and political issues, in the context of EU directives.

Partners

Nb	Organisation	Town	Country
1	Natural Environment Research Council (NERC)	Swindon	UK
2	Forschungszentrum Juelich GmbH	Juelich	DE
3	Kobenhavns Universitet	Copenhagen K.	DK
4	Universidad de Almeria	Almeria	ES
5	Université Catholique de Louvain	Louvain-la-Neuve	BE
6	ARISTOTLE UNIVERSITY OF THESSALONIKI	THESSALONIKI	GR
7	Industrial Research Institute for Automation and Measurements	Warsaw	PL
8	ESCO Sp. z o.o	Warsaw	PL
9	Geotomographie	Neuwied	DE
10	University Cadi Ayyad of Marrakech	Marrakech	MA
11	Institut National Agronomique de Tunisie	Tunis	TN

Activity code: SUSTDEV-2002-3.II.3.1.a Instrument: STR Contract strat date: 1/03/2004 Duration: 36 months

Title: A Regional Model for Integrated Water Management in Twinned River Basins

Project total cost: 2.964.140 €

Proposed funding: 2.460.160 €

Co-ordinator Prof. Karl Stahr

Organisation University of Hohenheim

DE-D-70599 Stuttgart

Abstract:

The project RIVERTWIN aims in adjusting, testing and implementing an integrated regional model for the strategic planning of water resources management in twinned river basins under contrasting ecological, social and economic conditions. The regional model will take into account the impacts of demographic trends, economic and technological development, the effects of global climate and land use changes on the availability and quality of water bodies in humid temperate, subhumid tropical as well as semiarid regions. The existing integration framework will be first tested in a European river basin with high data availability and data density. The Transferability of the model to other regions with different economic level, ecological standards and with low data availability will be jointly tested by the project team and river basin organisations in two river basins in Westafrica and Uzbekistan. Here, the problem of adequate human resources and the uncertainties of input data for the implementation of computer based decision support tools will be addressed. Capacity building through training of end users supports the transfer of the research results into application. In cooperation with stakeholders and potential users integrated scenarios of economic growth, land use and climate change will be developed and the model will be used to assess the implications for water management under the respective scenario assumptions. The twinning of river basins will promote mutual transfer of know-how and technology between European and Third countries. Based on the results, river basin management plans can be prepared. Through its holistic basin wide approach, the project contributes to the EU water directive, the Millennium Goals defined by the WSSD and the EU water initiative for Africa and Newly Independent States.

Partners

Nb	Organisation	Town	Country
1	University of Hohenheim	Stuttgart	DE
2	Universitaet Stuttgart	Stuttgart	DE
3	Stichting Onderzoek Wereldvoedselvoorziening van de Vrije Universiteit	Amsterdam	NL
4	Aristotle University of Thessaloniki	Thessaloniki	GR
5	Stockholm Environment Institute	Stockholm	SE
6	Institut National des Recherches Agricoles du Benin	Cotonou	BJ
7	DIRECTION DE L'HYDRAULIQUE	COTONOU	BJ
8	UNIVERSITÉ D' ABOMEY CALAVI	COTONOU	BJ
9	Scientific Information Center of Interstate Water Coordination Commission of Central Asia	Tashkent	UZ
10	sje - Schneider & Jorde Ecological Engineering GmbH	Stuttgart	DE
11	Terra Fusca, Marohn & Lange GbR	Stuttgart	DE



Activity code: SUSTDEV-2002-3.II.2.2.a Instrument: IP Contract strat date: 1/02/1900 Duration: 60 months

Title: Understanding river-sediment-soil-groundwater interactions for support of management of waterbodies (river basin & catchment areas)

Project total cost: 20.222.363 €

Proposed funding: 12.999.992 €

Co-ordinator MA Elisabeth Frank

Organisation Attempto Service GmbH
DE-72072 Tübingen

Abstract:

Changes in climatic conditions, land use practices and soil and sediment pollution have large scale adverse impacts on water quantity and quality. The current knowledge base in river basin management is not adequate to deal with these impacts. AquaTerra is both integrating and developing knowledge to resolve this and disseminating it to stakeholders. In the water cycle, soil is a key element affecting groundwater recharge and the chemical composition of both subsurface and surface waters (the latter is additionally affected by sediments). The proper functioning of the river-sediment-soilgroundwater system is linked to key biogeochemical processes determining the filter, buffer and transformation capacity of soils and sediments. AquaTerra aims at a better understanding of the system as a whole by identifying relevant processes, quantifying the associated parameters and developing numerical models of the groundwater-soil-sediment-river system to identify adverse trends in soil functioning, water quantity and quality. The modelling addresses all relevant scales starting from micro-scale water/solid interactions, the transport of dissolved species, pollutants as well as suspended matter in soil and groundwater systems at the catchment scale, and finally the regional scale, with case studies located in major river basins in Europe. With this integrated modelling system, AquaTerra provides the basis for improved river basin management, enhanced soil and groundwater monitoring programs and the early identification and forecasting of impacts on water quantity and quality during this century. AquaTerra is committed to the dissemination and exploitation of project results through structured workshops, dedicated short courses, and the active participation of consortium partners in national and international conferences. The quality and direction of the project is supervised by a peer review panel.

Partners

Nb	Organisation	Town	Country
1	Attempto Service GmbH	Tübingen	DE
2	Eberhard Karls Universitaet Tuebingen	Tuebingen	DE
3	BUREAU DE RECHERCHES GEOLOGIQUES ET MINIERES	PARIS	FR
4	Netherlands Organisation for Applied Scientific Research	Delft	NL
5	University of Newcastle upon Tyne	Newcastle upon Tyne	UK
6	Lancaster University	Lancaster	UK
7	Czech Technical University in Prague	Prague	CZ
8	Danmarks Tekniske Universitet (Technical University of Denmark)	Kgs. Lyngby	DK
9	CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS	MADRID	ES
10	Wageningen University	Wageningen	NL
11	Umweltforschungszentrum Halle Leipzig GmbH	Leipzig	DE
12	Technische Universität Hamburg-Harburg represented by TUHH-Technologie GmbH	Hamburg	DE
13	Eidgenössische Technische Hochschule Zürich	Zürich	CH
14	Institute for Ecology of Industrial Areas	Katowice	PL
15	Université de Neuchâtel	Neuchâtel	CH
16	AGENCIA CATALANA DE L'AIGUA'	BARCELONA	ES
17	Akademia Górniczo-Hutnicza	Cracow	PL
18	Europa Fachhochschule Fresenius	Idstein	DE
19	Vlaamse instelling voor technologisch onderzoek	Mol	BE

20	BOKU - University of Natural Resources and Applied Life Sciences, Vienna	Vienna	AT
21	Utrecht University	Utrecht	NL
22	University of Liège	Liège	BE
23	UNIVERSITE LIBRE DE BRUXELLES	Brussels	BE
24	Université Henri Poincaré NANCY 1	NANCY	FR
25	Faculté Universitaire Agronomiques de Gembloux	Gembloux	BE
26	Université d'Avignon et des Pays de Vaucluse'	Avignon	FR
27	Vrije universiteit Amsterdam	Amsterdam	NL
28	Università degli Studi di Trento - Dipartimento di Ingegneria Civile ed Ambientale	Trento	IT
29	Università degli Studi Padova	Padova	IT
30	Vyzkumny ústav vodohospodársky T.G.Masaryka	Praha 6	CZ
31	Institut Scientifique de Service Public	LIEGE	BE
32	Institute for Inland Water Management and Waste Water Treatment	Lelystad	NL
33	Provincie Noord-Brabant	s-Hertogenbosch	NL
34	INSTITUT NATIONAL DE CERCETARE - DEZVOLTARE PENTRU PROTECTIA MEDIULUI - ICIM Bucuresti	BUCHAREST	RO
35	Ministry for Protection of Natural Resources and Environment Republic of Serbia	Belgrade	YU
36	Water Research Institute	Bratislava	SK
37	Technical University of Munich	München	DE
38	ACTeon	ORBey	FR
39	LAOP Consulting & Research - Laboratories for Applied Organic Petrology	Lauta	DE
40	r3 environmental technology Limited	Ware	UK
41	AGUAS DE BARCELONA	BARCELONA	ES
42	GOBIO GmbH - Institut für Gewässeroekologie und angewandte Biologie	Hohenstein	DE
43	AQUATEST a.s.	Prague	CZ
44	Environmental Institute	Kos	SK
45	WASY Gesellschaft für wasserwirtschaftliche Planung und Systemforschung mbH	Berlin	DE



Activity code: SUSTDEV-2002-3.II.2.1.a Instrument: IP Contract strat date: 1/02/2004 Duration: 60 months

Title: Integrated Project to Evaluate the Impacts of Global Change on European Freshwater Ecosystems

Project total cost: 19.154.659 €

Proposed funding: 12.647.141 €

Co-ordinator: Dr Simon Patrick

Organisation: University College London
UK-WC1E 6BT London

Abstract:

Freshwater ecosystems, under stress from land-use change and pollution, face additional pressures from climate change, directly and through interaction with other drivers of change. Euro-limpacs is concerned with the science required to understand and manage the ecological consequences of these interactions. It is relevant to the Water Framework Directive and other international directives and protocols and supports the EU's Charter on Sustainable Development. The Project comprises a consortium of leading scientists to integrate river, lake and wetland ecosystem science at the catchment scale. It focuses on the key drivers of aquatic ecosystem change (land-use, nutrients, acid deposition and toxic substances) and examines their interactions with global, especially climate, change using time-series analysis, space-for-time substitution, palaeolimnology, experiments and process modelling. It considers these interactions at 3 critical time-scales: (i) hours/days, concerned with changes in the magnitude and frequency of extreme events; (ii) seasons, concerned with changes in ecosystem function and life-cycle strategies of freshwater biota; (iii) years/decades, concerned with ecological response to environmental pressure, including stress reduction and ecosystem recovery. An innovative toolkit for integrated catchment analysis and modelling will be developed to simulate hydrological, hydrochemical and ecological processes at the catchment scale for use in assessing the potential impact of global change under different climate and socio-economic scenarios. A unified system of ecological indicators for monitoring freshwater ecosystem health, and new methods for defining reference conditions and restoration strategies will be developed. These will take into account the probable impacts of future climate change and the need for a holistic approach to restoration based on habitat connectivity.

Partners

Nb	Organisation	Town	Country
1	University College London	London	UK
2	National Environmental Research Institute	Roskilde	DK
3	Royal Holloway and Bedford New College	Egham, Surrey	UK
4	Universität Duisburg-Essen	Essen	DE
5	University of Reading	Reading	UK
6	ALTERRA B.V.	Wageningen	NL
7	Natural Environment Research Council	Swindon	UK
8	CONSEJO SUPERIOR DE INVESTIGACIONES CIENTÍFICAS	MADRID	ES
9	IVL Swedish Environmental Research Institute	Stockholm	SE
10	Norwegian Institute for Water Research	Oslo	NO
11	SVERIGES LANTBRUKSUNIVERSITET	UPPSALA	SE
12	Finnish Environment Institute	Helsinki	FI
13	Leopold Franzens Universitaet Innsbruck	Innsbruck	AT
14	University of Liverpool	LIVERPOOL	UK
15	Universitaet fuer Bodenkultur	Vienna	AT
16	CONSIGLIO NAZIONALE DELLE RICERCHE	Rome	IT
17	Centre National de Recherche Scientifique	Paris	FR
18	Eidgenössische Anstalt für Wasserversorgung, Abwasserreinigung und Gewässerschutz	Dübendorf	CH
19	Goulondris Natural History Museum	Kifissia	GR



20	Entera Ingenieurgesellschaft für Planung und Informationstechnologie GbR	Hannover	DE
21	Hydrobiologicky ustav Akademie vid Eeske Republiky	Ceske Budejovice	CZ
22	Univerzita Karlova v Praze	Prague 2	CZ
23	HYDROMOD Dr. K Duwe, K. Pfeiffer, J. Post, G. Dunkel, Dr. Dr. H. Baumert GbR	Wedel	DE
24	Vrije Universiteit Amsterdam	Amsterdam	NL
25	Katholieke Universiteit Leuven	Leuven	BE
26	Masarykova Univerzita v Brne	Brno	CZ
27	Universitat de Barcelona	Barcelona	ES
28	Umweltforschungszentrum GmbH	Leipzig	DE
29	Universidad de Granada	Granada	ES
30	University of Iceland	Reykjavik	IS
31	UNIVERSITY OF BUCHAREST	BUCHAREST	RO
32	Université de Rennes 1	RENNES	FR
33	Universiteit Utrecht	Utrecht	NL
34	Water Problems Institute of the Russian Academy of Sciences	Moscow	RU
35	Trent University	Peterborough, Ontario	CA
36	Ceska Geologicka Sluzba	Prague	CZ
37	Macaulay Institute	Aberdeen	UK



Activity code: SUSTDEV-2002-3.II.2.1.a Instrument: SSA Contract strat date: 1/01/2004 Duration: 12 months

Title: Integration of European Wetland research in a sustainable management of water cycle

Project total cost: 529.958 €

Proposed funding: 529.958 €

Co-ordinator Dr. Philippe NEGREL

Organisation BUREAU DE RECHERCHES GEOLOGIQUES ET MINIERES
FR-75739 PARIS

Abstract:

The final goal of the EUROWET project is to integrate the substantial multidisciplinary European research in wetlands to help attain the sustainable management of the water cycle. This will be achieved by the translation of state-of-the art science developed at both national and European levels, into practical guidance for end-users. This will be achieved by a comprehensive review, expert assessment and a focussed dissemination strategy. There is considerable scientific knowledge and technical experience gained in diverse aspects of wetland science and management including hydrology, biogeochemistry, ecology restoration, socio-economic and policy analysis. However the results of research and management experience are still too fragmentary and not sufficiently orientated to problem-solving or simply inadequately framed to be effectively transferred to, or used by, stakeholders and policy-makers. Simultaneously the general outcome of the scientific research has been increased awareness of the significance of wetlands in delivering goods and services important for human welfare including quality of life, biodiversity conservation and maintenance or enhancement of environment quality. Despite this wetlands continue to be degraded and lost throughout Europe without adequate consideration of the wider benefits to be achieved from this management. The new Water Framework Directive (WFD) promotes a unique opportunity to redress this problem by means of the

holistic, integrated approach to water management. There is currently in preparation horizontal guidance on Wetlands as part of the Common Implementation Strategy (CIS) process. There is however work still to be done on providing more specific scientific and technical guidance on the effective implementation of the Directive with respect to wetlands. This is particularly the case in relation to Integrated River Management, the CIS cluster within which wetlands are being considered in the WFD.

Partners

Nb	Organisation	Town	Country
1	BUREAU DE RECHERCHES GEOLOGIQUES ET MINIERES	PARIS	FR
2	Royal Holloway and Bedford New College	Egham, Surrey	UK



Activity code: SUSTDEV-2002-3.II.3.1.a Instrument: STR Contract strat date: 1/07/2004 Duration: 36 months

Title: FLOODWATER RECHARGE OF ALLUVIAL AQUIFERS IN DRYLAND ENVIRONMENTS

Project total cost: 2.605.295 €

Proposed funding: 1.700.000 €

Co-ordinator Dr Gerardo Benito

Organisation Consejo Superior de Investigaciones Cientificas
ES-28006 Madrid

Abstract:

The WADE project aims to assess long-term (decades to centuries) water resources in selected semiarid to hyperarid ephemeral river basins by determining long-term transmission losses from floods and quantifying floodwater recharge into alluvial aquifers. An innovative approach will be applied based on three principal research themes. 1) Palaeoflood hydrology will be used to determine long-term flood magnitude and frequency in order to quantify the frequency of recharging flood events. 2) Surface and sub-surface hydrology will be monitored in order to quantify transmission losses through the river bed into the alluvial aquifers. The combination of these two methodologies will be able to quantify long-term aquifer recharge through flooding. 3) The final research theme focuses on the socio-economic issues related to the use of alluvial aquifer groundwater within the study catchments. The research will be undertaken in 4 research basins, twinning catchments in Spain and Israel with study catchments in Namibia and South Africa.

Partners

Nb	Organisation	Town	Country
1	Consejo Superior de Investigaciones Cientificas	Madrid	ES
2	The Hebrew University of Jerusalem	Jerusalem	IL
3	Hydroisotop GmbH	Schweitenkirchen	DE
4	Desert Research Foundation of Namibia	Windhoek	NA
5	The University of Edinburgh	Edinburgh	UK
6	University of Cape Town	Rondebosch	ZA
7	Institut National de Recherche Scientifique	Sainte-Foy (Quebec)	CA
8	The Ben Gurion University of the Negev	Beer-Sheva	IL
9	Ministry of Agriculture, Water and Rural Development, Republic of Namibia	Windhoek	NA
10	Surplus People Project	Athlone	ZA
11	Kamiesburg Municipality	Garies	ZA
12	Nama Khoi Municipality	Springbok	ZA



EUROPEAN
COMMISSION

Community research



Abstracts of projects proposed
for funding
FP 6 - 2003 - Global 2

Water cycle and Soil-related aspects

European Water Research

GLOBAL CHANGE AND ECOSYSTEMS





Activity code: SUSTDEV-2004-3.II.2.2.b

Instrument: CA

Duration

36 months

Title: European Platform for Demonstration of Efficient Soil and Groundwater Remediation

Proposed funding: 1.000.000 €

Co-ordinator Mrs Gundula Prokop

Organization Umweltbundesamt GmbH

AT-1090 Wien

Abstract:

The proposed Coordination Action aims to be the principal innovative platform in Europe concerning the characterisation, monitoring and remediation of contaminated land. A key element of this initiative is the involvement of relevant stakeholders from policy, research, service providers, industry, and also existing networks to develop commonly accepted protocols to certify novel technologies and to evaluate their efficiency. The basis for this process will be generated by making use of existing cases of European demonstration sites. Furthermore, the co-ordination and better information exchange among European demonstration initiatives will play a key role along the project. A common format for boundary conditions for the implementation of novel remediation technologies and a catalogue of these operating windows will be generated. Specific dissemination of structured information through the EUGRIS information platform and through specific workshops and training initiatives will ensure that sustainable land management in Europe is boosted.

Partners

Nb	Partner Legal Name	Country
1	Umweltbundesamt GmbH	AT
2	Contaminated Land: Applications in Real environemnts	UK
3	Bureau de Recherches Geologiques et Minieres	FR
4	exSite Research Limited	UK
5	Netherlands Organisation for Applied Scientific Research	NL
6	Openbare Afvalstoffenmaatschappij voor het Vlaamse Gewest	BE
7	r3 environmental technology Limited	UK
8	Land Qaulity Management Ltd	UK
9	IURS-Institut pro udržitelný rozvoj sídel o.s.	CZ
10	University of Stuttgart, Versuchseinrichtung zur Grundwasser- und Altlastensanierung, Research facility for Subsurface Remediation	DE
11	University of Applied Sciences-NE Lower Saxony, Department of Civil Engineering, Water and Environmental Management	DE
12	University of Latvia	LV
13	Federal Ministry of Agriculture, Forestry, Environment and Water Management	AT
14	Institute for Ecology of Industrial Areas/Polish Thematic Network on Environmental Technologies	PL
15	AGENCE DE L'ENVIRONNEMENT ET DE LA MAITRISE DE L'ENERGIE	FR
16	DEKONTA, a.s.	CZ
17	Geological Survey of Lithuania	LT
18	University of Ljubljana, Faculty of Chemistry and Chemical Technology	SI
19	University of Bologna, Faculty of Engineering	IT
20	Budapest University of Technology and Economics	HU
21	Consorzio Venezia Ricerche	IT



22	Consiglio Nazionale delle Ricerche	IT
23	Federal Environmental Agency, Germany (Umweltbundesamt)	DE
24	Netherlands Centre for Soil Quality and Knowledge Transfer	NL
25	Czech Ministry of Environment	CZ



Activity code: SUSTDEV-2004-3.II.2.2.b

Instrument: STREP

Duration

36 months

Title: Biological procedures for diagnosing the status and predicting evolution of polluted environments

Proposed funding: 1.800.000 €

Co-ordinator Dr. Dietmar Helmut Pieper

Organization German Research Centre for Biotechnology
DE-38124 Braunschweig**Abstract:**

The objective of BIOTOOL is the generation and validation of novel conceptual and material instruments, rooted in biological processes, for diagnosing soil status and predicting evolution of contaminated soil and groundwater. The focus is on the assessment and evaluation of natural attenuation processes. This will require benchmarked monitoring tools and warning criteria to implement natural attenuation as the key groundwater and soil remediation strategy in Europe. It will be materialized through the application of a suite of state-of-the-art genomic, proteomic and analytical technologies to environmental samples and sites themselves. We will exploit the translocation of indicator chemicals from below ground into above-ground vegetation as a cheap and rapid monitoring tool for subsurface contamination. Diagnosis of the biological status and evolution models for polluted environments will be achieved through [i] the design and utilization of DNA and specifically DNA-array technology for examining the catabolic potential of any given particulate sample and [ii] the identification of protein biomarkers as descriptors of soil and groundwater quality and biological attenuation clocks. The progress in microbial community functional genomics and proteomics will be employed to gain a mechanistic understanding of prevailing stresses, global responses to chemical insults, plant/microbe interactions and microbial community adaptations that determine microbial-driven soil and groundwater processes. This will add a considerable predictive power to the genomic and proteomic approaches mentioned above. Determining the links between environmental factors and expression of degradation abilities will be crucial for strategies aiming at an optimal expression of the catalytic power of the indigenous microbial community. The robustness of diagnostic instruments for future normative applications will be validated in microcosms and used for assessment of contaminated sites under study.

Partners

Nb	Partner Legal Name	Country
1	German Research Centre for Biotechnology	DE
2	Consejo Superior de Investigaciones Cientificas	ES
3	Technical University of Denmark	DK
4	Ecole Polytechnique Federale de Lausanne	CH
5	Institute of Microbiology	CZ
6	National Environmental Research Institute	DK
7	UFZ - Umweltforschungszentrum Leipzig - Halle GmbH	DE
8	KAP Ltd	CZ
9	Bionostra S.L.	ES



Activity code: SUSTDEV-2004-3.II.2.2.b

Instrument: STREP

Duration

36 months

Title: IN SITU STIMULATION AND REMEDIATION OF CONTAMINATED FRACTURED SOILS

Proposed funding: 1.100.000 €

Co-ordinator Dr. Edmund Gosk

Organization Geological Survey of Denmark and Greenland
DK-DK-1350 Copenhagen K**Abstract:**

This project proposes pre-normative work aiming to design on site soil stimulation techniques for the cost-effective in situ remediation of NAPL-contaminated fractured soils of low permeability. Field-scale studies will be performed on fractured clay till site that has heavily been contaminated by NAPL. Integrated methods of multi-scale characterization of fractured media will be employed to establish regional and local hydrological / geological models, and quantify the existing fracture networks. Chemical analyses on soil and groundwater samples and predictions of an existing macroscopic simulator of NAPL transport in fractured media (SIMUSCOPP) will set the initial conditions of contamination. The microbiological activity will be identified to evaluate the soil/water capacity for NAPL biodegradation. Three soil stimulation scenarios differing with respect to the degree of hydraulic fracturing, will be designed and installed. Based on the improved hydraulic properties of the stimulated areas, various remediation strategies will be screened to select the most adequate ones. From microstructural properties/hydrodynamic conditions / fluid properties, and using lab-scale techniques/computational methods of the statistical physics of disordered media, the effective transport coefficients of four soil components will be determined: clay till, sand, natural fractures, artificial hydraulic fractures. From the local properties, the up-scaled transport coefficients of the heterogeneous soil will be determined and introduced as input data in the SIMUSCOPP simulator. The SIMUSCOPP will be extended to take into account (i) the artificial hydraulic fractures, and (ii) various remediation scenarios. Monitoring of the chemical status of soil and groundwater, and numerical predictions of the updated simulator will form databases which, in combination with cost benefit analysis, will enable us to set the criteria for the selection of the most cost-effective strategy of stimulation / remediation on similar NAPL-contaminated sites.

Partners

Nb	Partner Legal Name	Country
1	Geological Survey of Denmark and Greenland	DK
2	Foundation for Research and Technology	GR
3	Institut Français du Pétrole	FR
4	Brøndborefirmaet Brøker	DK
5	HYDROGEOTECHNIKA Sp. z o. o.	PL



Activity code: SUSTDEV-2004-3.II.2.2.b

Instrument: STREP

Duration

24 months

Title: SEDiment bioBARriers for Chlorinated Aliphatic Hydrocarbons in groundwater reaching surface water

Proposed funding: 1.100.000 €

Co-ordinator Dr Winnie Dejonghe

Organization Flemish Institute for Technological Research
BE-2400 Mol**Abstract:**

Infiltration of toxic contaminants from subsurface groundwater streams form in urban and industrial areas often a continuous source of contaminants of surface waters such as rivers leading to diffuse pollution. The sediment in a streambed provides an interface between groundwater and subsurface water and might act as a natural sink of passing groundwater contaminants through biological and physico-chemical processes. However, data on natural attenuation of infiltrated groundwater pollutants by river sediments and on the processes involved are scarce or non-existent. This project aims at (i) characterising and defining the physico-chemical environment of the sediment zone, (ii) exploring the intrinsic capacity of river sediment microbial communities to degrade organic contaminants present in infiltrated groundwater and (iii) defining the concomitant process. Therefore, the microbial community composition and activities involving chlorinated aliphatic hydrocarbon (CAN) degradation present in the sediment interface of two appropriately selected contaminated areas will be studied, both in the field and in the laboratory. The indication of the existence of such a zone will be of high importance for understanding the risks associated with (diffuse) groundwater pollutants contaminating surface water and to define refined management procedures for risk reduction. The project will support integrated projects covering the water/soil relationship of river basins. At the moment, the mentioned contact zone is supposed to exist but not valuable data can be used to support this important behaviour. This proposal will fill this existing gap and support the European soil strategy.

Partners

Nb	Partner Legal Name	Country
1	Flemish Institute for Technological Research	BE
2	Katholieke Universiteit Leuven	BE
3	Wageningen University	NL
4	AQUATEST a.s.	CZ
5	GSF - Forschungszentrum fuer Umwelt und Gesundheit, GmbH	DE
6	C&E - Consulting und Engineering GmbH	DE
7	Umwelt- und Ingenieurtechnik GmbH Dresden	DE



Activity code: SUSTDEV-2004-3.II.3.1.b

Instrument: IP

Duration

48 months

Title: New Approaches to Adaptive Water Management under Uncertainty

Proposed funding: 12.000.000 €

Co-ordinator Prof. Claudia Pahl-Wostl

Organization University of Osnabrück
DE-49069 Osnabrück**Abstract:**

The central tenet of the NeWater project is a transition from currently prevailing regimes of river basin water management into more adaptive regimes in the future. This transition calls for a highly integrated water resources management concept. NeWater identifies key typical elements of the current water management system and focuses its research on processes of transition of these elements to adaptive IWRM. Each key element is studied by novel approaches. Key IWRM areas where NeWater is expected to deliver breakthrough results include: • governance in water management (methods to arrive at polycentric, horizontal broad stakeholder participation in IWRM) • sectoral integration (integration of IWRM and spatial planning; integration with climate change adaptation strategies, cross-sectoral optimisation and cost-benefit analysis) • scales of analysis in IWRM (methods to resolve resource use conflicts; transboundary issues) • information management (multi stakeholder dialogue, multi-agent systems modelling; role of games in decision making; novel monitoring systems for decision systems in water management) • infrastructure (innovative methods for river basin buffering capacity; role of storage in adaptation to climate variability and climate extremes) • finances and risk mitigation strategies in water management (new instruments, role of public-private arrangements in risk-sharing) • stakeholder participation; promoting new ways of bridging between science, policy and implementation. The development of concepts and tools that guide an integrated analysis and support a stepwise process of change in water management is the corner-stone of research activities in the NeWater project. To achieve its objectives the project is structured into six work blocks, and it adopts a management structure that allows effective exchange between innovative and cutting edge research on integrative water management concepts.

Partners

Nb	Partner Legal Name	Country
1	University of Osnabrück	DE
2	Alterra - Wageningen University and Research Centre	NL
3	Centre for Ecology and Hydrology	UK
4	Centre National du Machinisme Agricole, du Génie Rural des Eaux et des Forêts	FR
5	Geological Survey of Denmark and Greenland	DK
6	HR Wallingford Ltd	UK
7	International Institute for Applied Systems Analysis	AT
8	SEI Oxford Office Ltd	UK
9	Agriculture Mechanization and Irrigation Institute	UZ
10	Integrated Catchment Assessment and Management Centre The Australian National University	AU
11	Universität Kassel	DE
12	Katholieke Universiteit Leuven Research & Development	BE
13	Cranfield University	UK
14	Ecologic- Institute for international and European Environmental Policy	DE
15	Fondazione Eni Enrico Mattei	IT
16	Global Water Partnership	SE
17	International center for Integrative Studies, University Maastricht	NL
18	Institute of Hydrodynamics, Academy of Sciences of the Czech Republic	CZ



19	Institute of Natural Resources	ZA
20	Water Research Institute of National Research Council	IT
21	Instituto de Soldadura e Qualidade	PT
22	IUCN - International Union for the Conservation of Nature and Natural Resources	CH
23	Ministry of Agriculture and Water Resources Republic of Uzbekistan MAWR of Uzbekistan	UZ
24	Manchester Metropolitan University	UK
25	Max Planck Society for the Advancement of Science represented by Max Planck Institute for Meteorology	DE
26	National Scientific Centre for Medical and Biotechnical Research/National Academy of Sciences of Ukraine	UA
27	Potsdam Institute for Climate Impact Research	DE
28	Technische Universiteit Delft	NL
29	Rijksinstituut voor Integraal Zoetwaterbeheer en Afvalwaterbehandeling	NL
30	Seecon Deutschland GmbH	DE
31	UNIVERSITY OF YORK, Stockholm Environment Institute-York	UK
32	Vyzkumny ustav vodohospodarsky T.G. Masaryka (T.G. Masaryk Water Research Institute)	CZ
33	Universidad Complutense de Madrid	ES
34	Centre for Environmental Research Leipzig-Halle GmbH	DE
35	University of Georgia Research Foundation, Inc	US
36	Umeaa University	SE
37	UNIVERSITY OF EXETER	UK
38	Universidad Politécnica de Madrid	ES
39	University of Twente	NL
40	Vrije Universiteit Amsterdam - Institute for Environmental Studies	NL
41	Water Management Office in the Upper-Tisza Region	HU
42	Wageningen University	NL
43	Rheinische Friedrich-Wilhelms-Universität	DE



Activity code: SUSTDEV-2004-3.II.3.3.b

Instrument: IP

Duration

48 months

Title: Mitigation of Water Stress through new Approaches to Integrating Management, Technical, Economic and Institutional Instruments

Proposed funding: 10.300.000 €

Co-ordinator Prof. Roberto Passino

Organization Consiglio Nazionale delle Ricerche
IT-00185 Roma**Abstract:**

Water stress is a global problem with far-reaching economic and social implications. The mitigation of water stress at regional scale depends not just on technological innovations, but also on the development of new integrated water management tools and decision-making practices. The AquaStress IP delivers enhanced interdisciplinary methodologies enabling actors at different levels of involvement and at different stages of the planning process to mitigate water stress problems. This IP draws on both academic and practitioner skills to generate knowledge in technological, operational management, policy, socio-economic, and environmental domains. Contributions come from 36 renowned organizations from 17 Countries, including 6 SMEs. The IP will generate scientific innovations to improve the understanding of water stress from an integrated multisectoral perspective to support: - diagnosis and characterisation of sources and causes of water stress - assessment of the effectiveness of water stress management measures and development of new tailored options - development of supporting methods and tools to evaluate different mitigation options and their potential interactions - development and dissemination of guidelines, protocols, and policies - development of a participatory process to implement solutions tailored to environmental, cultural, economic and institutional settings - identification of barriers to policy mechanism implementation - continuous involvement of citizens and institutions within a social learning process that promotes new forms of water culture and nurtures long-term change and social adaptivity. The IP adopts a Case Study stakeholder driven approach and is organised in three phases; (i) characterisation of selected reference sites and relative water stress problems, (ii) collaborative identification of preferred solution options, (iii) testing of solutions according to stakeholder interests and expectation. It will make a major contribution to the objectives of the Global Change and Ecosystems Sub-Priority 1.1.6.3, addressing Topic II.3.3.b, and supporting the Community Directive 2000/60/EC and the EU Water Initiative

Partners

Nb	Partner Legal Name	Country
1	Consiglio Nazionale delle Ricerche	IT
2	University of Reading	UK
3	Rijksinstituut voor Integraal Zoetwaterbeheer en Afvalwaterbehandeling	NL
4	Cranfield University	UK
5	University of Piraeus	GR
6	University College London	UK
7	University of Osnabrück	DE
8	Alterra BV	NL
9	Rheinisch-Westfälische Technische Hochschule Aachen	DE
10	Centre National du Machinisme Agricole, du Génie Rural des Eaux et des Forêts	FR
11	Centre for Ecology and Hydrology	UK
12	Seecon Deutschland GmbH	DE
13	University of Hannover	DE
14	University of Exeter	UK
15	Universitat de Barcelona	ES
16	APA NOVA Bucuresti - A Veolia Water Company	RO
17	GEONARDO Environmental Technologies	HU



18	WL Delft Hydraulics Stichting Waterloopkundig Laboratorium	NL
19	Netherlands Organisation for Applied Scientific Research	NL
20	Agenzia per la Promozione della Ricerca Europea	IT
21	National Technical University of Athens	GR
22	International Centre for Advanced Mediterranean Agronomic Studies - Istituto Agronomico Mediterraneo of Bari	IT
23	Hydrodata S.p.A.	IT
24	Centre de Coopération Internationale en Recherche Agronomique pour le développement	FR
25	Institut de Recherche pour le Développement	FR
26	HIDROMOD, Modelação em Engenharia, Lda	PT
27	DHI Water & Environment	DK
28	Wageningen University	NL
29	Innovation & Development consulting	BE
30	Faculdade de Engenharia da Universidade do Porto	PT
31	Hydrocontrol - Research and Training Centre for Water Systems Control	IT
32	Cracow University of Technology, Institute of Water Engineering and Water Management	PL
33	University of Architecture, Civil Engineering and Geodezy	BG
34	AEOLIKI Foundation	CY
35	Institut National Agronomique de Tunisie	TN
36	Institut Agronomique et Vétérinaire Hassan II	MA



Activity code: SUSTDEV-2004-3.VII.1.1.a

Instrument: IP

Duration

60 months

Title: Novel Methods for Integrated Risk Assessment of Cumulative Stressors in Europe

Proposed funding: 10.000.000 €

Co-ordinator Dr. Hans Løkke

Organization National Environmental Research Institute
DK-4000 Roskilde**Abstract:**

To support current and future European strategies, in particular for environment and health, there is an urgent need for development of methods for assessing the cumulative risks from combined exposures to multiple stressors including from complex mixtures of chemical, physical, and biological agents. This presented IP will help support the development and improvement of a coherent series of methodologies that will be underpinned by mechanistic understanding, while integrating the risk analysis approaches of environmental and human health. The project will deliver understanding and tools for sound risk assessment, developing a research framework for the description and interpretation of combined stressor effects that leads to the identification of biomarkers and other indicators of cumulative impacts. The IP will help increase knowledge on the transfer of pollutants between different environmental compartments, including how these processes are influenced by natural stressors such as climate, and on the impact of cumulative stressors, including chemical mixtures. This will facilitate the link information concerning the condition of air, water, soil and the built environment with human and ecosystem health monitoring data. By developing and using improved assessment tools and novel models, the project will quantify and aim at reducing uncertainty in current risk assessment and screening methodologies, e.g. by improving the scientific basis for setting safety factors. The new methods will take into account geographical, ecological, social and cultural differences across Europe. The IP consortium is highly competent in the relevant areas, counting leading scientists within human toxicology and epidemiology, aquatic and terrestrial ecotoxicology, environmental chemistry/biochemistry, toxicogenomics, physics, mathematical modelling, geographic informatics, and socio-economic science.

Partners

Nb	Partner Legal Name	Country
1	National Environmental Research Institute	DK
2	Natural Environment Research Council	UK
3	UFZ - Umweltforschungszentrum Leipzig - Halle GmbH	DE
4	University of Nijmegen; Faculty of Science, Mathematics and Computing Science	NL
5	Università degli studi del Piemonte Orientale "Amedeo Avogadro" Dipartimento di Scienze e Tecnologie Avanzate	IT
6	Vrije Universiteit Amsterdam	NL
7	National Institute of Public Health	CZ
8	University of Wales, Cardiff	UK
9	University of Cambridge	UK
10	Jagiellonian University (Uniwersytet Jagiellonski)	PL
11	Eberhard Karls Universität Tübingen	DE
12	WAGENINGEN UNIVERSITY	NL
13	Universidade de Aveiro	PT
14	UNIVERSITY OF ANTWERP	BE
15	WRC-NSF Ltd.	UK
16	Lemnatec GmbH	DE
17	University of Salzburg	AT
18	Directorate General Joint Research Centre, European Commission	IT



19	Finnish Environment Institute	FI
20	Institute of Environmental Engineering, Kaunas University of Technology	LT
21	Alterra BV	NL
22	Swiss Institute of Environmental Science and Technology	CH
23	National Institute of Public Health and the Environment	NL
24	LimCo International	DE
25	Rheinisch-Westfaelische Technische Hochschule Aachen Aachen University of Technology	DE
26	ECT Oekotoxikologie GmbH	DE
27	Consorzio Interuniversitario Scienze del Mare - Università di Milano Bicocca	IT
28	ENVIRONMENT PARK SPA	IT
29	Ecole Polytechnique Fédérale de Lausanne	CH
30	Lancaster University	UK
31	Stockholms Universitet	SE
32	DIALOGIK gemeinnützige Gesellschaft für Kommunikations- und Kooperationsforschung mbh	DE
33	UNIVERSITAT ROVIRA I VIRGILI	ES
34	LHASA Ltd	UK
35	Bourgas "Prof. As. Zlatarov" University	BG
36	CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS	ES
37	University of Southampton	UK
38	Institut SYMLOG de France	FR



Activity code: SUSTDEV-2004-3.VII.1.1.b

Instrument: STREP

Duration

36 months

Title: Environmental risk assessment of pharmaceuticals

Proposed funding: 2.800.000 €

Co-ordinator Dr Thomas Knacker

Organization ECT Oekotoxikologie GmbH
DE-65439 Flörsheim/Main**Abstract:**

The overall objective of ERAPharm is to improve and complement existing knowledge and procedures for the environmental risk assessment (ERA) of human and veterinary Pharmaceuticals. Based on EU regulatory frameworks on the ERA of Pharmaceuticals and on the outcome of previous projects ERAPharm will address the following aspects: It will investigate previously unstudied major routes leading to exposure of the terrestrial and aquatic environment and subsequent fate of Pharmaceuticals in surface water and sediment. Factors and processes affecting the behaviour of Pharmaceuticals and their transformation products in the environment will be studied on the laboratory, semi-field and field scale. A scenario-based exposure assessment system will be developed for predicting concentrations of Pharmaceuticals in soils, surface waters and sediments and leaching to groundwater. It will be investigated if environmentally relevant concentrations of Pharmaceuticals and their transformation products pose a risk to aquatic and terrestrial organisms. Pharmaceuticals and selected transformation products will be screened using in vitro and low complexity bioanalytical tests in order to provide a first hazard characterisation and to target higher tier testing. Higher tier test methods will be improved and applied for detecting the effects of long-term, low-level exposure to Pharmaceuticals on aquatic and terrestrial invertebrates and fish. It will be evaluated if information on pharmacology and toxicodynamics in mammalian species can be used to predict effects of Pharmaceuticals on environmental organisms. Moreover, the effects of antibiotics on microbial communities will be studied with a main focus on the spread of genetically encoded resistance. Based on the developed approaches recommendations will be provided on how to improve the ERA procedures for Pharmaceuticals. A guidance document will be compiled that will be made available to regulators, industry and scientific community.

Partners

Nb	Partner Legal Name	Country
1	ECT Oekotoxikologie GmbH	DE
2	AstraZeneca UK Ltd. (AstraZeneca PLC)	UK
3	Brunel University	UK
4	Bundesanstalt für Gewässerkunde	DE
5	Cemagref, Centre National du Machinisme Agricole du Genie Rural des Eaux et des Forets	FR
6	Cranfield University	UK
7	The Danish University of Pharmaceutical Sciences	DK
8	Eidgenössische Anstalt für Wasserversorgung, Abwasserreinigung und Gewässerschutz	CH
9	Geotechnisches Institut AG	CH
10	Institute for Risk Assessment Sciences, Faculty of Veterinary Medicine, Utrecht University	NL
11	Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria	ES
12	National Environmental Research Institute	DK
13	OpdenKamp Adviesgroep B.V.	NL
14	Schering AG	DE
15	Umweltbundesamt	DE
16	Canadian Water Network	CA



Activity code: SUSTDEV-2004-3.VII.2.1.a

Instrument: IP

Duration

60 months

Title: EMERGING DISEASES IN A CHANGING EUROPEAN ENVIRONMENT

Proposed funding: 11.500.000 €

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Abstract:

These last years, several vector-borne, parasitic or zoonotic diseases have (re)-emerged and spread in the European territory with major health, ecological, socio-economical and political consequences. Most of these outbreaks are linked to global and local changes resulting of climatic changes or activities of human populations. Europe must anticipate, prevent and control new emergences to avoid major societal and economical crisis (cf. SARS in Asia, West Nile in US). EDEN (Emerging Diseases in a changing European Environment) offers a unique opportunity to prepare for uncertainties about the future of the European environment and its impact on human health. EDEN's aim is to increase preparedness by developing and coordinating at European level a set of generic investigative methods, tools and skills within a common scientific framework (Landscapes, Vector and Parasite bionomics, Public Health, Animal Reservoirs). EDEN has therefore selected for study a range of diseases that are especially sensitive to environmental changes. Some of these diseases are already present in Europe (West Nile, Rodent-borne, Tick-borne, Leishmaniosis), others were present historically (Malaria) and so may re-emerge, whilst finally Rift Valley Fever is either on the fringes of Europe. EDEN integrates research between 42 leading institutes from 23 countries with the combined experience and skills to reach their common goals. EDEN is organised into a series of vertical Sub-Projects led and managed by an internationally recognised expert and linked by a series of Integrative Activities that include biodiversity monitoring, environmental change detection, disease modelling, remote sensing and image interpretation, information and communication. The proposed management structure, including a Scientific Board and a User Forum, takes into account both the diversity of the partners and the size of the project. Specific links with third world countries will be achieved through an Africa platform.

Partners

Nb	Partner Legal Name	Country
1	Centre de Coopération Internationale en Recherche Agronomique pour le Développement	FR
2	Faculty of Veterinary Medicine, University of Utrecht	NL
3	Université Catholique de Louvain	BE
4	University of Oxford	UK
5	Georeferenced Epidemiological Data Management Systems	BE
6	INstitute for Animal Health	UK
7	Istituto Zooprofilattico Sperimentale dell'Abruzzo	IT
8	Institut Pasteur Network	FR
9	Centro Nacional de Microbiología Instituto de Salud Carlos III	ES
10	Entente Interdépartementale pour la Démoustication du Litoral Méditerranéen	FR
11	Institute of Vertebrate Biology, Academy of Sciences of the Czech Republic	CZ
12	Istituto Superiore di Sanità	IT
13	Institut de Recherche pour le Développement	FR
14	Hacettepe University Faculty of Science	TR
15	Instituto de Higiene e Medicina Tropical	PT
16	Institut National d'Hygiène	MA
17	University of Valencia	ES
18	Centro di Ecologia Alpina	IT



19	Department of infectious diseases and neuroinfections, Medical Academy, Bialystok	PL
20	Ludwig-Maximilians Universitat Munchen	DE
21	Institute of Zoology, Slovak Academy of Sciences	SK
22	National Health Development Institute	EE
23	Institute for Microbiology and Immunology, Medical Faculty of Ljubljana	SI
24	Instituto Vasco de investigacion y desarrollo agrario	LK
25	Johan Bela National Centre for Epidemiology	HU
26	Public Health Agency	LV
27	Centre for communicable diseases prevention and control	LT
28	Finnish Forest Research Institute, Vantaa Research Centre	FI
29	Insitut National de Recherche Agronomique, Centre de Biologie et de Gestion des Populations	FR
30	Swedish Institute for Infectious Disease Control	SE
31	University of Antwerp	BE
32	UNiversity of Helsinki Haartman Institute	FI
33	University of Liverpool	UK
34	Natural History Museum	UK
35	Ege University medical school	TR
36	London School of Hygiene & Tropical Medicine	UK
37	Szent Istvan University, Fac of Veterinary Science	HU
38	University of Barcelona	ES
39	Université Montpellier 1	FR
40	Universiy of Crete	GR
41	Institut Agronomique et Veterinaire Hassan II	MA
42	Institut Senegalais de Recherches Agricoles	SN