

SIXTH FRAMEWORK PROGRAMME PRIORITY: ERA-NET  
Coordination of National and Regional Activities (ERA-NET scheme)



Proposal/Contract no.: 026058

CIRCLE CA  
Climate Impact Research Coordination for a Larger Europe  
Deliverable I e-1  
Deliverable I e-2

European initiatives, networks and ERA-Nets relevant for CIRCLE  
Globally operating networks and organisations relevant for CIRCLE

Dissemination Level: Public

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Work Package Leader: Partner 18 Ministry for the Environment and Territory (Italy))

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**Editor**

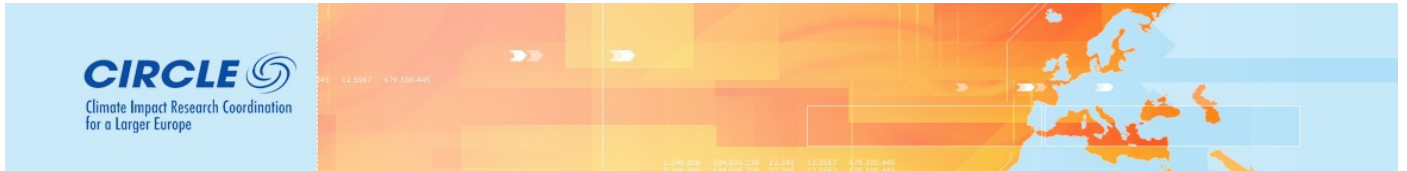
Björn Sellberg

**Contributing Authors:**

Silvia Medri

Daniela Past

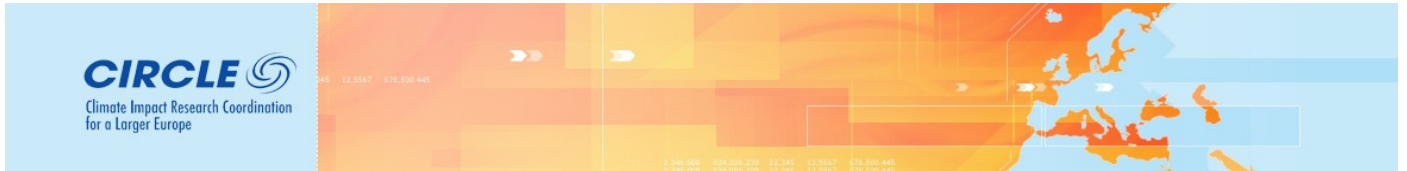
Daniela Hohenwallner



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## 0. Summary and Introduction

There are many international and national activities/projects/Organisations with relevance to CIRCLE and in this paper they are organised in different categories according to the following.

1. European NoE, IP and SSA (in the 6<sup>th</sup> framework programme). (in total 26)
  - 2 a) Major International organisations, networks and programmes. (in total 7)
  - 2.b) OECD (energy efficiency, development sustainable energy sources and systems – mainly mitigation)
  - 2.c) Other International Organisations (in total 17)
3. Selected National *Organisations/Programmes* – Germany, The Netherlands, Sweden, USA, and UK (2)
4. ERA-NETs with relevance to CIRCLE (in total 14 in four series)
5. Selected Climate Change R&D *Programmes outside Europe* in USA, Canada, Japan, Australia

The implementation of this paper and the collaboration with other activities relevant to CIRCLE is an important issue to discuss continuously in CIRCLE member countries and could also be an important issue for a wider audience where people can come together in a workshop. The survey is rather extensive and therefore it could be valuable with a wide review. It will also be a valuable input for further tasks in the CIRCLE ERA NET.

For activities that have finished during the near future we should observe the reporting: For activities ongoing during CIRCLE running time it could be fruitful with collaboration.

### Relevant questions in this context are for example:

How to approach the relevant activities/projects/organisations?

How can we benefit from their results and have a constructive and fruitful collaboration with them?

What resources do we need for that?



## 1. European: NoE, IP and SSA (6<sup>th</sup> FP)

### Accent: Atmospheric Composition change: An European Network

#### Coordinator:

#### Consiglio Nazionale Delle Ricerche

Instituto di Scienze dell' Atmosfera e del Clima

Piazzale Aldo Moro 7, 185 ROMA, ITALY

Short description: *Changes in atmospheric composition directly affect many aspects of life, determining climate, air quality and atmospheric inputs to the ecosystems. The ACCENT joint research programme focuses on aerosols, biosphere-atmosphere interaction and transport and transformation of pollutants.*

End time: 2009-03-01 NoE

[www.accent-network.org](http://www.accent-network.org)

20 partners. Partners from CIRCLE Countries:

Universitaet fuer Bodenkultur, International Institute for Applied System Analysis – Austria

University of Kuopio, Helsingin Yliopisto, Ilmatieteen Laitos - Finland

Deutsches Zentrum fuer Luft und Raumfahrt, Max Planck Gesellschaft, Leibniz Institut fuer Troposphaerenforschung,

Universitaet Bremen, Ruprecht-Karls-Universitaet Heidelberg, Forschungszentrum Juelich - Germany

Koninklijk Nederlands Meteorologisch Instituut, Rijksinstituut voor Volksgezondheit en Milieu, Nederlandse

Organisatie voor Toegepast Natuurwetenschappelijk Onderzoek, Energieonderzoek Centrum Nederland – The

Netherlands

Norsk Institutt for Luftforskning, University of Oslo – Norway

Belgisch Instituut voor Ruimte Aeronomie, Commission of the European Communities - Belgium

Universidade de Aveiro - Portugal

Stockholms Universitet - Sweden

Vezpremi Egyetem - Hungary

Meteo-France, CNRS - France

Universita Degli Studi di Urbino Carlo Bo - Italy

**Relevance to CIRCLE:** Changes in atmospheric composition affects climate



## **AGRIDEMA: Introducing tools for Agricultural decision-making under climate change conditions by connecting users and tool-providers.**

### **Coordinator:**

Instituto Tecnológico Agrario de Castilla y Leon, Crop production, Ctra.

Burgos, Km.119, 47071 Valladolid, SPAIN

End time: 2006-01-01 (SSA). *Continuation not known at the moment of writing.*

[www.agridema.net/opencms/opencms/inicio/index](http://www.agridema.net/opencms/opencms/inicio/index)

Partners from CIRCLE Countries:

University of Natural Resources and Applied Life Sciences, Austria.

**Relevance to CIRCLE:** Stakeholder oriented approach concerning climate change and agricultural crop production

## **ALARM: Assessing Large-scale environmental Risks with tested Methods**

### **Coordinator:**

UFZ-Umweltforschungszentrum, Leipzig-Halle GmbH, Department of Community Ecology, Permoserstrasse 15, P.F. 2, 4318 Leipzig, Germany

*Short description: Based on a better understanding of terrestrial and freshwater biodiversity and ecosystem functioning ALARM will develop and test methods and protocols for the assessment of large-scale environmental risks in order to minimise negative direct and indirect human impacts. Risk assessment in ALARM will be hierarchical and examine a range of organisational (genes, species, ecosystems), temporal (seasonal, annual, decadal) and spatial.*

End time: 2009-02-01 (IP).

Potential overlap with CIRCLE: Climate change modelling

[www.alarmproject.net/alarm](http://www.alarmproject.net/alarm)

31 Partners:

Lunds Universitet, Stockholm Environment Institute, SLU, Stockholms Universitet, Umea Universitet - Sweden

Universitaet Wien, Dr. Friedrich Hinterberger, Sustainable Europe Research Institute – Austria

Suomen Ymparistokeskus, Ilmatieteen Laitos - Finland

Katholieke Universiteit Leuven, Procter & Gamble, Universite Catholique de Louvain - Belgium

Universitaet Hannover, Gesellschaft fuer angewandete Landschaftsoekologie und Umweltplanung Dr. Ott MBH,

Olanis Expertensysteme, Potsdam Institut fuer Klimafolgenforschung, Georg-August-Universitaet Goettingen, Martin-Luther-Universitaet Halle-Wittenberg - Germany

Universiteit Utrecht - Netherlands

Universidade de Evora - Portugal

University of Haifa - Israel

Universite de Versailles Saint Quentin en Yveline, Institut de la Recherche Agronomique - France

Consorzio Nazionale Interuniversitario per le Scienze del Mare - Italy

**Relevance to CIRCLE:** Risk analysis also with regards to climate change



## **ALERT: Sustainable Management of Water resources by Automated Real-Time Monitoring Coordinator:**

Natural Environment Research Council,  
British Geological Survey Environment & Hazards Directorate, Polaris House,  
North Star Avenue  
SN21EU  
Swindon, UK

*Short description: ALERT aims to develop a radically different strategy for monitoring and managing the impact of climate 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, thereby giving early warning of potential threats to ecosystems, and vulnerable water systems.*

End time: 2007-06-01 (STREP).

[www.coastal-alert.bgs.ac.uk/public](http://www.coastal-alert.bgs.ac.uk/public)

11 Partners. Partners from CIRCLE countries:

Geotomographie, Forschungszentrum, Juelich GmbH, Germany  
Universite Catholique de Louvain, Belgium

**Relevance to CIRCLE:** Monitoring the effects of climate change on land-use practice on water resources

## **ALTER-NET: A long-term Biodiversity, Ecosystem and Awareness Research Network. Coordinator:**

Natural Environment Research Council  
Centre for Ecology and Hydrology  
Polaris House  
North Star Avenue  
SN2 1EU Swindon, UK

*Short description: Network of Excellence (NoE) will create a European long-term inter-disciplinary research facility for research on the complex relationship between ecosystems, biodiversity and society. It will provide research support for policy assessment and development on the conservation and sustainable use of biodiversity in EU, and stable facility for information retrieval and reporting on biodiversity –related issues.*

End-time: 2009-04-01 (NoE).

[www.alter-net.info](http://www.alter-net.info)

25 Partners. Partners from CIRCLE Countries:

Partners from CIRCLE Countries:

SLU - Sweden

Umweltbundesamt – Austria

UFZ-Umweltforschungszentrum Leipzig-Halle, Potsdam Institut fuer Klimafolgenforschung, Georg-August-Universitaet Goettingen - Germany

Corpo Forestale dello Stato - Italy

Alterra, Rijksinstituut voor Volksgezondheid en Milieu, European Centre for Nature Conservation - Netherlands

Instituut voor Natuurbehoud - Belgium

Suomen Ymparistokeskus - Finland

Institute of Ecology and Botany of the Hungarian Academy of Sciences - Hungary

Stiftelsen Norsk Institutt for Naturforskning - Norway

CEMAGREF, CNRS - France





## Relevance to CIRCLE: Biodiversity

### **CARBOEUROPE: Assessment of the European Terrestrial Carbon Balance**

#### **Coordinator:**

Max Planck Gesellschaft zur Förderung der Wissenschaften E.V.

Max-Planck-Institut für Biogeochemie

Hofgartenstrasse 8

85748 München, Germany

*Short description: The overarching aim of the CarboEurope-IP is to understand, quantify and predict the terrestrial carbon balance of Europe and the uncertainty at local, regional and continental scale. This is achieved by (1) executing a strategically focussed set of surface based ecological measurements of carbon pools and CO<sub>2</sub> exchange, (2) further enhancement of an atmospheric high precision observation system for CO<sub>2</sub> and other trace gases, (3) execution of a regional high spatial resolution experiment and (4) integration of these components by means of innovative data assimilation systems and modelling.*

End Time: 2009-01-01 (IP)

[www.carboeurope.org](http://www.carboeurope.org)

58 partners. Partners from CIRCLE Countries:

Joanneum Reserach – Austria

Potsdam Institut fuer Klimafolgenforschung, Technische Universitaet Dresden, Tueringer Landesanstalt fuer Wald, Jagd und Fischerei, Universitaet Bayreuth, Martin-Luther-Universitaet Halle-Wittenberg, Ruprecht-Karls-Universitaet Heidelberg, Teische Universitaet Muenchen, Universitaet Stuttgart - Germany

Vrije Universiteit Amsterdam, Nationaal Instituut voor Ruimteonderzoek, Wageningen Universiteit, Alterra, Energieonderzoek Centrum Nederland, Rijks-Universiteit Groningen - Netherlands

Philippe Saugier International Educational Projects, Universite de Paris-Sud XI, Meteo France, CNRS, Institut National de la Recherche Agronomique, Commissariat a l Energie Atomique - France

Ente Per le Nuove Tecnologie, l' Eenergia e l'ambiente, Provincia Autonoma de Bolzano Seconda, Universita degli Studi di Napoli, Centro di Ecologia Alpina, CESI, Consiglio Nazionale delle Ricerche, Universita degli Studi della Tuscia - Italy

Faculte Universitaire des Sciences Agronomiques de Gembloux, Universite de Liege, Universiteit Antwerpen, Commission of the European Communities - Belgium

Szent Istvan Egyetem, Lorand Eoetvoes University - Hungary

European Forest Institute, Helsingin Yliopisto, Ilmatieteen Laitos - Finland

Instituto Superior de Agronomia, Universidade de Aveiro, Instituto Superior Tecnico - Portugal

Sveriges Lantbruksuniversitet, Lunds Universitet, Stockholms Universitet - Sweden

**Relevance to CIRCLE: Climate change modelling**

### **CLARIS: A Europe-South America Network for Climate Change Assessment and Impact Studies**

#### **Coordinator:**

Centre National de la Recherche Scientifique LODYC (Laboratoire d'Océanographe Dynamique et de Climatologie) /IPSL/UPMC

Tour 45-55/Etage 4/Case 1000,

3 Rue Michel Ange,

75794 Paris, FRANCE

*Short description: The aim is to strengthen collaborations between Europe and South America to develop common research strategies on climate change and impact issues in the subtropical*





*region of South America through a multi-scale integrated approach (continental-regional-local). The resulting database will be of great value to validate and evaluate the models skills in simulating climate trends and extreme event frequency changes.*

End time: 2007-07-01 (SSA)

[www.claris-eu.org](http://www.claris-eu.org)

11 partners. Partners from CIRCLE countries:

Consiglio per la Ricerca e Sperimentazione in Agricoltura - Agriculture Research Council, Istituto Nazionale di Geofisica e Vulcanologia – Italy

Plant Research International B. V. – Netherlands

Max Planck Society for the Advancement of Science – Germany

Centre de Cooperation Internationale en Recherche Agronomique pour le Developpement, Institut de Recherche pour le Developpement - France

**Relevance to CIRCLE:** Climate Change and developing countries

## **EDEN: Emerging diseases in a changing European Environment**

### **Coordinator:**

Centre de Cooperation Internationale en Recherche Agronomique pour le Developpement, Departement d'Elevage et de Medicine Veterinaire (CIRAD-EMVT),

42, rue Scheffer,

75116 Paris, FRANCE

*Short description: 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 climate 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 the US).EDEN's aim is to increase preparedness by developing and coordinating at European level a set of generic investigative methods.*

End time: 2009-11-01 (IP)

[www.eden-fp6project.net](http://www.eden-fp6project.net)

23 partners. Partners from CIRCLE Countries:

Swedish Institute for Infectious Disease Control – Sweden

Institut de Recherche pour le Developpement, Entente InterDepartementale pour la demoustication du littoral mediterraneen, Institut Pasteur, Universite Montpellier 1, Insitut National de RESherche Agronomique - France

Universidade Nova de Lisboa - Instituto de Higiene e Medicina Tropical - Portugal

Johan Bela National Centre for Epidemiology, Szent Istvan University, Fac of Veterinary Science, MTA Allatorvos-Tudomanyi Kutato Intezete - Hungary

Finnish Forest Research Institute, Vantaa Research Centre, Helsingin yliopisto - Finland

Istituto Zooprofilattico Sperimentale dell'Abruzzo' e del Molise G. Caporale, Istituto Superiore di Sanita, Centro di Ecologia Alpina, Department of Public Health Science, University La Sapienza, Roma - Italy

Universiteit Utrecht - Netherlands

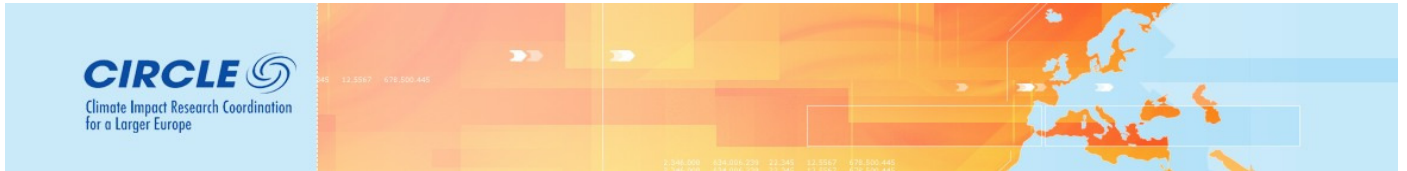
Natural History Museum - not mentioned

Universite Catholique de Louvain, University of Antwerpen, Institute of Vertebrate Biology,; European Agro-Environmental health Associates EEIG - Belgium

- Belgium

Ludwig-Maximilians-Universitaet Munchen – Germany

**Relevance to CIRCLE:** Climate change and human health



## ENSEMBLES: ENSEMBLE-based Predictions of Climate Changes and their Impacts

### Coordinator:

Met Office, Hadley Centre for Climate Prediction and Research,  
Fitzroy Road  
EX1 3PB Exeter, UK

*Short description: Prediction of both natural climate variability and human impact on climate is inherently probabilistic, due to uncertainties in forecast initial conditions, representation of key processes within models, and climate forcing factors. Hence, reliable estimates of climatic risk can only be made through ensemble integrations of Earth – System Models in which these uncertainties are explicitly incorporated. For the first time ever, a common ensemble forecast system will be developed for use across a range of timescales (seasonal, decadal, and longer) and spatial scales (global, regional and local). Most importantly, the model system will be extensively validated.*

End time: 2009-09-01 (IP)

[www.ensembles-eu.org](http://www.ensembles-eu.org)

23 partners. Partners from CIRCLE Countries:

Koninklijk Nederlands Meteorologisch Instituut, Rijksinstituut voor Volksgezondheid en Milieu- The Netherlands

Universität zu Köln, Universität Kassel, Universität Stuttgart, Universität Hamburg, Deutscher Wetterdienst, Institut fuer Meereskunde an der Universität, Max Planck Gesellschaft, Fachhochschule fuer Technik Stuttgart, Freie Universität Berlin, Potsdam-Institut fuer Klimafolgenforschung, GKSS Forschungszentrum Geesthacht - Germany

Cosiglio Nazionale delle Ricerche, Fondazione Eni Enrico Mattei, Istituto Nazionale di Geofisica e Vulcanologia, The Abdus Salam International Centre for Theoretical Physics, Food and Agriculture Organization of the United Nations, Agenzia Regionale per la Prevenzione e l'Ambiente dell'Emilia-Romagna, Servizio Meteorologico Regionale, Università Degli Studi di Firenze - Italy

Climpact, Ecole Normale Supérieure, Société de Mathématiques Appliquées et de Sciences Humaines, Université Joseph Fourier Grenoble 1, Centre Européen pour la Recherche et la Formation Avancée en Calcul Scientifique, Météo France, Centre National de Recherches Meteorologiques, Electricité de France, CNRS - France

Suomen Ympäristökeskus, Ilmatieteen Laitos - Finland

International Institute for Applied Systems Analysis – Austria

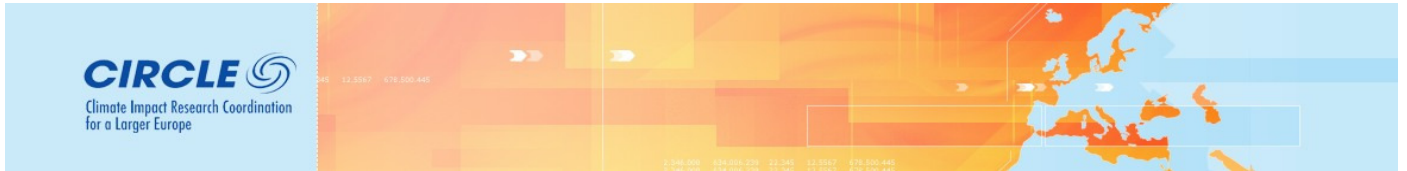
Nansen Environmental and Remote Sensing Center, CICERO senter for klimaforskning, Meteorologisk Institutt, Universitet i Oslo – Norway

Université Catholique de Louvain, Commission of the European Communities – Belgium

Lunds Universitet, Sveriges Meteorologiska och Hydrologiska Institut - Sweden

**Relevance to CIRCLE:** Human impact on climate





## **EURO-LIMPACS: Integrated project to evaluate the Impacts of Global Change on European Freshwater Ecosystems**

### **Coordinator:**

University College London,  
Environmental Change Research Centre  
Department of Geography,  
Gower Street  
WC1E 6BT, London, UK

*Short description: 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-lampas is concerned with the science required to understand and manage the ecological consequences of these interactions.*

End time: 2009-02-01 (IP)

[www.eurolimpacs.ucl.ac.uk](http://www.eurolimpacs.ucl.ac.uk)

27 partners. Partners from CIRCLE countries:

IVL, Sveriges Lantbruksuniversitet – Sweden

Leopold Franzens Universitaet Innsbruck, Universitaet fuer Bodenkultur – Austria

Suomen Ymparistokeskus - Finland

Vrije Universiteit Amsterdam, Alterra, Universiteit Utrecht - Netherlands

Entera Ingenieurgesellschaft fuer Planung und Informationstechnologie, GbR ; Hydromond, Dr. K Duwe, K. Pfeiffer, J. Post, G. Dunkel, Dr Dr H Baumert Gbr, Universitaet Duisburg-Essen, Umweltforschungszentrum Leipzig-Halle - Germany

Universite de Rennes 1, CNRS - France

Consiglio Nazionale delle Ricerche - Italy

Katholieke Universiteit Leuven - Belgium

Norsk Institutt for Vannforskning – Norway

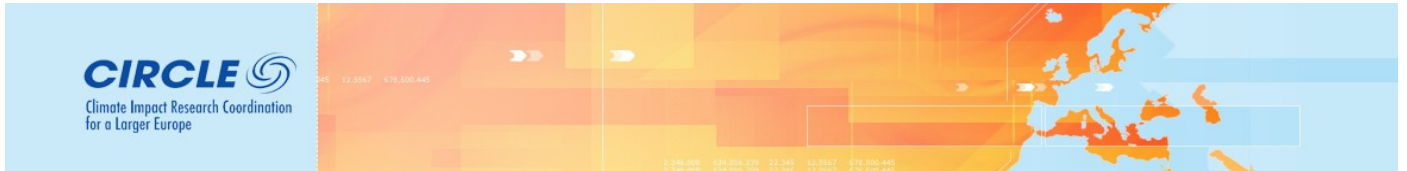
**Relevance to CIRCLE:** Climate change impacts on freshwater ecosystems

## **FLOODSITE: Integrated Flood Risk Analysis and Management Methodologies**

### **Coordinator:**

HR Wallingford Ltd,  
Water Management Group/Coastal Group,





Howbery Park,  
OX10 8BA Wallingford, UK

*Short description: The Management of flood risk is a critical component of public safety and quality of life. The FLOODSITE integrated Project will produce improved understanding of specific flood processes and mechanisms and methodologies for flood risk analysis and management ranging from the high level management of risk at arider-basin, estuary and coastal process cell scale down to the detailed assessment in specific areas. It includes specific actions on the hazard of coastal extremes, coastal morph dynamics and flash flood forecasting, as well as understanding of social vulnerability and flood impacts, which are critical to improving the mitigation of flood risk from all causes. Several pilot studies are included in the project and also studies of lessons from recent floods e.g. Elbe.*

End time: 2009-03-01 (IP)

[www.floodsite.net](http://www.floodsite.net)

28 partners. Partners from CIRCLE countries:

Lund University – Sweden

Umweltforschungszentrum Leipzig-Halle, Technische Universitaet Dresden, Leibniz - Institut fuer Oekologische Raumentwicklung, Universitaet Potsdam, Christian-Albrechts-Universitaet zu Kiel, Technische Universitaet Carol-Wilhelmina zu Braunschweig - Germany

Universita degli Studi di Bologna, Istituto di Sociologia Internazionale di Gorizia, Universita degli Studi di Padova, Universita degli Studi Roma Tre - Italy

Wageningen Universiteit, Infram International, Stichting ihe Delft, Stichting Waterloopkundig Laboratorium, Universiteit Twente, Technische Universiteit Delft – Netherlands

Ecole Nationale des Ponts et Chaussees, Institut National Polytechnique de Grenoble, CEMAGREF, Sogreah S.A – France

H-Euraquq KFT, Vituki – Water Resources Research Centre - Hungary

Instituto Superior Tecnico - Portugal

Universite Catholique de Louvain, Commission of the European Communities - Belgium

**Relevance to CIRCLE:** Flood risk analysis

**GEOLAND: GMES products & services, integrating EO monitoring capacities, to support the implementation of European directives and policies related to land cover and vegetation**

**Coordinator:**

Infoterra GmbH,  
Operations, n/a 88039,  
FRIEDRICHSHAFEN, Germany





*Short description: The garland products and services aim at the monitoring of land cover and vegetation addressing the GMES priorities “Land Cover Change in Europe”, “Environmental Stress in Europe”, and “Global Vegetation Monitoring”. **Geoland** integrates 56 partners (!) comprising user organisations, private and public service providers and researchers from 15 European member and accession states.*

End time: 2007-01-01 (IP)

[www.gmes-geoland.info](http://www.gmes-geoland.info)

### **56 partners. Partners from CIRCLE countries:**

SEPA, County Administration of Dalarna, Metria, Sveriges Lantbruksuniversitet - Sweden

Joanneum Research, Geoville Informations Systeme, Oesterreichisches Institut fuer Raumplanung, Amt der Vorarlberger Landesregierung, Technische Universitaet Wien, Arc Seibersdorf Research, Umweltbundesamt, Veterinaermedizinische Universitaet Wien - Austria

Commissariat a l energie atomique, Eads Astrium, NOVELTIS, Institut Français de l'Environnement, Medias France, Institut National de la Recherche Agronomique, Centre National de la Recherche Scientifique, Meteo France, Spot Image - France

DLR, Tueringer Landesanstalt fuer Wald, Jagd und Fischerei, Delphi Informations, Muster Management, Hugin GMBH, The European Organisation for the Exploitation of Meteorological Satellites, Remote Sensing Solutions GMBH, Universitaet Karlsruhe, Universitaet Bonn, Albert-Ludwigs-Universitaet Freiburg - Germany

Ingenieursbureau voor Environmental Analysis and Remote Sensing, Alterra, Netherlands Geomatics & Earth Observation, Koninklijk Nederlands Meteorologisch Instituut, Norwegian Computing Center - Netherlands

Agenzia Nazionale per la Protezione Dell'Ambiente, Consiglio Nazionale delle Ricerche, Universita degli Studi di Trieste - Italy

Instituto de Investigacao Cientifica Tropical, Instituto de Meteorologia - Portugal

Vlaamse Instelling voor Technologisch Onderzoek, Commission of the European Communities, Universite Catholique de Louvain - Belgium

**Relevance to CIRCLE:** Monitoring of Land use and vegetation changes

### **GLOCHAMORE: Global Change in Mountain regions: An integrated Assessment of Causes and Consequences.**

#### **Coordinator:**

UNIVERSITÄT Wien Institut für Ökologie und Natur schutz,  
Abteilung für Naturschutzforschung, Vegetations- und Landschaftsökologie,  
Dr. Karl Lueger-Ring 1,  
1010 WIEN, Austria

*Short description: Many of the world's mountain ecosystems are moving along trajectories that couple high rates of environmental change with strong economic changes, whose collective effect may alter the ability of mountain regions to provide critical goods and services, both to mountain inhabitants and lowland communities. In order to address the environmental challenges facing the*





*world's mountain regions in the 21<sup>st</sup> Century, the project will develop an integrative research strategy for detecting signals of global environmental change in mountain environments.*

End time: 2005-11-01 (SSA)

[www.mri.schnatweb.ch/content/category/3/10/31](http://www.mri.schnatweb.ch/content/category/3/10/31)

13 partners. Partners from CIRCLE countries:

Potsdam Institut fuer Klimafolgenforschung - Germany

Universiteit Utrecht – Netherlands

Universite Joseph Fourier, United Nations Educational, Scientific and Cultural Organization, Centre National du Machinisme Agricole, du Genie Rural, des Eaux et des Forets, Centre National de la Recherche Scientifique - France

Universita degli Studi dell Aquila - Italy

**Relevance to CIRCLE:** Environmental and ecosystems change in mountainous regions

## **GREENCYCLES: Biogeochemistry and Climate Change Research and Training Network**

### **Coordinator:**

Commissariat a l'Energie Atomique,

Laboratoire des Sciences du Climat et de l'Environnement,

31-33 Rue de la Federation, 75752 Paris, France

*Short description: Human activity is believed to be having a profound influence on the global environment through inadvertent changes in the atmospheric concentrations of greenhouse gases. It is almost certain that these effects are already altering global climate patterns and will have major impacts on the future well-being of life on earth. However, our understanding of these changes remains inadequate to predict with confidence the evolution of the earth system over the rest of this century and beyond*

End time: 2009-01-01 (Marie Curie)

[www.greencycles.org](http://www.greencycles.org)

12 partners. Partners from CIRCLE Countries:

Lund University - Sweden

Vrije Universiteit Amsterdam - Netherlands

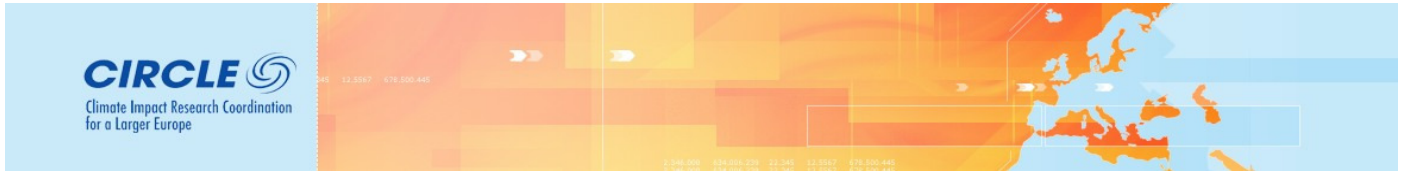
Potsdam Institute for Climate Impact Research, Max-Planck-Gesellschaft - Germany

Instituto Superior de Agronomia - Portugal

Universite Joseph Fourier Grenoble 1, Centre National de la Recherche Scientific, Alcatel Space - France

**Relevance to CIRCLE:** Anthropogenic influence of the greenhouse gas balance. Climate change research and training network.





## **INDEX: Indicators and thresholds for desertification, soil quality, and remediation**

### **Coordinator:**

GSF-Forschungszentrum für Umwelt und Gesundheit GmbH,  
 Ingolstädter Landstrasse 1,  
 85764 NEUHENBERG, Germany

*Short description: Land degradation (incl desertification) is a paramount international problem, and indicators have been developed to follow it. Many are based on (1) plant communities, or (2) soil loss or (3) salinity. They tend to monitor the status quo over large time periods and are more suitable for crisis assessment than for risk prevention. They are also poorly suited for the sensitive monitoring of the success of remediation efforts.*

End time: 2007-01-01 (STREP)

[www.soil-index.com/english/home](http://www.soil-index.com/english/home)

6 partners. Partners from CIRCLE countries:

Wpa beratende Ingenieure GMBH – Austria

Szent Istvan University, University of Szeged - Hungary

Consiglio Nazionale delle Ricerche – Italy

**Relevance to CIRCLE:** Desertification and soil quality issues are serious and important impacts of climate change.

## **LESSLOSS: Risk Mitigation for Earthquakes and Landslides.**

### **Coordinator:**

Universita degli Studi di Pavia,  
 Dipartimento di Meccanica Strutturale,  
 Strada Nuova 65,  
 27100 Pavia, Italy

*Short description: Earthquake and landslide risk is a public safety issue that requires appropriate mitigation measures and means to protect citizens, property, infrastructure and the built cultural heritage. Mitigating the risk requires integrated and coordinated action that embraces a wide range of organisations and disciplines.*

End time: 2007-09-01 (IP)

28 partners. Partners from CIRCLE countries:

Geotechnical Institute - Sweden





Osterreichisches Forschungs- und Prufzentrum Arsenal Ges.m.b.H., VCE Holding GmbH - Austria

Rheinisch-Westfalische Technische Hochschule Aachen Munich Reinsurance Company, Maurer Soehne GmbH & Co. KG - Germany

Commissariat a l'energie atomique, Vince Construction Grands Projects Geodynamique et Structure, Institut National Polytechnique de Grenoble, INSA-LYON-Institut, National des Sciences Appliquees de Lyon, Bureau de Reserches Geologiques etMinieres - France

ALGA Applicazione Lavorazione Giunti Appoggi S.p.A., Presidenza del Consiglio dei Ministri - Dipartimento della Protezione, NewHYDRO S.r.l., Ente per le Nuove Tecnologie, L'Energia e l'Ambiente, Istituto Nazionale di Geofisica e Vulcanologia Studio Geotecnico Italiano S.r.l. STAP - Reparacao, Consolidacao e Modificacao de Estruturas, S.A., Universita degli Studi di Napoli Federico II, Universita di Roma La Sapienza, Universita degli Studi di Milano Bicocca - Italy

Laboratorio Nacional de Engenharia Civil, Faculdade de Engenharia da Universidade do Porto, Instituto Superior Tecnico - Portugal

Norwegian Geotechnical Institute - Norway

Commission of the European Communities, Universite de Liege - Belgium

**Relevance to CIRCLE:** Landslide risk research and studies and mitigation measures for citizens and the built environment.

## **MARBEF: Marine biodiversity and Ecosystem functioning**

### **Coordinator:**

Netherlands institute of Ecology, Centre for Estuarine and Marine Ecology,

Korringaweg 7, 4400 Yerseke, NL

*Short description: Knowledge on marine biodiversity in Europe is fragmented within and between disciplines. The approach to understanding the effects of increased anthropogenic pressure on marine biodiversity has hitherto been ad hoc locally. In particular, to understand how marine ecosystems will adapt to climate change, we need addressing especially the long-term and large-scale changes in marine biodiversity.*

End time: 2009-02-01 (NoE)

[www.marbef.org](http://www.marbef.org)

26 partners. Partners from the CIRCLE countries:

University of Gothenburg - Sweden

Stichting Nederlands stituut voor Onderzoek der Zee, Rijksuniversiteit Groningen, Nationaal Natuurhistorisch Museum, Wageningen Universiteit, Netherlands Institute for Fisheries Reserach, Netherlands; Rijkinstituut voor Kust en Zee, Universiteit van Amsterdam, Universiteit Maastricht, Expert Center for Taxonomic Identification - Netherland

Havforskningsinstituttet, Akvaplan-Niva, Universitet i Oslo - Norway

Centro Interdisciplinar de Investigacao Marinha e Ambiental, Universidade dos Acores - Portugal

Institut fuer Meereskunde an der Universitaet, Max Planck Gesellschaft, Institut fuer Oestseeforschung Warnemuende, Alfred-Wegener-Institut, Senckenbergische Naturforschende Gesellschaft - Germany

Vlaams Instituut voor de Zee, Universiteit Gent - Belgium

Institut Français de Recherche pour l'Exploration de la Mer, Centre National de la Recherche Scientifique - France





Stazione Zoologica Anton Dohrn, Consorzio Nazionale Interuniversitario per le Scienze del Mare, Consiglio Nazionale delle Ricerche, Università degli Studi di Pisa - Italy

Abo Akademi University - Finland

**Relevance for CIRCLE:** Biodiversity.

## **MODELKEY: Models for Assessing and Forecasting the Impact of Environmental Key Pollutants on Marine and Freshwater Ecosystems and Biodiversity.**

*Coordinator:*

UFZ - Umweltforschungszentrum Leipzig - Halle GmbH, Department of Chemical Ecotoxicology, Permoserstrasse 15 Postfach 2, 4318 Leipzig, GERMANY.

Short description: *MODELKEY* comprises a multidisciplinary approach aiming at developing interlinked and verified predictive modelling tools as well as state-of-the-art effect-assessment and analytical methods generally applicable to European freshwater and marine ecosystems: 1) to assess, forecast, and mitigate the risks of traditional and recently evolving pollutants on fresh water and marine ecosystems and their biodiversity at a river basin and adjacent marine environment scale, 2) to provide early warning strategies on the basis of sub-lethal effects *in vitro* and *in vivo*, 3) to provide a better understanding of cause-effect-relationships between changes in biodiversity and the ecological status, as addressed by the Water Framework Directive, and the impact of environmental pollution as causative factor, 4) to provide methods for state-of-the-art risk assessment and decision support systems for the selection of the most efficient management options to prevent effects on biodiversity and to priorities contamination sources and contaminated sites, 5) to strengthen the scientific knowledge on an European level in the field of impact assessment of environmental pollution on aquatic eco-systems and their biodiversity by extensive training activities and knowledge dissemination to stakeholders and the scientific community.

End time: 2010-02-01 (IP)

22 partners

Relevans for CIRCLE:

[www.modelkey.ufz.de](http://www.modelkey.ufz.de)

22 partners. Partners from CIRCLE countries:

Vrije Universiteit Amsterdam, Nederlands Instituut voor Visserij Onderzoek, Rijksinstituut voor Kust & Zee, Universiteit Antwerpen, Rijksinstituut voor Volksgezondheid en Milieu, Stichting Waterloopkundig Laboratorium – The Netherlands

Consorzio Venezia Ricerche - Italy

Arbeitsgemeinschaft für die Reinhaltung der Elbe ECT Oekotoxikologie GmbH, Universität Stuttgart – Germany

Donabaum & Wolfram OEG - Austria

University of Joensuu - Finland

Centre National de Recherche Scientifique – France

**Relevance for CIRCLE:** Climate change could increase risk of migration of pollutions in soil and ground water. Modeling these risks is relevant for CIRCLE.





## **NA.R.AS: Natural risks assessment harmonisation of procedures, quantification and information.**

### *Coordinator:*

Università di Napoli Federico II, Centro Regionale di Competenza Analisi e Monitoraggio del Rischio Ambientale (CRdC AMRA), Corso Umberto I, 40, 80125 Napoli, ITALY.

*Short description: Mediterranean countries are subject to frequent and different natural catastrophes that pay a high toll in terms of economic loss and human life. Since some tens of years EU countries are trying to mitigate the effects of these events mainly by means of prevention. Scientific progress in natural risk assessment and mitigation has increased the capacity of public administration to cope with high risk deriving from volcanic and hydro-geological events, to use satellites for short term prediction of meteorological events and floods, to work out, refine and enforce seismic EUROCODE 8. Several research projects have been supported by EU Framework Programs.*

End time: 2006-09-01 (SSA)

2 partners. Partners from CIRCLE countries:

Université de Nice-Sophia Antipolis - France

**Relevance for CIRCLE:** More general of Natural Risk Assessment.

## **NEWATER: New Approaches to Adaptive Water Management under Uncertainty.**

### *Coordinator:*

University of Osnabrueck; Institute of Environmental Systems Research (USF), Neuer Graben / Schloss, 49076 Osnabrueck, GERMANY

*Short description: 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.*

End time: 2009-01-01 (IP)

22 partners.

Partners from CIRCLE countries:

Umeaa University – Sweden

International Institute for Applied Systems Analysis - Austria

Umweltforschungszentrum Leipzig-Halle, Seecon Deutschland GmbH, Max-Planck-Gesellschaft, Ecologic- Institute for International and European Environmental Policy, Universitaet Kassel, Rheinische Friedrich-Wilhelms-Universitat, Potsdam Institute for Climate Impact RES - Germany





Vrije Universiteit Amsterdam - Institute for Environmental Studies, Wageningen University, Alterra, Rijksinstituut voor Integraal Zoetwaterbeheer en Afvalwaterbehandeling, Technische Universiteit Delft, Maastricht University, University of Twente - Netherlands

Fondazione Eni Enrico Mattei, National RES Council - Italy

Instituto de Soldadura e Qualidade - Portugal

Centre National du Machinisme Agricole, du Genie Rural des Eaux et des Forets - France

Katholieke Universiteit Leuven – Belgium

**Relevance for CIRCLE:** Water management is highly relevant to climate change research

[www.newater.info](http://www.newater.info)

## **NOAH'S ARK: GLOBAL CLIMATE CHANGE IMPACT ON BUILT HERITAGE AND CULTURAL LANDSCAPES**

*Coordinator:*

CONSIGLIO NAZIONALE DELLE RICERCHE, ISTITUTO DI SCIENZE DELL'ATMOSFERA E DEL CLIMA, Piazzale Aldo Moro 7, 185 ROMA, ITALY.

Short description: *Climate change over the next 100 years will likely have a range of direct and indirect effects on the natural and material environment, including the historic built environment. Important changes will include alterations in temperature, precipitation, extreme climatic events, soil conditions, groundwater and sea level. Some processes of building decay will be accelerated or worsened by climate change, while others will be delayed.*

End time: 2007-05-01 (STREP)

9 partners.

Partners from CIRCLE countries:

Korrosionsinstitutet - Sweden

University of East Anglia, Ecclesiastical Insurance Group, University College London - UK

Norsk Institutt for Luftforskning - Norway

**Relevance for CIRCLE:** Climate change impact on built heritage and cultural landscapes

[www.noahsarksearch.com](http://www.noahsarksearch.com)

## **RECONDES: Conditions for Restoration and Mitigation of Desertified Areas Using Vegetation.**

*Coordinator:*

UNIVERSITY OF PORTSMOUTH HIGHER EDUCATION CORPORATION, Department of Geography, University House, Winston Churchill Avenue, PO1 2UP PORTSMOUTH, UNITED KINGDOM.





Short description: *The focus of RECONDES is to address the mitigation of desertification processes by the means of innovative techniques using vegetation in specific landscape configurations prone to severe degradation processes. Its major objective is to produce practical guidelines on the conditions for use of vegetation in areas vulnerable to desertification, taking into account spatial variability ingeomorphological and human-driven processes related to degradation and desertification.*

End time: 2007-02-01 (STREP)

5 partners.

Partners from CIRCLE countries:

Universiteit van Amsterdam – The Netherlands

Universite Catholique de Louvain, Katholieke Universiteit Leuven - Belgium

Consiglio Nazionale Delle Ricerche - Italy

**Relevance for CIRCLE:** Desertification

[www.port.ac.uk/research/recondes/](http://www.port.ac.uk/research/recondes/)

## **RIVERTWIN: A Regional Model for Integrated Water Management in Twinned River Basins.**

*Coordinator:*

UNIVERSITAET HOHENHEIM, Institute of Soil Science and Land Evaluation (310), Schloss 1, 70599 STUTTGART, GERMANY.

Short description: *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.*

End time: 2007-03-01 (STREP)

10 partners

Partners from CIRCLE countries:

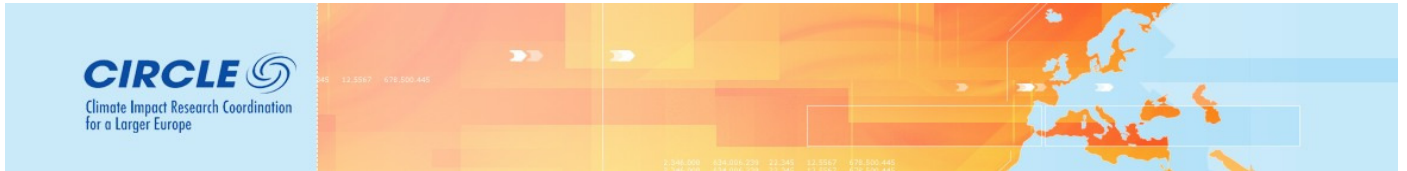
Stockholm Environment Institute - Sweden

Schneider & Jorde Ecological Engineering, Universitaet Stuttgart, Terra Fusca, Marohn & Lange - Germany

Stichting Onderzoek WereldvoedselVoorziening Van De Vrije Universiteit - Netherlands

**Relevance for CIRCLE: maybe more a IWRM topic. New handling on Water Management is, however, an impact of Climate Change**

[www.rivertwin.org](http://www.rivertwin.org)



## **SENSOR: Sustainability Impact Assessment: Tools for Environmental, Social and Economic Effects of Multifunctional Land Use in European Regions.**

### *Coordinator:*

Leibniz-Zentrum für Agrarlandschafts- und Landnutzungsforschung e.V., Directorate, Eberswalder Str. 84, 15374 Müncheberg, GERMANY

Short description: *Sustainability of land use in European regions is a central point of policy and management decisions at different levels of governance. Implementation of European policies designed to promote and protect multifunctional land use requires the urgent development of robust tools for the assessment of different scenarios' impacts on the environmental and socio-economic sustainability.*

End time: 2008-12-01 (IP)

21 partners .

Partners from CIRCLE countries:

Lund University - Sweden

University of Bath, Forestry Commission Research Agency, Macaulay Institute, The University Court of the University of Aberdeen, Natural Environment Research Council, University of Nottingham - UK;

ARC systems research, International Institute for Applied Systems Analysis, Universität für Bodenkultur Wien, Universität Wien - Austria

Wageningen University, Alterra, Landbouw-Economisch Instituut (LEI) B.V. – The Netherlands

University of Western Hungary, Szent Istvan Egyetem – Hungary

European Forest Institute – Finland,

Humboldt-Universität zu Berlin, Brandenburgische Technische Universität Cottbus, Technische Universität München - Germany

Università degli Studi di Firenze - Dipartimento di Economia Agraria e delle Risorse Territoriali - Italy

European Commission, General Directorate Joint Research Centre - Belgium

Chambre de Commerce et d'Industrie de Paris', Centre national du machinisme agricole, du génie rural, des eaux et des forêts - France

### **Relevance for CIRCLE: Interdisciplinary approach**

[www.ip-sensor.org](http://www.ip-sensor.org)

## **SOBIO: MOBILISING THE EUROPEAN SOCIAL RESEARCH POTENTIAL IN SUPPORT OF BIODIVERSITY AND ECOSYSTEM MANAGEMENT**

### *Coordinator:*

EUROPEAN CENTRE FOR NATURE CONSERVATION, European Centre for Nature Conservation, Reitseplein 3 PO Box 90154, 5000 LG TILBURG, THE NETHERLANDS

Short description: *Counteracting the decline of biodiversity and ensuring the sustainable management of ecosystems requires insight into the socio-economic processes and structures,*





which directly or indirectly impact on them. However, there is a discrepancy in the amount of research work carried out in the economic domain, and the amount of work done in the more strictly social domain.

End time: 2006-02-01 (CA). Continuation not known

7 partners.

Partners from CIRCLE countries: Not defined

**Relevance for CIRCLE: Interdisciplinary research and preservation of biodiversity**

### **TWINBAS: Twinning European and third countries river basins for development of integrated water resources management methods.**

*Coordinator:*

IVL SVENSKA MILJÖINSTITUTET AB, IVL Swedish Environmental Research Institute, Department of Remote Sensing and GIS, Haelsingegatan 43 PO Box 21060, 10031 STOCKHOLM, SWEDEN

Short description: *Strategic objectives. To fill gaps in knowledge and methods in order to enable implementation of a harm sided IWRM approach that addresses the European Water Initiative, in five river basins. 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.*

End time: 2006-12-01 (STREP)

6 partners.

Partners from CIRCLE countries:

University of Southampton, Natural Environment Research Council – UK

Institut for vand og Miljoe - Denmark

**Relevance for CIRCLE: Climate change impact on water resources management**

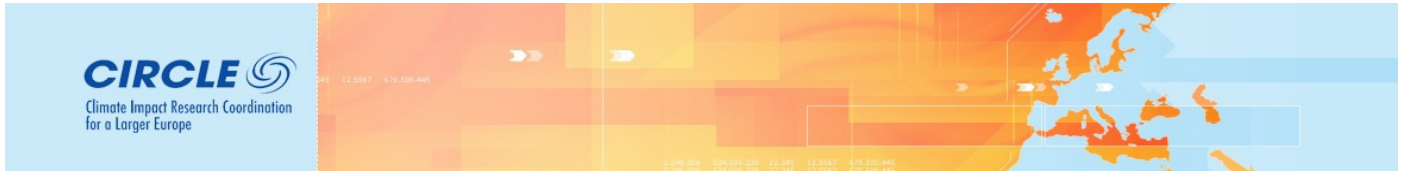
## **2. International Organisations, Networks and Programmes**

### **2.1 Major International Organisations**

#### **International Geosphere-Biosphere Programme (IGBP)**

The vision of IGBP is to provide scientific knowledge to improve the sustainability of the living Earth. IGBP studies the interactions between biological, chemical and physical processes and human systems.





[www.igbp.kva.se/cgi-bin/php/frameset.php](http://www.igbp.kva.se/cgi-bin/php/frameset.php)

### **Past Global Changes (PAGES)**

PAGES support all paleoenvironmental and paleoclimate research efforts directed to secure a quantitative understanding of natural and human-induced variations of the Earth system in the past, in order to make sound predictions of future climate, environment and sustainability. PAGES seeks to facilitate interdisciplinary and international cooperation in research and to involve scientists from developing countries in the world-wide paleo-community. PAGES main areas of focus include integrating international paleoresearch, encouraging research partnerships, strengthening the involvement of scientists from developing countries, supporting educational programs, engaging with the climate modelling community, and facilitating public access to paleoclimate data.

[www.pages.unibe.ch](http://www.pages.unibe.ch)

### **Land-Use and Land-Cover Change (LUCC)**

The LUCC project is a program element of the International Geosphere-Biosphere Programme (IGBP) and the International Human Dimensions Programme on Global Environmental Change (IHDP) This project is an interdisciplinary programme aimed at improving the understanding of the land use and land cover change dynamics and their relationships with the global environmental change. From its inception the planning and implementation of the project has actively engaged both the physical and social science communities, and this will continue to be an important modus operandi in the future. The objectives are 1) to obtain a better understanding of global land-use and land-cover driving forces. 2) To investigate and document temporal and geographical dynamics of land-use and land-cover. 3) To define the links between sustainability and various land uses. 4) To understand the inter-relationship between LUCC, biogeochemistry and climate.

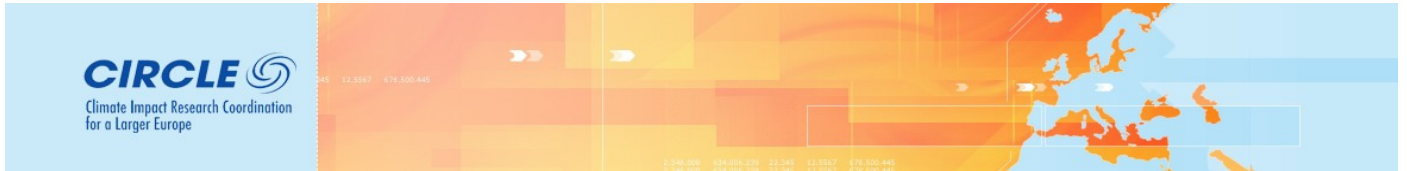
[www.geo.ucl.ac.be/LUCC/lucc](http://www.geo.ucl.ac.be/LUCC/lucc)

### **International Human dimensions Programme on Global Environmental Change (IHDP)**

IHDP's mission is to generate scientific knowledge on coupled human-environment systems, achieve comprehensive understanding of global environmental change processes and their consequences for sustainable development, and make contributions to explore the anthropogenic drivers of global environmental change, the impact of such change on human welfare, and societal responses to mitigate and adapt to global environmental change

[www.uhdp.uni-bonn.de](http://www.uhdp.uni-bonn.de)





## World Climate impact research and adaptation strategies Programme (WCRP)

The objectives of the WCRP are to develop the fundamental scientific understanding of the physical climate system and climate processes needed to determine to what extent climate can be predicted and the extent of human influence on climate.

[www.wmo.ch/web/wcrp/wcrp-home.html](http://www.wmo.ch/web/wcrp/wcrp-home.html)

## Intergovernmental Panel on Climate Change (IPCC)

The well-known role of the IPCC is to assess on a comprehensive, objective, open and transparent basis the scientific, technical and socio-economic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts and options for adaptation and mitigation.

[www.ipcc.ch/](http://www.ipcc.ch/)

## The World Bank's Climate Change Group

The Team is located within the Environment Department and is part of the Bank's Environmentally and Socially Sustainable Network. The Climate Change Team provides resources and expertise for the World Bank's participation in international climate change negotiations under the United Nations Framework Convention on Climate Change (UNFCCC), and provides technical advice to the World Bank's Global Environment Facility (GEF) Program on the preparation of GEF climate change mitigation projects in energy efficiency and renewable energy and on development of strategic initiatives with the Global Environment Facility (GEF). The Team also is leading the Bank's efforts related to climate change vulnerability and adaptation issues for its client countries, and coordinates these efforts with the Bank's Disaster Management Facility.

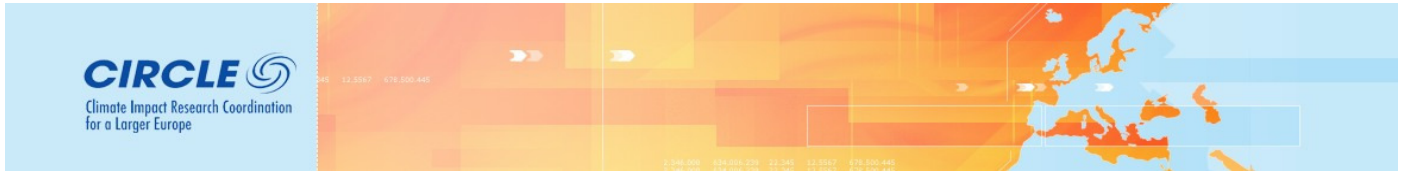
<http://Inweb18.worldbank.org/ESSD/envext.nsf/46ByDocName/ClimateChange>

## UNESCO – Man and Biosphere (UNESCO-MAB)

UNESCO'S Man and the Biosphere (MAB) Programme develops the basis, within the natural and the social sciences, for the sustainable use and conservation of biological diversity, and for the improvement of the relationship between people and their environment globally. The "Global change research in Mountain Biosphere Reserves" project (GLOCHAMORE) was launched by UNESCO and the Mountain Research Initiative (MRI) to study the impact of global change in the mountain environment.

[www.unesco.org/mab](http://www.unesco.org/mab)

[www.unesco.org/mab/mountains/home.htm](http://www.unesco.org/mab/mountains/home.htm)



## 2.2 Energy Efficiency and the Development of Sustainable Energy resources (OECD/IEA)

The International Energy Agency (IEA) is an autonomous agency linked with the Organisation for Economic Co-operation and Development (OECD) and based in Paris. The IEA's main decision-making body is the Governing Board (GB), composed of senior energy officials from each member country. The IEA has more working and decision levels (Subordinate bodies) below the GB. A secretariat with a staff of energy experts drawn from Member countries supports the work of GB and subordinate bodies. The IEA (established 1974) is the energy forum for 26 industrialised countries. IEA member governments are committed to taking joint measures to meet oil supply emergencies. They also have agreed to share energy information, to co-ordinate their energy policies and to co-operate in the development of rational energy programmes. The treaty objectives are:

- To maintain and improve systems for coping with oil supply disruptions.
- To promote rational energy policies in a global context through co-operative relations with non-member countries, industry and international organisations.
- To operate a permanent information system on the international oil market
- To improve the world's energy supply and demand structure by developing alternative energy sources and increasing the efficiency of energy use.
- To assist in the integration of environmental and energy policies.

– Reporting on CO<sub>2</sub> emissions from fossil fuels and developing climate friendly technologies, researching topics as diverse as renewable energy, energy efficiency and new carbon capture and storage technologies.

[www.iea.org](http://www.iea.org)

## 2.3 Other International Organisations

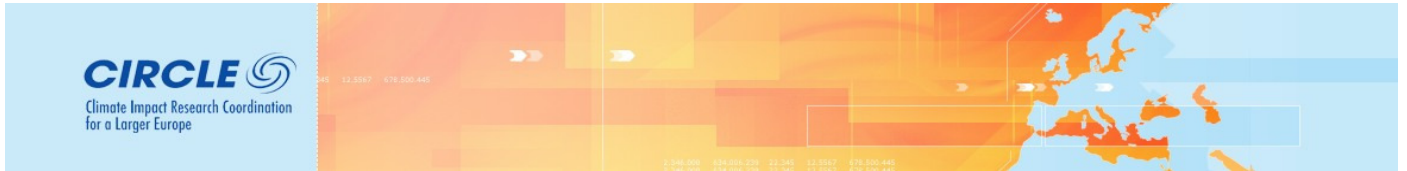
### Center for International Earth Science Information Network (CIESIN)

61 Route 9W  
PO Box 1000  
Palisades, NY 10964 USA

<http://www.ciesin.org>

The Center for International Earth Science Information Network (CIESIN) is a center within the [Earth Institute](#) at [Columbia University](#). CIESIN works at the intersection of the social, natural, and





information sciences, and specializes in on-line data and information management, spatial data integration and training, and interdisciplinary research related to human interactions in the environment.

### **International Permafrost Association (IPA)**

The International Permafrost Association, founded in 1983, has as its objectives to foster the dissemination of knowledge concerning permafrost and to promote cooperation among persons and national organizations engaged in scientific investigation and engineering work on permafrost.

[www.geo.uio.no/IPA](http://www.geo.uio.no/IPA)

### **Permafrost Network (GTN-P)**

The global Terrestrial Network for Permafrost (GTN-P) was initiated by the International Permafrost association IPA to organize and manage a global network of permafrost observatories for detecting , monitoring, and predicting climate change.

[www.gtnp.org](http://www.gtnp.org)

### **The International Tundra experiment**

The International Tundra Experiment (ITEX) is a scientific network of experiments focusing on the impact of climate change on selected plant species in tundra and alpine vegetation.

[www.geog.ubc.ca/itx](http://www.geog.ubc.ca/itx)

### **International Group of funding Agencies for Global Change Research (IGFA)**

IGFA is a forum of national agencies that fund research on global change may interact, however, IGFA itself does not provide any research funding. IGFA is a world wide operating network and has a wide thematic focus regarding global change (e.g. including land use patterns) whereas CIRCLE will consider the special situation of Europe and has the thematic focus of climate change impact research with more depth.

[www.igfagcr.org](http://www.igfagcr.org)



## The Nature Conservancy(TNC)

The Nature Conservancy's mission to preserve the plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive. TNC has developed a strategic, science-based planning process, called "Conservation by Design", which helps to identify the highest-priority places, landscapes and seascapes that, if conserved, promise to ensure biodiversity over the long term. "Conservation by Design" allows to achieve meaningful, lasting conservation result. The Nature Conservancy has five priority conservation initiatives to address the principal threats to conservation at the sites where we work, focusing on fire, climate change, freshwater, marine and invasive species.

[www.nature.org](http://www.nature.org)

## Global Terrestrial Observing System (GTOS)

The Global Terrestrial Observing System fulfils its mission through a number of complementary activities. Strengthening the communication between similarly minded groups and harmonizing their efforts is of highest priority. To this effect, the observing system often plays the broker – bringing people from different fields of expertise together at one table. In addition to networking, GTOS also develops regional programmes and coordinates demonstration projects.

[www.fao.org/gtos](http://www.fao.org/gtos)

## The Global Ocean Observing System GOOS)

GOOS is permanent global system for observations, modelling and analysis of marine and ocean variables to support operational ocean services worldwide. GOOS will provide accurate descriptions of the present state of the oceans, including living resources; continuous forecasts of the future conditions of the sea for as far ahead as possible; and the basis for forecasts of climate change.

[www.ioc.unesco.org/goos](http://www.ioc.unesco.org/goos)

## Coastal Network (GTN-C)

GTOS was creating this coastal initiative which will be responsible for the terrestrial component of coastal study. The key coastal issues are the terrestrial of a) sand and sediment movement, b) chemical contamination, c) carbon budget and primary productivity, d) water quantity and quality, e) wetland conservation, f) biodiversity and biocomplexity and g) sealevel rise from global climate change.

[www.fao.org/gtos/gt-netCOA](http://www.fao.org/gtos/gt-netCOA)





## Global Climate Observation System (GCOS)

In 1992, four international organizations created the Global Climate Observation System (GCOS) to coordinate the acquisitions of this critical information. The Global Climate Observing System insures and coordinates the acquisition of data for: 1) climate system monitoring, climate change detection and response monitoring especially in terrestrial ecosystems; 2) the application of climate information to national economic development; 3) research toward improved understanding, modelling, and prediction of the climate system. GCOS prioritizes the observations needed for; 1) prediction of seasonal and interannual climate variability; 2) detection of climate change; 3) reduction of uncertainties in climate prediction. GCOS approaches climate as an integrated system that includes the atmosphere, the oceans, the land surface, the cryosphere, and the biosphere.

[www.wmo.ch/web/gcos/gcoshome.html](http://www.wmo.ch/web/gcos/gcoshome.html)

## Mountain Research Initiative (MRI)

The Initiatives vision is a global change scientific program that detects signals of global environmental change in mountain environments, defines the consequences of global environmental change for mountain regions as well as lowland systems dependent on mountain resources and informs sustainable land, water, and resource management for mountain regions at local to regional scales. The MRI program has three elements: communication, framing the research agenda and funding.

[www.mri.scnatweb.ch](http://www.mri.scnatweb.ch)

## The Global Observation Research Initiative in Alpine Environments (GLORIA)

The purpose of GLORIA is to establish and maintain a world-wide long-term observation network in alpine environments. Vegetation and temperature data collected at the GLORIA sites will be used for discerning trends in species and temperature. The data will be used to assess and predict losses in biodiversity and other threats to these fragile alpine ecosystems which are under accelerating climate change pressures.

[www.gloria.ac.at](http://www.gloria.ac.at)

## Arctic Monitoring and Assessment Programme (AMAP)

The primary function of AMAP is to advice the governments of the eight Arctic countries (Canada, Denmark/Greenland, Finland, Iceland, Norway, Russia, Sweden and the United States) on matters relating to threats to the arctic region from pollution, and associated issues. One of the



activity focus of AMAP is to monitor and assess impacts of climate change and UV radiation in the Arctic, including their effects on Arctic ecosystems and human health, taking into account the scientific recommendations of the ACIA assessment.

[www.amap.no](http://www.amap.no)

### **World Glacier Monitoring Service (WGMS)**

As a contribution to the Global Environment Monitoring System (GEMS/GTOS) of the United Nations Environment Programme (UNEP) and to the International Hydrological Programme (IHP) of the United Nations Educational, Scientific and Cultural Organisation (UNESCO), the WGMS of the Commission on Cryospheric Sciences of the International Union of Geodesy and Geophysics (CCS/IUGG) and the Federation of Astronomical and Geophysical Data Analysis Services (FAGS/ICSU) today collects and publishes worldwide standardized glacier data.

[www.geo.unizh.ch/wgms](http://www.geo.unizh.ch/wgms)

### **Global Land Ice Measurements from Space (GLIMS)**

GLIMS objectives are to establish a global inventory of land ice, including surface topography, to measure the changes in extent of glaciers and, where possible, their surface velocities. This project is designed to use primarily data from the ASTER (Advanced Space-borne Thermal Emission and

Reflection radiometer) instrument, and the monitoring activities are expected to continue through the life of the ASTER mission. This work will also establish a digital baseline inventory of ice extent for comparison with inventories at later times but the monitoring of glaciers and the cause of their changes, will lead to a greater understanding of global change and its causes.

[www.glims.org](http://www.glims.org)

### **Hydrology Network (GTN-H)**

GTN-H is a global hydrological “network of networks”, that builds on existing networks and data centres and produces value-added products through enhanced communications and shared development. It has been jointly developed by GCOS and GTOS.

GTN-H entered its implementation stage during 2002-2003. The force function of GTN-H include:

1. Provide users with timely access to global hydrological data and meta-data;
2. Generate relevant products (including global-scale data products) and related documentation in a time frame and of a quality that is required by users;
3. Promote method standardization and the use of “best” practices (including policies, quality control, data formats, coding and transmission)





4. Promote and facilitate free and unrestricted exchange of data and products within the existing framework
5. Promote data integration, including both multiple platform observations and cross-network data
6. Evaluate adequacy of networks
7. Monitor and evaluate GTN-H performance
8. Contribute to identifying the key observational requirements of GTN-H, including requirements for satellite observations
9. Provide support for capacity-building.

[www.gtn-h.unh.edu/PHP/index.php](http://www.gtn-h.unh.edu/PHP/index.php)

### 3. Selected National Organisations/Programmes

#### Potsdam Institute for Climate Impact Research (PIK)

Telegrafenberg A 31

14473 Potsdam

Germany

Internet <http://www.pik-potsdam.de>

At PIK researchers in the natural and social sciences work together to study global change and its impacts on ecological, economic and social systems and to devise general strategies for a sustainable development of humankind and nature. PIK research projects are interdisciplinary and undertaken by scientists from the following five departments: Integrated Systems Analysis, Climate System, Natural Systems, Social Systems and Data & Computation

#### The Stockholm Environment Institute (SEI)

Lilla Nygatan, 1

Box 2142,

S-103 14 Stockholm,

Sweden

<http://www.sei.se>

SEI's mission is to support decision-making and induce change towards sustainable development around the world by providing integrative knowledge that bridges science and policy in the field of environment and development.





### **Institute for Environment and Human Security (UNU-EHS)**

Goerresstrasse 15  
D-53113 Bonn, Germany

<http://www.ehs.unu.edu>

UNU-EHS explores threats to human security arising from natural and human-induced hazards. The Institute spearheads research, capacity building and policy-relevant advisory activities relating to the broad interdisciplinary field of 'risk and vulnerability'.

### **University Corporation for Atmospheric Research (UCAR)**

#### **National Centre for Atmospheric Research (NCAR)**

P.O. Box 3000  
Boulder, CO 80307-3000

<http://www.ucar.edu/>

UCAR, NCAR, and UOP are part of a collaborative community dedicated to understanding the atmosphere—the air around us—and the interconnected processes that make up the Earth system, from the ocean floor to the Sun's core.

The National Center for Atmospheric Research and the UCAR Office of Programs provide research, facilities, and services for the atmospheric and Earth sciences community. NCAR and UOP are managed by the nonprofit University Corporation for Atmospheric Research.

### **Tyndall Centre (HQ)**

Zuckerman Institute for Connective Environmental Research  
School of Environmental Sciences,  
University of East Anglia,  
Norwich, NR4 7TJ, UK

<http://www.tyndall.ac.uk/>

The Tyndall Centre brings together scientists, economists, engineers and social scientists, who together are working to develop sustainable responses to climate change through trans-disciplinary research and dialogue on both a national and international level – not just within the research community, but also with business leaders, policy advisors, the media and the public in general. Tyndall Centre aims to be academically strong, socially relevant, and an active communicator in Science.



### **Institute for Environmental Studies (IVM)**

Vrije Universiteit  
De Boelelaan 1085  
1081 HV Amsterdam  
The Netherlands  
<http://www.ivm.falw.vu.nl>

The Institute for Environmental Studies (Instituut voor Milieuvraagstukken, IVM) is the oldest environmental research institute in the Netherlands. Since its creation in 1971, IVM has built up considerable experience in dealing with the complexities of environmental problems. Its purpose is to contribute to sustainable development and the rehabilitation and preservation of the environment through academic research and training. The institute has repeatedly been evaluated as the best Dutch research group in this field.

### **UK Climate Impacts Programme**

Oxford University Centre for the Environment  
Dyson Perrins Building  
South Parks Road  
Oxford OX1 3QY  
<http://www.ukcip.org.uk/default.asp>

The UK Climate Impacts Programme (UKCIP) provides scenarios that show how our climate might change and co-ordinates research on dealing with our future climate. UKCIP shares this information, free of charge, with organisations in the commercial and public sectors to help them prepare for the impacts of climate change.

## **4. ERA-NETs with relevance to CIRCLE**

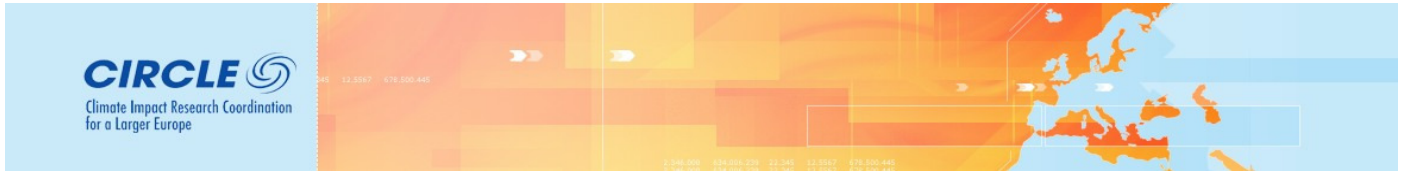
A complete catalogue/set of running ERA-NETs can be downloaded from [www.lu/coordination/home.html](http://www.lu/coordination/home.html)

In addition to that each ERA-NET has its own website. Most of the ERA-NETs are launched in the 6<sup>th</sup> Framework Programme of the Commission ( 6<sup>th</sup> FP)

This list shows the most relevant ones to CIRCLE.

### **Series IV**





## CIRCLE (!)

[www.circle.era-net](http://www.circle.era-net)

## IWRM.NET Networking water resource management; Towards a European-wide exchange Network for integrating research efforts on Integrated Water Resources Managemnet

Duration 60 months; 3 M€. 16 partners. Coordinator: Office International de l'Eau, France.

[www.oieau.fr](http://www.oieau.fr)

## Series III

### BiodivERsA: Biodiversity Research ERA NET.

Duration: 4 years; 2.8 M€. 18 partners. Coordinator: Institute National de la Recherche Agronomique/InstitutFrancais de la Biodiversité .

[www.eurobiodiversa.net](http://www.eurobiodiversa.net)

### EUROPOLAR: The European Polar Consortium

Duration 4 years . 2.485 M€. 24 partners. Coordinator: Institut Polaire Paul Emile Victor, France.

[www.europolar.org](http://www.europolar.org)

### EUWI-ERA-NET: Coordination of Member State research programmes in water science and technology for the developing world

Duration 9 months. 0.150M€ (SSA). 4 partners. Coordinator: Department of International development, UK.

[www.dfid.gov.uk](http://www.dfid.gov.uk)



## **FENCO: Promotion of an Integrated European and National R&D Initiative for Fossil Energy Technologies towards Zero Emission Power Plant.**

Duration 4 years. EC funding: 3 M€. 12 partners. Coordinator: Forschungszentrum Jülich, GmbH – Projektträger Jülich (PtJ), Germany

[www.fenco-era.net](http://www.fenco-era.net)

## **INNER: Innovative Energy Research.**

Duration: 48 months. EC funding: 1.930 M€. 12 partners. Coordinator: Forschungszentrum Jülich., Germany.

Further information: Mrs Gillian Glaze. E-mail: [g.glaze@fz-juelich.de](mailto:g.glaze@fz-juelich.de)

[www.fz-juelich.de/portal](http://www.fz-juelich.de/portal)

## **MARINERA**

*Coordinator:*

Maurice Héral, IFREMER

*Short description: MarinERA is a ERA-NET during 2004 – 2008. MarinERA is a partnership of the leading Marine RTD Funding Organisations in the European Member States (coordinated by IFREMER and managed by the Marine ESF).*

*The MarinERA project main objectives are:*

**Map** European marine RTD programmes and specialised infrastructures, facilitate the creation of an internal market and quantifying the existing European marine research capacity

**Facilitate** the networking of Marine RTD funding agencies in the European Union

**Contribute** to the development of a European Marine research policy, by identifying future scientific challenges.

**Provide** a basis for the sharing of available resources to address priority issues which are beyond the capacities of individual Member states

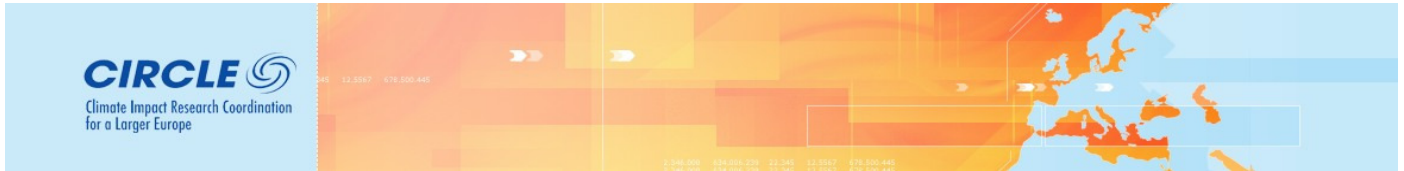
**Progress** the reciprocal opening of Member State RTD Programmes

Partners: Belgium, France, Finland, Germany, Greece, Ireland, Malta, The Netherlands, Norway, Poland, Portugal, Spain and the UK.

Relevance for CIRCLE: Climate Change and the impacts of the sustainable utilization of marine resources.

[www.marinera.net](http://www.marinera.net)





## **SKEP: Scientific knowledge for Environmental Protection – Network of Funding Agencies**

Duration: 4 years. EC funding: 2.756 M€. 13 partners. Coordinator: Environmental Agency, UK.

Further information: Michael Depledge. E-mail: [Michael.depledge@environment-agency.gov.uk](mailto:Michael.depledge@environment-agency.gov.uk)

[www.environment-agency.gov.uk/](http://www.environment-agency.gov.uk/)

## **Series II**

### **BONUS : Baltic Sea Research Programmes and Funding**

Duration: 2004 – 2007 (48 months) 3.03 M €

11 partners; From CIRCLE Countries: Finland, Germany, Sweden (3).

The objective of BONUS is to form a network and partnership of key agencies that fund research with the aim to deepen the understanding of conditions for science-based management of environmental issues in the Baltic Sea. BONUS is following the conditions of the Baltic Sea, including effects caused by Climate Change.

Further information: Kaisa Kononen, AKA, Finland (koordinator). E-mail: [Kaisa.kononen@aka.fi](mailto:Kaisa.kononen@aka.fi)

### **ERABUILD: Strategic Cooperation between national programmes promoting sustainable construction and operation of buildings.**

Duration: 36 months. EC funding: 2.529 M€. 12 partners. Coordinator: Tekes, National Technology Agency, Finland.

Further information: Mika Lautanala. E-mail: [mika.lautanala@tekes.fi](mailto:mika.lautanala@tekes.fi)

[www.tekes.fi](http://www.tekes.fi)

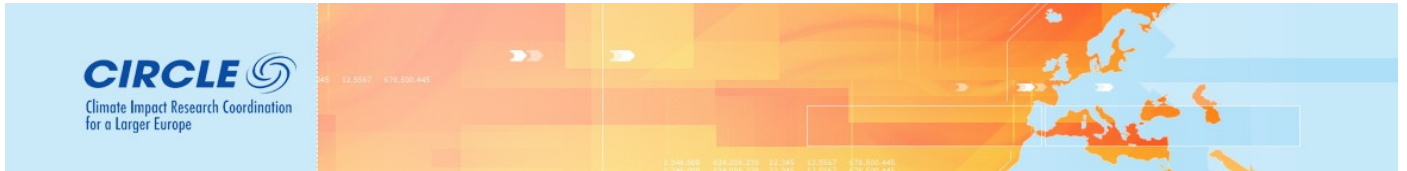
### **ERA-NET BIOENERGY: (=full title)**

Duration: 50 months. 8 partners. EC funding: 2.652 M€. Coordinator: SenterNovem, The Netherlands.

Further information: Kees Kwant, SenterNovem. E-mail: [k.kwant@senternovem.nl](mailto:k.kwant@senternovem.nl)

[www.senternovem.nl](http://www.senternovem.nl)





**PV ERA-NET: Networking and integration of national and regional programmes in the field of photovoltaic (PV) solar energy research and technological development (RTD) in the European Research Area (ERA).**

Duration: 48 months. EC funding: 2.568 M€. 16 partners. Coordinator: Forschungszentrum Jülich, GmbH, Projektträger ETN. Germany.

Further information: Dr Isolde Arzberger. E-mail: [etn@pt-etn.tz-juelich.de](mailto:etn@pt-etn.tz-juelich.de)

[www.fz-juelich.de/etn](http://www.fz-juelich.de/etn)

**HYCO: Coordination Action to Establish a Hydrogen and Fuel Cell ERA-NET, Hydrogen coordination**

Duration: 48 months. EC funding: 2.70 M€. 17 partners. Coordinator: Forschungszentrum, Jülich, Germany.

Further information: Dr Eberhard Seitz. E-mail: [e.seitz@fz.juelich.de](mailto:e.seitz@fz.juelich.de)

[www.fz-juelich.de/pj](http://www.fz-juelich.de/pj)

**CRUE: Coordination of the research financed in the European Union on flood management.**

Duration: 48 months. EU funding: 3 M€. 12 partners. Coordinator: Department for the Environment, Food and Rural Affairs.

Further information: Mr Peter Allen-Williams. E-mail: [peter.allen-wlliams@defra.gsi.gov.uk](mailto:peter.allen-wlliams@defra.gsi.gov.uk)

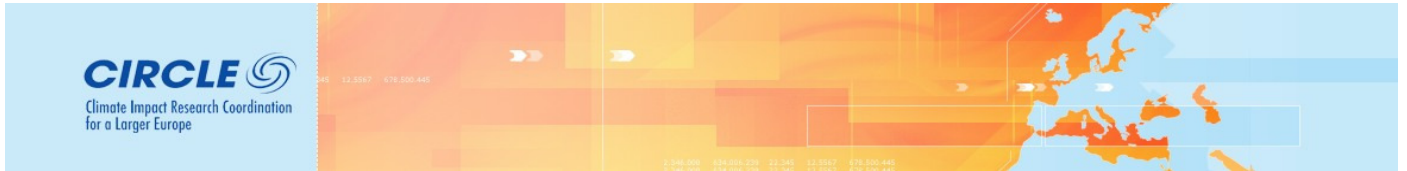
[www.defra.gov.uk](http://www.defra.gov.uk)

**Serie I**

**FENCO (see above, Series III)**

**IWRM (see above, series IV)**





## **SNOWMAN: Sustainable Management of soil and groundwater under the pressure of soil pollution and soil contamination.**

Duration: 3 years. (Extension applied for). EC funding: 1 M€. 6 partners. Coordinator: Bundesministerium für Land-und Forstwirtschaft, Umwelt und Wasserwirtschaft, Austria.

Further information: Stefan Vetter. E-mail: [stefan.vetter@bmlfuw.gv.at](mailto:stefan.vetter@bmlfuw.gv.at)

[www.eugris.org/](http://www.eugris.org/)

## **5. Selected R&D Programmes outside Europe**

### **Australia**

The Australian Greenhouse Science Program comprises a significant research program within CSIRO CLIMATE. The Program is supported through, and administrated by, the Australian Greenhouse Office. CSIRO makes a significant co-investment to the Program. The Commonwealth Bureau of Meteorology is also amajor contributor to the Australian Greenhouse Science Program.

CSIRO's contributions build on well over a decade of internationally-recognised work. During the past year, we have fundamental observations of the state of the atmosphere and of the oceans. We have completed advanced studies that further our understanding of the climate system. This improved knowledge has been implemented in computer models of the climate system, which have been rigorously validated and used in climate change simulations. The CSIRO Mark 3 model is world-class and provides the basis for downscaling climate scenarios for input to regional impact assessments. Our increasing knowledge of the carbon cycle is contributing to improvements in our capacity to predict the impacts in Australia of climate change. The Areas of research include:

Aerosols and cloud feedbacks

The role of the oceans

Terrestrial carbon and hydrological cycles

Greenhouse gases

Links between climate change, climate variability and extreme events

Climate model development, evaluation and application

Regional climate change projections





[www.cmar.csiro.au/ar/ccrp/index.html](http://www.cmar.csiro.au/ar/ccrp/index.html)

## Canada

The Government of Canada's Climate Change Impacts and Adaptation Program provides funding for research and activities to improve our knowledge of Canada's vulnerability to climate change, to better assess the risks and benefits posed by climate change and to build the foundation upon which appropriate decisions on adaptation can be made. The Program also facilitates interaction between stakeholders and researchers through support of the Canadian Climate Impacts and Adaptation Research Network (C-CIARN).

Adaptation is also a critical component of the international community's response to climate change. Adaptive capability differs among regions and is often least developed in those areas of the world likely to be most affected by climate change, such as the developing small island states.

There are five basic categories of adaptation measures that can be employed in response to an identified risk:

- Prevent the loss. Adopt measures to reduce vulnerability to climate change.
- Tolerate the loss. Do nothing to reduce vulnerability and absorb losses.
- Spread the share the loss. Do not reduce vulnerability, but rather spread the burden of losses across different systems of populations.
- Change the activity. Stop activities that are not sustainable under the changed climate, and substitute with other activities
- Change the location. Move the activity or system.

<http://adaptation.nrcan.gc.ca>

## Japan

Extensive R&D on environmental research including Climate Change is ongoing. Japan is also involved in comprehensive international collaboration on climate change research. The programmes are more or less incorporated and in close co-operation with the programmes of the US, Canada and the EU.

There are many research institutes with direct financing from the government. Japan has also powerful computer centres working with global climate modelling. One example is Asia-Pacific Integrated model (AIM) which is an international collaborative project.

The Kyoto protocol is important and, thus research programmes dealing with Beyond Kyoto (2012 – 2030) – Energy efficiency and introduction of low carbon energy and environmental friendly non





CO2 energy. Japanese companies have invested in about 400 different technologies – examples; nanotechnology, biotechnology, “zeroemission technology” and IT.

Some items from the Japanese minister- Beyond 2012:

New initiatives emerged (G8, APP, Methane P); Kyoto is the first step, need of further development; Long-term goals and ways of achieving them should be discussed; Need to mobilise reduction efforts by all measure emitters, while enabling all countries to take effective measures in accordance with their own capabilities; Investment in technology is the key to success; Focus on adaptation, sustainable development

## USA

### US Climate Change Program

The US Climate Change Science Program is part of the U.S. Global Change Research Program (USGCRP) which, in collaboration with several other national and international science programs, has documented and characterised several important aspects of the sources, abundances and lifetimes of greenhouse gases; has mounted extensive space-based monitoring systems for global-wide monitoring of climate and ecosystem parameters; has begun to address the complex issues of various aerosol species that may significantly influence climate parameters; has advanced our understanding of the global water and carbon cycles and has developed several approaches to computer modelling of the global climate.

[www.climatescience.gov](http://www.climatescience.gov)