



# ENVIRONMENTAL

Environmental concerns are gaining increasing importance on the political agenda. Global threats such as climate change, the loss of biodiversity, the struggle for water supply, the exhaustion of non-renewable resources, increasing energy consumption and persistent environmental pollution endanger the stability of our economies and societies.

Detecting the signals of change as early as possible and understanding their meaning have become crucial for designing adequate response strategies. This requires fundamental knowledge on the functioning of our global life-support systems and the development of a wide range of tools to meet the rapidly changing needs of decision makers, public agencies and media alike.

The challenge is to balance economic growth with sustainability principles. Environmental protection is not an obstacle, but a prerequisite to European competitiveness. The environmental sector is driving economic growth and job-creation – fulfilling the spirit of the EU's Environmental Technologies Action Plan. The

environment and its ecosystem services are also a driving force for attracting investments by improving the quality of life in an enlarging European Union.

The ambition of the Partnership for European Environmental Research (PEER) is to address these challenges. PEER is coordinating the resources of Europe's largest environmental research centres to create a unique European capacity in terms of scientific expertise and research infrastructures. PEER seeks to overcome fragmentation in European environmental research and to be a dynamic example of the benefits of the European Research Area.

## ENVIRONMENTAL EXPERTISE FOR DECISION MAKING

With its combined capacity of 4700 staff and annual budget of 360 Million €, PEER offers unique interdisciplinary expertise. Its members carry out basic and applied research combining different disciplines from natural and social sciences. Research covers all fields of the environment, particularly addressing the interaction between man and nature. Members cooperate in joint research projects with a large number of universities and research institutes, but also with industry and civil society at large.

PEER institutes are mainly public funded national and European competence centres. They are used to work in a policy driven context and have a long tradition of collaboration with all levels of governance, from the local to the European and wider international.

# KEY RESEARCH THEMES

Environmental research and technology should serve society, both globally and locally. All PEER research is based on strong collaborations within and outside EU.

## EVALUATING ENVIRONMENTAL POLICIES

Research on environmental governance and evaluations of policies supports public environmental debates. Innovative ways of managing our natural resources and solutions for pressing environmental issues, such as climate change, can emerge through critical analysis of current policies and policy instruments.

## HALTING THE LOSS OF BIODIVERSITY

Biodiversity supports many ecosystem services. Halting the loss of biodiversity calls for better understanding of the status, trends and distribution of species and habitats. Our research extends the knowledge of the most significant pressures on biodiversity, and explores options for the prevention and mitigation of biodiversity loss. Improved research infrastructures in Europe support joint monitoring of biodiversity.

# PEER PARTNERSHIP



## DIVERSITY IN SKILLS

PEER members are actively involved in a large number of significant research projects generating an output of 5000 publications per year. The institutes offer training of young scientists and encourage the exchange of scientific staff. Seven hundred PhD students are presently working with these institutions, benefiting from large-scale research infrastructures ranging from research vessels to specialised laboratories. PEER is open to collaboration across Europe and wants to strengthen the co-operation with partners also outside the EU, with particular emphasis on capacity building.

Access to reliable environmental information and expertise is at the heart of PEER.

Its members inform policy-makers and the public about research results and contribute to the debate on environmental issues.

## SOLVING GLOBAL WATER PROBLEMS

Water issues are a world-wide concern and even sources of conflict. The challenge is to create new knowledge of the natural and societal processes affecting our waters. New solutions are analysed in order to achieve the objectives set by legislation such as the European Water Framework Directive.

## ADAPTING TO CLIMATE CHANGE

Anthropogenic global climate change is already occurring, and continued change is unavoidable. Research on types of impacts and adaptation in natural and human systems is necessary to meet the challenge ahead.

## SEEKING FOR NEW TECHNOLOGIES

Environmental innovations have to take into account the full life cycle of products and services. Integrated assessment of technologies supports ecodesign and helps to reduce environmental impacts.

## SUSTAINING MULTIFUNCTIONAL LANDSCAPES

Landscapes offer a wide range of functions such as production, regeneration and absorption. Maintaining and enhancing these functions sustainably requires research that supports participative communication. Assessment and planning tools for multifunctional landscapes can change our view of landscape management.

## VISUALISING AND MODELLING ENVIRONMENTAL PROCESSES

Geoinformation can help us to understand and model environmental processes and support environmental policies. Spatio-temporal data is needed to understand the causes of environmental changes and to control impacts. A key challenge is to turn data into information.

## ASSESSING THE RISK OF POLLUTANTS

Environmental health needs knowledge of traditional and emerging pollutants, and on the impact of chemical mixtures. New assessment tools and approaches strengthen the scientific basis for risk managements.



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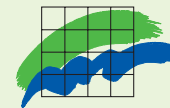
CEH - Centre for Ecology and Hydrology, United Kingdom | [www.ceh.ac.uk/](http://www.ceh.ac.uk/)



Centre for Agricultural and Environmental Engineering Research, France | [www.cemagref.fr](http://www.cemagref.fr)



Joint Research Centre - Institute for Environment and Sustainability,  
European Commission | <http://ies.jrc.ec.europa.eu>



NERI - National Environmental Research Institute, University of Aarhus, Denmark | [www.dmu.dk](http://www.dmu.dk)



SYKE - Finnish Environment Institute, Finland | [www.environment.fi/syke](http://www.environment.fi/syke)



Helmholtz Centre for Environmental Research - UFZ, Germany | [www.ufz.de](http://www.ufz.de)