

# COMING FULL CIRCLE

**Martin König explains how Climate Impact Research Coordination for a Larger Europe is achieving its aim of bringing together national research activities for CCIAV and what this means for progress in climate change preparedness.**

## HOW WAS CIRCLE SET UP AND WHAT IS ITS BASIC CONCEPT?

CIRCLE was set up by Environment Agency Austria (EAA) in 2004 and encompassed seven countries in the first phase until 2005. From 2005 on we established a much bigger partnership of 13 partner countries and seven observing countries, so that we got a really good coverage on the European scale.

We followed a step approach and firstly gathered all information we could get on national research efforts for CCIAV in all (accessible) European countries. This CIRCLE country report was a very useful tool for us as project partners, but also for interested parties such as the European Commission and the European Environment Agency.

Secondly we laid down a strategy for the future – which fields and on what basis to further cooperate. In parallel, connecting activities such as trans-national workshops and a joint database were installed. The last step of integration was the launch of trans-national joint calls among the partner countries. Preparing this needed some quite technical and of course topical coordination and in the end meant that we started to coordinate our national research strategies.

## WHAT IS IT THAT MAKES IT USEFUL TO TACKLE CCIAV RESEARCH ON A TRANS-NATIONAL ERA-NET LEVEL?

To date, research on CCIAV has been funded by national research programmes, the European Commission, the UN and in some cases by NGOs. National programmes normally have a focus on research on a national scale, sometimes including possibilities for joint research with neighbour countries or for research in developing countries. However European Programmes have had a mostly pan-European focus with few exceptions. Many issues for research in CCIAV have at least cross-border implications (for example, certain river catchments) and in numerous cases real trans-national implications – consider the impact of more frequent droughts on the water cycle or on the frequency of forest fires in the Mediterranean and related response measures.

## HOW WAS, AND IS, THE GLOBAL AND EUROPEAN POLICY ENVIRONMENT GOOD OR BAD FOR CIRCLE?

Since the IPCC issued its 4th assessment report and the Stern-report highlighted the costs of 'business as usual', climate change is very much on the political agenda. That has meant that numerous new CCIAV programmes were established on the national scale and added to our CIRCLE partnership. Besides significant coordination efforts, this has made us grow fast. Our partnership is now a powerful one.

We have a strong mandate that enables us to discuss how best to organise future CCIAV research funding within Europe with the European Commission and all our national partners.

Of course the current economic downturn and the related budget shifts towards economic stimulus programmes could endanger some research funding. But this only happens if investments in CCIAV research is regarded as simple *cost*.

But since the latest Stern-Report, it is clear to the global audience that investments in CCIAV will reap benefits in future. Helping European countries to allocate their research funding towards CCIAV in a way that enables them to take decisions for adaptation and mitigation in a sustainable and efficient manner might be one of the wisest future investments in these times. That is why I remain optimistic.

## WHICH CIRCLE RESULTS (SO FAR) HAVE HAD A SUSTAINABLE IMPACT ON THE EU?

There is our CIRCLE partnership, which has developed into a trusted and sustainable network of CCIAV funding/managing institutions across Europe. On top of that, we succeeded in further tightening the cooperation within sub-networks – namely the Mediterranean, the Nordic region, the CEE and the mountainous countries.

What really impacted on the EU, the EC and all partners was the strong will and commitment of all partners to push cooperation forwards. Hopefully one day in the near future we will be able to say that we have built something that helps us all to respond to the tremendous challenges of climate change.

## WHAT LESSONS LEARNED WOULD YOU GIVE TO POLICY MAKERS AND RESEARCH FUNDERS FROM CIRCLE?

Funding CCIAV programmes on a long-term basis (10 years or more) is important, as programmes (especially in a still-emerging field of science as CCIAV is) need time to settle and to become established and visible. It is ideal if national programmes foresee some part of their budget for international cooperation, which, for example, allow for joint calls with other national CCIAV programmes. National legislation should be flexible so that a cross-border flux of research funding is possible. At the very least, mechanisms to allow for the allocation of budgets in a common pot should be implemented.

If the EU wants to become a real European Research Area (ERA), it is essential that we find ways and tools to couple national budgets with EU budgets and to define clearly which funding mechanisms should be at which policy level (regional, national, European).

For adaptation it is excellent to have the EU's White Book now, but physical adaptation normally takes place on the local and regional level. However we must not forget that the adaptation of planning tools, legislation and market mechanisms is of course taking place on national and European level. For adaptation, I am very much in favour for putting the subsidiarity principle in action, since only this will find public acceptance in the long run. ■

**CIRCLE**  
Climate Impact Research Coordination  
for a Larger Europe

## MARTIN KÖNIG CIRCLE Coordinator

Martin holds a MSc in Geography from the University of Marburg, Germany and has set up CIRCLE in 2004 with his colleagues Herbert Haubold and Irene Gabriel and is member of the new department for environmental impact assessment and climate change at the Environment Agency Austria.

How CIRCLE is aligning national research programmes and developing collaborative forms of research, in order to fill knowledge gaps in the most efficient and effective ways.

# Coping with climate change Europe-wide

**W**hile climate change is now acknowledged as one of the big global problems, individual nations are preparing to adapt to its impact. CIRCLE – Climate Impact Research Coordination for a Larger Europe – is a EU-sponsored network of research funding organisations that coordinates Europe's national research programmes on climate change impacts and adaptation measures. CIRCLE's objective is to facilitate and establish collaboration in science and research initiatives, aimed at coordination of national research agendas. This will promote trans-national research activities and joint calls for proposals. CIRCLE aims to generate results that are useful for policymakers in decision-making processes concerning trans-national, national and/or local adaptation strategies.

## APPROACH AND RESULTS

The first steps have been to collect the knowledge and experience of the various national programmes. Clustering based on common topics, has led to the establishment of regional cooperation, such as the Mediterranean and Nordic groups.

In parallel with trans-national activities of all CIRCLE partner countries, both geographical groups have started strategic planning for short and mid-term activities. They identify common research questions and will launch joint calls for proposals. The four partners (France, Portugal, Italy and Israel) of the Mediterranean group and the region of Galicia from Spain as observer, have, in 2007, committed to a common call for research proposals on "coastal zones and water management" that is currently funding eight trans-national research projects in that area.

It is vital to predict the possible impact of climate change. Rising temperatures are melting glacier and polar ice, diverting ocean currents and shifting climatic zones. Weather patterns are changing and

extreme events like hurricanes, floods and droughts, ignoring national frontiers, become more frequent and intense. Agricultural land-use and residential patterns will change, and energy consumption for heating or cooling buildings will increase.

As a continent, Europe in particular is facing increases in earth and sea surface temperature, resulting changes in atmospheric circulation patterns and severe shifts in precipitation. It is assumed that preparation of national adaptation plans can be much more scientifically sound and economically viable if it is made on the basis of regional exchange of knowledge, according to relevant threats and relevant solutions.

The EU needs information on a Europe-wide scale to formulate policy on adapting to the impact of changing climatic

while in high mountain areas, melting glaciers that increase the risk of mass movements will attract attention. Some institutes are carrying out numerical modelling of climate patterns, while others are looking at the social and economic impact of change. Climate models are important because they enable adaptation measures to be implemented ex ante, however substantial research efforts are still needed to lower uncertainties within the models. Coordinated information about these national research programmes will enable each partner to learn from the others, to avoid duplication.

## A UNIFIED APPROACH

CIRCLE is organised into four activities to integrate what is already being done at the national level and to take it forward as a unified effort. The first is learning from each

## “ Managing climate impact needs not only transdisciplinary, but also trans-national approaches ”

conditions. CIRCLE is gathering information in these areas for all the EU member states. Its main aim is to coordinate European research on the impact of, and adaptation to, climate change, to help decision-makers at national and European levels to design effective and economic strategies. Aspects of vulnerability are considered by CIRCLE because they determine the severity of impacts with which the different areas of Europe have to cope owing to their land-use and their geographic features. This clear focus excludes any attempt to mitigate the effects of climate change, like the Kyoto Protocol, as adaptation is needed regardless of developments on greenhouse gases.

## CHOOSING THE WAY

Different regions face different problems: in a low-lying coastal area, researchers are looking at the effect of rising sea levels,

other – CIRCLE requires an interdisciplinary approach to integrate indicators of climate change that have major socioeconomic consequences. Indeed, the study of environmental impact on human health does not only concern climatology. For example, as far as the effects of heat waves and possible spread of vector-borne diseases are concerned, meteorology, hydrology, biology, soil sciences, marine sciences and forestry, building technologies, sociology and medicine also come into play. With regard to protection measures, socioeconomic sciences like economics and sociology have increasing importance. Medical sciences also play a more and more visible role owing to obvious impacts on human health. To adapt human society to the most striking impacts of climate change, it is necessary to involve not only scientists, but decision makers, stakeholders and also the public in



Large parts of Europe are at risk of serious flooding

many cases. This high degree of complexity and diversity of research needs will be kept operational through the coordination of national research programmes by CIRCLE.

Learning involves the exchange of knowledge and experiences on national programmes, their areas of focus, and their scientific and management practices. This leads to planning – defining tangible ways for the national programmes to support each other on specific issues. It is then possible to set up working links by connecting the national programmes for their mutual benefit. The fourth and major strand is fulfilling the means of an ERA-NET by establishing trans-national research programmes and joint calls for proposals.

## FOUR BY FOUR

The four strands were complemented by four cross-sectional activities – project coordination, establishing a platform for continued coordination after CIRCLE, and supporting the establishment of groups within the consortium that want to address similar issues, such as Mediterranean countries, Nordic countries, continental central and eastern Europe, mountainous countries and Atlantic coastal countries.

Finally, CIRCLE developed an active, targeted approach to disseminating its information and experience. Ideally all the relevant national research programmes of the EU, associated states and any future new member states will be part of the forum set up by CIRCLE. For awareness raising and dissemination of results to be effective, target groups have to be identified. The primary dissemination practice of CIRCLE was dialogue with future users of its outputs –

politicians, policymakers and representatives of specific societal sectors. CIRCLE designed an effective approach in getting guidance regarding research priorities, communication and further usage of the results, which enables the delivery of tailor-made knowledge to the prospective users of it. The facility for systematic assessment and adaptation to climate change in Europe complements FP7 and subsequent EU research Framework Programmes. This may lead to a larger scale Article 169 initiative, contributing substantially to the European Research Area, and supplementing international initiatives like the IPCC and UNFCCC regimes. From 2013, CIRCLE envisages becoming a key European platform in this area.

## AFTER CIRCLE?

CIRCLE was submitted in April '09. The 'squared r' stands for research and response and reflects quite well, where the project needs to go in the future – further cooperating in research and research funding, but since many CIRCLE and CIRCLE partners have a national role in adaptation, CIRCLE has a clear focus on cooperation in efforts to make society adapt to the impact of climate change. CIRCLE will be in a very good position to do so and is aimed at establishing a partner network to share national experiences for adaptation. Since quite many partner countries within the CIRCLE network have already implemented national adaptation strategies or are on a way to do so, they are in an excellent position to teach the less developed CIRCLE partner countries. But it will not only be about teaching, countries must mutually learn about the most pressing impact and the most promising response options all across Europe. ■

## AT A GLANCE

The objectives of CIRCLE's partners are to:

- LEARN from each other.
- PLAN strategic issues jointly, as the basis for a fruitful collaboration.
- CONNECT these programmes effectively by specific joint activities.
- FULFILL the ERA-Net idea by facilitating trans-national research activities and to...
- LEAD the consortium to form a strong and commonly accepted vision.
- CONTINUE this endeavour beyond the lifetime of CIRCLE.
- GROUP some programmes related to geo-climatic areas or to socio-economic issues.
- SPREAD the results of CIRCLE in accord with identified information needs.

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