

STAKEHOLDERS DEMAND REGIONAL RESEARCH DATA

Climate Hot Spot investigation

Wherever spatial planning or investment decisions are made, localized climate change research is becoming increasingly relevant.

Co-creation and tailor-made science is the new trend from Lisbon to Göteborg, from London to Budapest.

MICHEL VERSCHOOR



With the right data we can deliver state-of-the-art services

What would you decide as a board member of a Swiss or Swedish energy provider, planning to build a hydroelectric dam in a mountainous area? Without science-based data on regional precipitation and long-term temperature models, you may be risking your company's future.

To take another example: imagine you are looking for a site on which to build your family house: how would you know that it will not be a flood prone location in twenty years time, damaging your financial position in retirement?

Wherever spatial planning or investment decisions are made, questions related to climate change are becoming increasingly relevant. "Changing water levels, temperatures and flow will affect food supply, health, industry and transport and ecosystem integrity", states April 2009's EU White Paper 'Adapting to Climate Change: Towards a European Framework for Action'. According to the EU, climate change will lead to significant economic and social impact. Due to the regional variability and severity of climate impact, most adaptation, it says, will be taken at national, regional

Adapting to climate change will become part of everyday policy making

and local level. "To be able to take decisions on how to adapt, it's essential to have access to reliable data."

World Heritage Site

In England and the Netherlands, national climate knowledge centres are initiating research and adaptation programmes at national, regional and local levels. In Portugal, regional and local stakeholders are taking the lead themselves. Municipalities like Cascais or the mountainous UNESCO World Heritage Site Sintra – both popular tourist destinations – have commissioned research on the local effects of climate change on coastal erosion, water resources and projected heat-waves. Ski resorts in Austria want to know whether or not investments in certain ski areas at certain altitudes are still profitable under changing climate conditions. If not, they might convert their tourism from winter to summer options.

Decision makers all over Europe fear that safety,

health, the regional economy, or business profits might suffer from climate change. And they all demand the same thing: specific data telling them how to respond.

Climate Service Center

Henk van Liempt works as desk officer with the German Federal Ministry of Education and Research. He is one of the initiators of the national Climate Service Center (CSC), in Hamburg. "We find ourselves increasingly exposed to various groups of stakeholders asking very specific questions about consequences, probabilities and uncertainties of climate change. They aim to assess cost and benefits or risks and chances. The new clients are decision makers and stakeholders on all levels and also highly trained scientists using the data for applied research."

Van Liempt continues: "We are trying to structure climate science in such a way that it becomes more practical in terms of contributing to solutions. Besides improving e.g. climate models and forecasts we stimulate the transfer between knowing and acting. This is a stream of information going both ways. And we would like to see all the different German research institutions work closely together to this end."

The German Government started the Climate Service Centre this summer as a facilitator of exchange between science and the users of such scientific knowledge.

According to director Guy Brasseur, CSC bridges the gap between science and society. "CSC will cooperate with knowledge centres, policy-makers and stakeholders with specific needs for climate data. We are in a unique position. Certain sectors of society need answers, and scientists have to adapt. At CSC we are right in the middle of that process."

Mainstreaming

In Hamburg, Brandenburg, North Hessen and four other regions the CSC is going to work with scientists, municipal officials and the industry sector on regional strategy planning. Van Liempt: "Our aim with integrated planning is to achieve so-called climate mainstreaming. We must acknowledge that planning adaptation implies influencing many decisions that are not primarily taken with climate change in mind. We explore new arrangements where adaptation will have to be integrated into a framework of already existing policy, planning and management tools. This year, however, the Climate Service Center is focusing on the development of a strategic plan and its network



Adaptation and knowledge transfer is a two-way system

development as well as on cooperation with the financial sector. We seek cooperation with banks and insurance companies who face unknown financial risks as a result of climate change.”

On high alert

“Our main interest is not in the results of global climate change models, but in specific, regional data for the near future”, says Peter Höppe, Chair of the German Climate Change Finance Forum and Head of Geo Risks Research of Munich Reinsurance Company. “Banks and insurance companies, as well as entrepreneurs, want to know what to expect in the next five to ten years within their field of interest, on specific locations. A bank has to incorporate climate change data into its risk analyses. Likewise, insurance companies have to calculate the consequences of extreme weather events.”

Höppe’s insurance branch is on high alert since the number of devastating weather events has doubled worldwide between 1980 and 2009. “There is evidence showing that at least part of this is due to climate change.”

Within the Climate Change Financial Forum, business representatives discuss climate change knowledge gaps in the German financial sector. Höppe says: “We meet several times a year and spend a day discussing and addressing our needs and questions.” If our needs are better represented in research programs”, Höppe goes on, “the German economy as well as individual companies will benefit. With the right data we can deliver state-of-the-art services.”

Co-creation

“It’s of major importance that climate science becomes more closely connected to everyday life”, says Florrie de Pater, Knowledge Transfer Manager of two Dutch research programmes: Climate Changes Spatial

Planning and Knowledge for Climate. “Scientists operate in their own scientific domain, but with the emerging need for climate adaptation and the huge knowledge gaps in this field, it’s time for scientists to work closely together with practice.” Adapting to climate change, de Pater argues, is only possible if government organizations, both national and regional, businesses and other stakeholders actively participate in research programming. For co-creation of knowledge, it is even better if stakeholders participate in the research itself. In the Netherlands scientists are asked to do their research in close cooperation with the eight so-called hotspots: focus projects in areas of particular sensitivity to climate change. Water boards, provinces, local authorities, farmers and nature conservation organisations will also be approached to join. The Dutch programmes have already gained considerable experience in co-creation. One example is the climate effect atlases, in which national climate scenarios are translated into regional ones and the effects of climate change are mapped out. The climate atlases support the process of planning adaptation strategies and measures.”

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Guy Brasseur



Florrie de Pater



Peter Höppe



Chris West



Henk van Liempt

Emerging legislation

In England the UK Climate Impacts Programme (UK-CIP) helps organisations to adapt to climate change. Recently UKCIP announced a North East England study on the economic impacts of climate change, which has been commissioned. 'The Economic Implications of Climate Change North East Study' will include a cost-benefit analysis of the adaptation responses required, the move towards a low carbon economy, and the impact of new and emerging legislation, policy and regulation. The study is supported by organisations from across the region. Chris West of UKCIP says: "UKCIP collects climate information and questions from stakeholders. But we also have a high level role in passing on research data to local authorities. In 1997 we started with adaptation to climate change in the UK. Back then, most climate research available was not being used at all. Organisation of stakeholders and integration of their needs was non-existent. Nowadays most people involved in climate related issues understand that adaptation and knowledge transfer is a two way system."

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Adaptation
research & results:
the CIRCLE
Nordic Call
**Stakeholders
demand data
tailored to
their needs**

There is a widespread need among European member states for more specific climate research that incorporates the needs and questions of (local) stakeholders. Within the ERA-net CIRCLE, applied research projects have started on international collaboration. Preliminary results are being presented or will be published soon. An update on CIRCLE NORDIC.

Research centres in Sweden, Norway and Finland are carrying out three transnational research projects, funded by CIRCLE partners. The CARAVAN-project addresses a Regional Assessment of Vulnerability and Adaptive capacity for the Nordic countries. The Nordic

area's second project asked the question 'Do research, policy and practice meet?' An investigation was also carried out under the project name 'Climate Change, community response and multi-level governance'. One of the main preliminary conclusions on the third project is that placing adaptation on local agendas requires networks that cut across governance levels. The study also made clear that vulnerability to climate change opened the eyes of policy-makers and made them get started with adaptation.

Substantial differences

The question as to whether research, policy and practice already meet has met some negative response. Inquiries

have proved that stakeholders demand more detailed data, especially concerning spatial planning. Stakeholders also want their needs and questions better addressed to increase the relevance of research data. The regional CARAVAN assessment is compiling a set of indices of extreme weather conditions alongside demographic and socio-economic statistics with the aim of developing vulnerability measures. It concludes that even in relatively wealthy and similar countries, there can be substantial differences in the adaptation abilities between social groups, regions and sectors.

for more information on CIRCLE
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