



Intern. Conference and Exhibition on
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Snowmelt 2009: Effective floodwater protection through early-warning systems and prevention

New models and research approaches at the acqua alta in Hamburg

International Conference and Exhibition on Consequences of Climate Change and Flood Protection, at the CCH - Congress Center Hamburg from 10 to 12 November 2009

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The cities and municipalities on the Rhine, the Danube and their tributaries regularly look anxiously toward the Alps in spring. This year, there is a particularly large amount of snow. If, in addition to the snowmelt, there is also strong rainfall, as in the 1999 spring flood, the danger of rivers swelling and bursting their banks will rise rapidly in wide parts of Germany. However, precipitation can only be predicted a few days in advance. This makes the significance of effective early-warning and prevention systems all the more important. New methods and current research projects for flood protection are being presented by acqua alta, International Conference and Exhibition on the Consequences of Climate Change and Flood Protection, from 10 to 12 November in the CCH-Congress Center Hamburg.

According to Reinhard Vogt, Managing Director of the Flood Competence Centre Cologne, the flood early-warning system has improved significantly in recent years: "The flood warning service now provides information three times per day on the current water levels, even if these have not yet reached the alarm levels. This way, the municipalities can prepare themselves better for potential hazards." The network of flood warning centres is also helpful, in which all relevant information, such as current water levels and flow rates of the rivers come together. Reinhard Vogt is participating in the acqua alta International Congress as a presenter: "This is the only event worldwide, which deals so extensively and intensively with flood protection."

The Deutscher Wetterdienst (DWD) occupies a central role in the early-warning system. It supports flood protection agencies in the federal states with forecasts on precipitation and snowmelt and advises the federal and state ministries involved in weather matters on the effects of weather and climate. At the acqua alta Congress, Dr. Bruno Rudolf, Manager of the Hydrometeorology department at the DWD will speak about the meteorological aspects of floodwater and low water. "The event will facilitate an interdisciplinary exchange of experiences and knowledge, also at the national level", Rudolf highlights the significance of the acqua alta. An example of this is the Dutch expert, Dr. Jaap Kwadjik from WL Delft Hydraulics, who will provide information in Hamburg on hydrological forecasts in a global context.



Rudolf regards Germany as being well-positioned in flood research, on an international comparison. This is largely contributed to by the “Risk Management of Extreme Flood Events” (RIMAX) subsidy programme of the Federal Ministry of Education and Research. For the total of around 40 projects at German colleges and universities, in which the flood agencies are also involved, the ministry has provided up to EUR 25 million. The projects deal with the simulation of possible flooding scenarios, from which efficient protective measures can be derived; they investigate weak points in flood management or develop a flood protection concept for bodies of water with small and medium-sized catchment areas.

The DWD is also involved in individual RIMAX projects, as explained by Dr. Bruno Rudolf: For example, we are observing the OPAQUE project of the University of Potsdam very precisely. It is searching for ways to improve the forecasting of floodwater overflows in headwaters and relies on our rain radar, among other things. On the basis of the results of this project, we intend to further optimise our radar observation.”

The content of the RIMAX projects is accompanied by a coordination office at the Helmholtz-Zentrum Deutsches GeoForschungsZentrum (GFZ) in Potsdam. Professor Bruno Merz, from GFZ, will speak on the latest findings in “Flood Risk Management in Time of Global Change” at the acqua alta. Merz regards multi-functional solutions as being promising: “These are approaches, which reduce the flood risk and simultaneously provide additional economic, social or environmental benefits. These include early-warning systems, which not only forecast floods, but are also used for warning of other hazards and information systems, which allow planning of flood evacuation scenarios, as well as being implemented for various traffic planning and urban planning purposes.” The acqua alta 2009 in Hamburg will provide information about these and other models and measures for flood protection.

acqua alta - International Conference and Exhibition on Climate Consequences and Flood Protection will be held at CCH-Conference Center Hamburg from 10 to 12 November 2009. It brings together the keynote issues of climate consequences, flood protection, disaster management and water management, and gives all the participating organisations, research institutes, local community associations and industries a platform for technical exchange and the development of joint strategies to deal with this global community task. Further information on the Conference and Exhibition and on early-bird discounts is given at the website www.acqua-alta.de

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