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ICT-based hydrometeorology science and natural disaster societal impact assessment

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In the Lisbon strategy, the 2005 European Council identified knowledge and innovation as the engines of sustainable growth and stated that it is essential to build a fully inclusive information society. In parallel, the World Conference on Disaster Reduction (Hyogo, 2005), defined among its thematic priorities the improvement of international cooperation in hydrometeorology research activities. This was recently confirmed at the joint press conference of the Center for Research on Epidemiology of Disasters (CRED) with the United Nations International Strategy for Disaster Reduction (UNISDR) Secretariat, held on January 2009, where it was noted that flood and storm events are among the natural disasters that most impact human life.
Hydrometeorological science has made strong progress over the last decade at the European and worldwide level: new modelling tools, post processing methodologies and observational data are available.
Recent European efforts in developing a platform for e-science, like EGEE (Enabling Grids for E-sciencE), SEE-GRID-SCI (South East Europe GRID e-Infrastructure for regional e-Science), and the German C3-Grid, provide an ideal basis for the sharing of complex hydrometeorological data sets and tools. Despite these early initiatives, however, the awareness of the potential of the Grid technology as a catalyst for future hydrometeorological research is still low and both the adoption and the exploitation have astonishingly been slow, not only within individual EC member states, but also on a European scale.
With this background in mind, the goal of the Distributed Research Infrastructure for Hydro-Meteorology Study (DRIHMS) project is the promotion of the Grid culture within the European hydrometeorological research community through the diffusion of a Grid platform for e-collaboration in this earth science sector: the idea is to further boost European research excellence and competitiveness in the fields of hydrometeorological research and Grid research by bridging the gaps between these two scientific communities.
Furthermore the project is intended to transfer the results to areas beyond the strict hydrometeorology science as a support for the assessment of the effects of extreme hydrometeorological events on society and for the development of the tools improving the adaptation and resilience of society to the challenges of climate change.