

**ERA-NET CRUE Funding Initiative
Research project fact sheet**

**Effectiveness and Efficiency of Early
Warning Systems for Flash-Floods**



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Executive summary

The issue addressed within the EWASE project centres on the assessment of the effectiveness and efficiency of Early Warning Systems (EWS) for medium sized river basins prone to flash floods.

The approach pursued relates the concept of risk analysis to the evaluation of strategies for flood damage prevention through early warnings.

For the assessment of EWS efficiency, the reliability of forecasts will be linked to the potential damage reduction - both as a function of forecast lead time. For this purpose, two basic factors will be compared: the reliability of the provided forecasts and the economic benefit of this information, e.g. in terms of avoided damages.

In particular, the different steps of the warning production chain and their qualitative impact on uncertainty propagation and forecast reliability are reviewed. Also, the uncertain factors present in risk analysis and economic evaluation are analysed.

Intended outcome

Outline of a methodology for a risk based evaluation of EWS efficiency
Guidelines for investors, planners and operators of EWS on potential benefits and limitations including a comprehensive catalogue of criteria and factors influencing the effectiveness and efficiency of EWS
Contribution to the comparability of EWS efficiency with other non-structural measures as well as with structural measures .ood risk

Project duration

18 months:
November 2006 – April 2008

Project costs [€]

320.800,-

Dissemination and implementation actions

Communication of the results to and discussion with the EWS operators in the study basins
Preparation of peer reviewed papers and contributions to national and international conferences

Funded by

BMBF (Germany), MEC (Spain)

Methods and data to be intended to use

Climatologic, geophysical and human assets catchment data
Uncertainty analysis of simulation model based flood forecasts
Extended Benefit Cost Analysis

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Geographical focus of research (test sites)

Besòs (1024 km²), near Barcelona, Spain. Mediterranean climate
Traisen (920 km²), north east Austria. Alpine/Pannonian climate