

A multifunctional approach to flood and nature protection in the Weisseritz catchment (Eastern Erzgebirge)

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Driven by the flood event of August 2002 in the region of the Eastern Erzgebirge and the high conservation value of parts of this area (FFH sites) the aim of the HochNatur-Project is to develop measures which both prevent floods and support nature conservation. A tight interdisciplinary cooperation between hydrological modelling on one side and landscape ecology studies and conservation assessment on the other plays the key role in this project (Fig. 1). Scientific analyses to assess the present state and to derive scenarios for future sustainable development have been carried out, for example a stream habitat survey, mapping of biotopes and endangered species, vegetation releves, analysis of surface hydraulic roughness and hydrological measurements. The results of these extensive analyses will be integrated in hydrological models (expert system XPS-AERC and the precipitation/runoff model WASIM ETH). The development of scenarios by the hydrological models focuses on the definition of structures and measures with a high relevance to flood control and includes the outcomes of the assessment of the conservation value including deficits. Measures suggested by the integrative modelling will be implemented in close cooperation with local and regional stakeholders. Another important aspect of this multifunctional approach to flood and nature protection lies in the transfer and generalisation of the suggested measures to other mountainous regions within Germany.

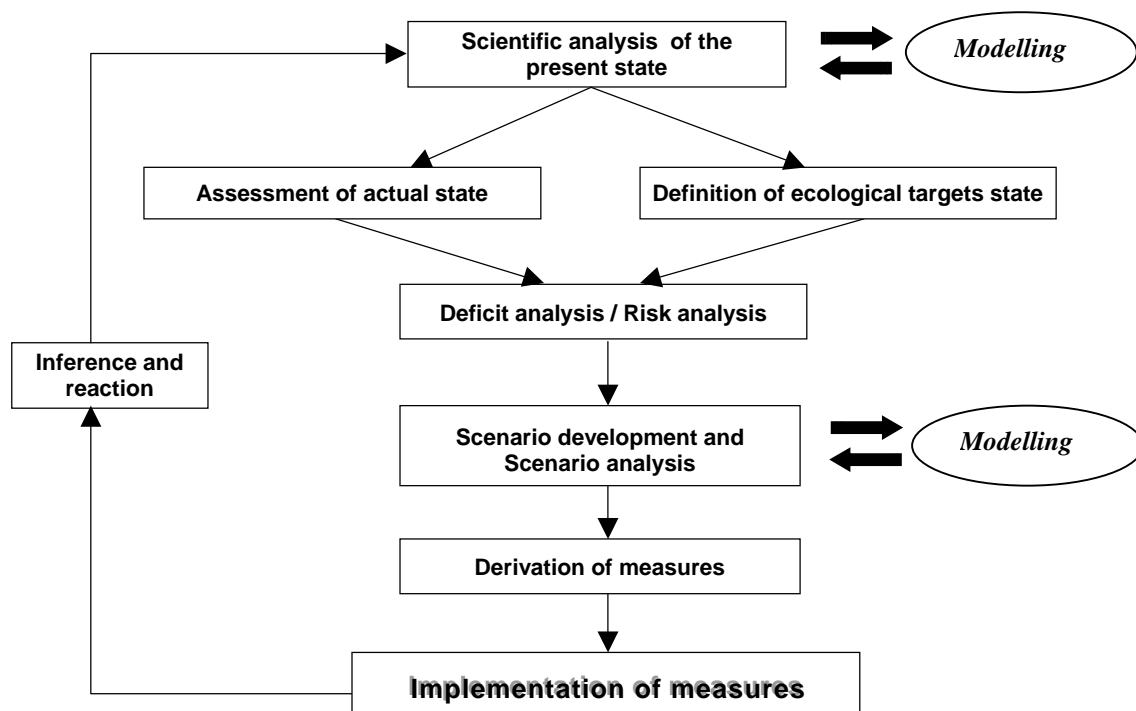


Figure 1: Workflow and main steps of the project HochNatur