



## **Hydrological ensemble prediction experiment (HEPEX)**

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Ensemble forecast techniques are beginning to be used for hydrological prediction by operational hydrological services throughout the world. These techniques are attractive because they allow effects of a wide range of sources of uncertainty on hydrological forecasts to be accounted for. Forecasting should not only offer an estimate of the most probable future state of a system, but also provide an estimate of the range of possible outcomes. Indeed, users are often more concerned with having a quantitative estimate of the probability that catastrophic effects may occur, than with knowing the most probable future state. Not only does ensemble prediction in hydrology offer a general approach to probabilistic prediction; it offers an approach to improve hydrological forecast accuracy as well. The main objective of HEPEX is to bring the international hydrological community together with the meteorological community to demonstrate how to produce reliable hydrological ensemble forecasts that can be used with confidence to make decisions that have important consequences for the economy and for public health and safety. Representatives of operational hydrological services and operational water resources agencies are participating in helping to define and execute the project. This objective can be achieved if the meteorological, hydrological and water resources communities understand the key challenges they face and work together both to couple currently available forecast tools and to improve the current quality of available systems. This presentation is a report on the status of the project since the initial workshop held at ECMWF, March, 2004, to initiate the project.