Geophysical Research Abstracts
Vol. 16, EGU2014-15427-2, 2014
EGU General Assembly 2014

HEPEX - achievements and challenges!

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HEPEX is an international initiative bringing together hydrologists, meteorologists, researchers and end-users to develop advanced probabilistic hydrological forecast techniques for improved flood, drought and water management. HEPEX was launched in 2004 as an independent, cooperative international scientific activity. During the first meeting, the overarching goal was defined as:
“to develop and test procedures to produce reliable hydrological ensemble forecasts, and to demonstrate their utility in decision making related to the water, environmental and emergency management sectors.”
The applications of hydrological ensemble predictions span across large spatio-temporal scales, ranging from short-term and localized predictions to global climate change and regional modeling. Within the HEPEX community, information is shared through its blog (www.hepex.org), meetings, testbeds and intercompaison experiments, as well as project reportings.

Key questions of HEPEX are:
* What adaptations are required for meteorological ensemble systems to be coupled with hydrological ensemble systems?
* How should the existing hydrological ensemble prediction systems be modified to account for all sources of uncertainty within a forecast?
* What is the best way for the user community to take advantage of ensemble forecasts and to make better decisions based on them?

This year HEPEX celebrates its 10th year anniversary and this poster will present a review of the main operational and research achievements and challenges prepared by Hepex contributors on data assimilation, post-processing of hydrologic predictions, forecast verification, communication and use of probabilistic forecasts in decision-making. Additionally, we will present the most recent activities implemented by Hepex and illustrate how everyone can join the community and participate to the development of new approaches in hydrologic ensemble prediction.