

Hydrologic ensemble prediction: enhancing science, operation and application through HEPEX

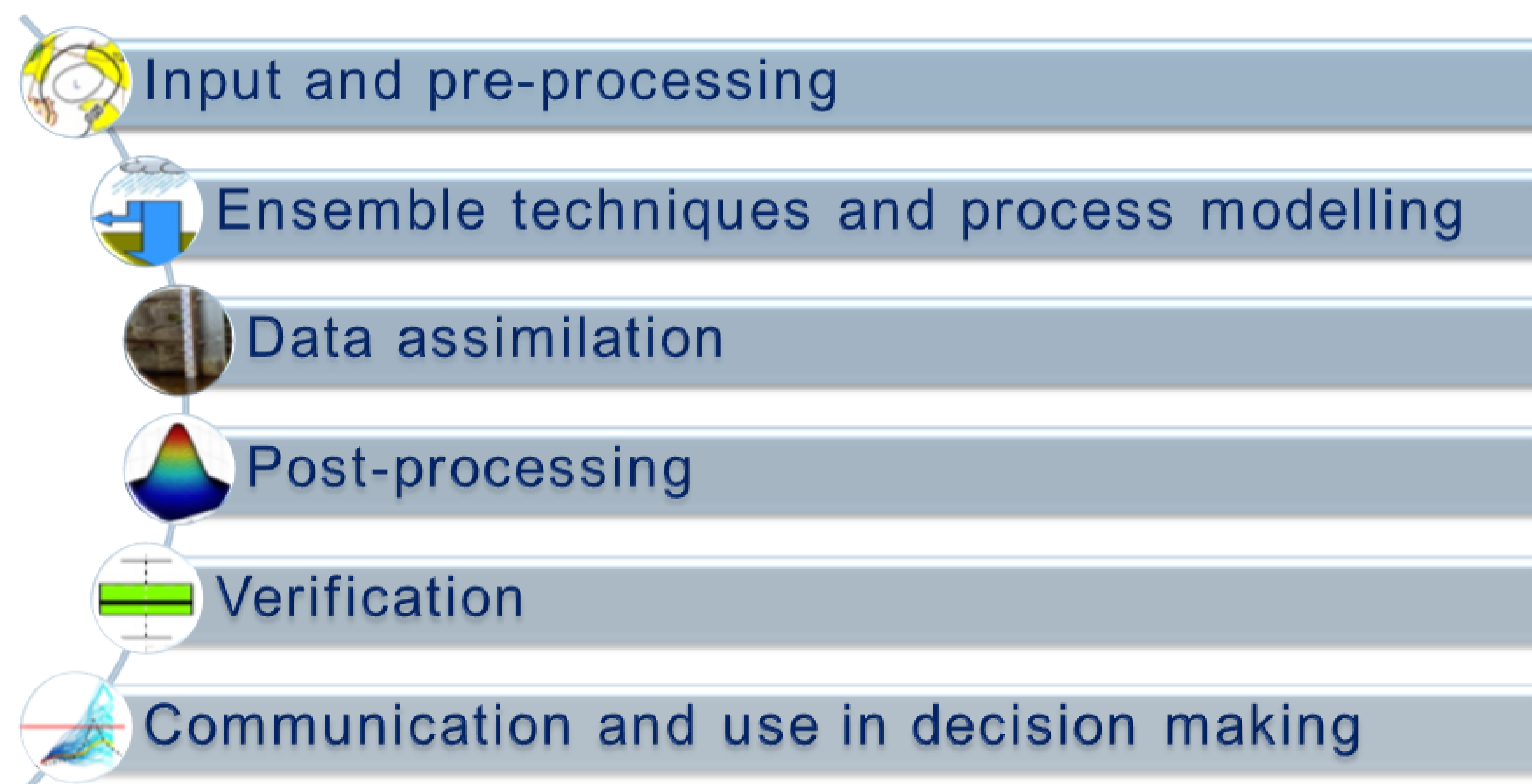
Maria-Helena Ramos¹, QJ Wang², Fredrik Wetterhall³ and Andy Wood⁴ (HEPEX co-chairs) and the HEPEX community

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Join at:
www.hepex.org

HEPEX activities include:

- organizing scientific exchange between participants through workshops and sessions or meetings at major conferences,
- planning and coordinating experiments or testbeds,
- highlighting operational or experimental real-time forecasting systems to help practitioners find out about how ensemble prediction is being used around the world for various applications,
- maintaining a community online interaction and related resources via its website.



HEPEX has contributed to the implementation of operational ensemble prediction systems around the world.

Numerous opportunities to further progress science, operation and application are indicated in the posts published in its website:

- “The true test of any forecasting method is, of course, how it performs for real-time applications. Forgetting to cross-validate reference forecasts can unfairly disadvantage your forecast method” (D. Robertson et al., 2016)
- “[...] a lack of experience is bad, but experience might as well result in excessive certitude of how to decide” (J. Danhelka, 2015)
- “With respect to flooding at least, to have value for decision-making we need to link the forecast of a particular magnitude river flow with the hazard posed by that size flow” (L. Stephens, 2014)

For these and more: www.hepex.org

HEPEX website is open to anyone wishing to contribute with posts or to help manage the portal



HEPEX:
a strong and active
community of nearly 400
researchers and practitioners
around the world

Workshop on seasonal hydrological forecasting:

21-23 September 2015, Norrköping, Sweden, SMHI, 55 participants, 30 oral and poster presentations

- ✓ We need to understand better the limitations of climate forecasts and how to make the best use of them: i.e., when and where the best source of predictability is.
- ✓ Communication is still a challenge: we need to increase transparency in methods and decisions to the user.
- ✓ Examples of impact-base forecasts can be of great benefit to a better understanding of forecast skill (and limits) and usefulness (added-value).

The Special issue: “Sub-seasonal to seasonal hydrological forecasting” on HESS is open for submissions: http://www.hydrol-earth-syst-sci.net/special_issue824.html



A timeline of developments at SMHI's hydrological forecasting and warning service
Posted on March 16, 2016 by Ilias Paschilvanidis

Contributed by Göran Lindström (SMHI) and Henrik Spångmyr (SMHI, Midvatten AB), members of the SMHI Guest Columnist Team The Swedish Meteorological and Hydrological Institute (SMHI) has a long tradition in developing customized products and services, as well as 24/7 production ... [Continue reading](#)

How good is my forecasting method? Some thoughts on forecast evaluation using cross-validation based on Australian experiences
Posted on March 8, 2016 by David Robertson

Contributed by David Robertson, James Bennett and Andrew Schepen, members of the CSIRO Guest Columnist Team As hydrological forecasting researchers, we are often excited when we develop new methods that lead to forecasts with smaller errors and/or more reliable uncertainty ... [Continue reading](#)

A Conversation with Martyn Clark – On Modeling, Forecasting, Life and Everything
Posted on February 16, 2016 by Maria-Helena Ramos

Contributed by Andy Wood and Maria-Helena Ramos On October 27th, 2015, we had the chance to sit at a local Boulder Colorado brewery and have a casual conversation with Martyn Clark. Martyn is a scientist in the Hydrometeorological Applications Program ... [Continue reading](#)

#FloodHack – Help improve the Global Flood Awareness System
Posted on December 22, 2015 by Fredrik Wetterhall

Are you interested in global flood forecasting? Are you a good code hacker? Or perhaps a bit of both? Then maybe a Hackathon would be something for you? On the 16-17 January ECMWF invites everybody interested in improving the Global Flood ... [Continue reading](#)

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HEPEX (Hydrologic Ensemble Prediction Experiment) began in 2004 at an ECMWF workshop that was jointly organized with the US National Weather Service (NWS) and the European Commission (EC). Over its more than 10 years of existence, it has connected the research community, forecasters and forecast users and facilitated the exchange of ideas, data, methods and experiences.