The Sandbox: How can we help forecasters to deal with uncertainties?

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At MET Norway, a small team - the Sandbox - are spending part of their working hours trying to improve the communication between the meteorologists and the audience. At the moment the Sandbox consists of seven forecasters, researchers, and communication advisors with backgrounds from both natural and social sciences. Over the past five years, this has been a proven format to address interdisciplinary and cross-departmental challenges. For example, the team has been working with ideas related to establishing an editorial team and a podcast. Suggestions from the Sandbox are delivered directly to the leadership who then decide what to follow up on or not.

This year, the team is working with two well-known and related challenges to the meteorological community: i) how can we help the meteorologists in the transition from mainly using deterministic model data, to mainly using probabilistic data from ensemble prediction systems?, and ii) how can we aid and develop more effective communication with respect to forecast uncertainty?

The work is set up as a one-year project, with a mix of two-day meetings working with a specific topic, and monthly two-hour follow-up meetings in between. A thematic plan related to uncertainties was agreed upon at the start of 2021 and covers a varied but coherent set of challenges, and includes a set of concrete aims and deliverables, and how to actually work together (with respect to methods as well as the Covid-19 restrictions). For the two-day meetings, the selected topics were 1. Insight into the existing mind-sets and tools/data the forecasters have, 2. Communication and language, 3. Technical insight in strengths and weaknesses of ensemble models and products, and 4. Communication and visualization. The main deliverables of the project are to provide a toolbox and a repository of knowledge regarding the operational use of ensemble data and communication of uncertainty. The toolbox and repository will be available for forecaster training and operations, as well as form a basis to develop future research and outreach activities.

At the annual EMS meeting September 2021 we will reflect on the work methods that the Sandbox uses, and present first outcomes of the project, e.g. more concrete information about what the toolbox and repository of knowledge will look like.