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Hydrology and Earth System Sciences
Discussions

Interactive comment on "Forecasters priorities for improving probabilistic flood forecasts" *by* F. Wetterhall et al.

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I would like to emphasize that we are actually reporting examples of individual forecasts and discuss the performance of individual forecasts at user meetings or for example through the EFAS bulletin. The just published Feb/March 2013 issue of this bulletin (http://www.efas.eu/efas-bulletins.html) presents a case study of a flood in the Vorma River (NO). Every bulletin also includes the warnings and watches issued for the previous months allowing for an independent assessment. This is important to establish and maintain trust as well as allowing for detailed diagnostics of the system.

However, it is important to keep in mind the consequences of failure within a scientific context in contrast to a forecasting context:

Submitting an article which reports failure in a scientific journal is extremely rare and indeed getting it published is event less frequent (often comments by reviewers are ranging from: “that was clear from the beginning that this cannot work” to “one should have applied method XYZ and then it would have worked!”). If it is published, then there in most cases no real tangible consequence.

Failing in a forecasting system by issuing false warnings is far more severe. For example, the ‘crying wolf’ issue (https://en.wikipedia.org/wiki/The_Boy_Who_Cried_Wolf) is debated extensively in the forecasting literature (see e.g. Barnes et al., 2007). Consequences of *one* incorrect or perceived incorrect forecasts can range from loosing once job, to being re-organized to nothing (please remember in a probabilistic forecasting system failure is part of the definition). Hence, it is not surprising that forecast failure is reported as rarely in scientific papers on operational flood forecasting as it is in other scientific publications.

I was just looking through the current HESSD papers (24th June 2013) and I fail to find any paper reporting failure. Maybe it is something which needs to be encouraged on a wider scale?

Barnes, Lindsey R., Eve C. Gruntfest, Mary H. Hayden, David M. Schultz, Charles Benight, 2007: False Alarms and Close Calls: A Conceptual Model of Warning Accuracy. Wea. Forecasting, 22, 1140–1147. doi: http://dx.doi.org/10.1175/WAF1031.1

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 10, 2215, 2013.