Associate Editor's (Ezio Todini) Comments

Recently, in writing a chapter on predictive uncertainty for a forthcoming edition of the Handbook of Hydrology, I have listed, including the UNEEC approach (Solomatine and Shrestha, 2009), up to 10 alternative ways for assessing predictive uncertainty.

Some of these approaches, the Hydrological Uncertainty Processor (HUP) (Krzysztofowicz,1999; Reggiani et al., 2009), the Quantile Regression (QR) (Koenker, 2005; Weerts et al., 2011), Bayesian Model Averaging (BMA) (Raftery,1993; Vrugt and Robinson, 2007), the Model Conditional Processor (MCP) (Todini, 2008; Coccia and Todini, 2011) have been extensively applied on theoretical as well as on real operational cases.

Therefore, I fully concur with both reviewers when they say that the presented comparison of UNEEC (Solomatine and Shrestha, 2009) to QR *(*Koenker, 2005; Weerts et al., 2011) has limited informative value, particularly because the theoretical limitations of each approach have not been fully set in evidence, as for instance the fact that QR is advantageous when patterns can be observed in the quantiles (Coccia and Todini, 2011).

An interesting work would be the comparison of several available approaches (not just two) showing both on theoretical data as well on case studies their advantages, their effectiveness and most of all their limitations.

As pointed out by Reviewer #1, there are several points that have not been dealt rigorously in this work. For instance, in the literature and in particular in the meteorological literature, several measures of sharpness (measuring the spread of the predictive densities) and calibration (measuring the consistency between the forecasted densities and what can be verified from actual observations) have been proposed and used for the case of discrete quantiles (such as QR and UNEEC) or continuous predictive densities (such as HUP, BMA, MCP). In particular, the PICP is extended to several values of probability threshold α using the Talgrand diagram (Talgrand et al. 1997) in the discrete case or the reliability diagram (Wilks, 1995), the latter being also recently proposed in hydrological applications by Laio and Tamea (2007).

Therefore, since I do not think that the authors replies were fully satisfactory at acknowledging the reviewers comments, it is my view that the manuscript should be extensively revised along the suggested lines prior to being reconsidered for publication.

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