

Interactive comment on “Long-range forecasting of intermittent streamflow” by F. F. van Ogtrop et al.

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This is a good paper, presenting a new method for estimating streamflow 12 months ahead using El Nino and IOD indices as predictors. It would be improved by using the approach to evaluate streamflow at periods shorter than 12 months for the reasons given below, however this may be a suitable topic to be tackled in a follow-up paper.

P685. I am a little concerned about the use of the IQQM unimpaired dataset for comparison. These IQQM flow models generally have flows that are much too large as they need to be able to extract flow at each extraction point in their modelling. This can be seen by the fact that the unimpaired flow in Table 2 is considerably higher than the observed flow. Of course, it would be expected to be higher, but this looks like too much to me.

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P687. Simply forecasting streamflow 12 months ahead is not a particularly strong test of the approach. These rivers are strongly influenced by a summer-dominated wet season, and thus if the stream is flowing currently, it is also likely to be flowing in 12 months time. Similarly, if the stream is not flowing currently, it is also not likely to be flowing in 12 months time. A useful extension of this work would be to evaluate streamflow at 1, 2, and 3 months time lag to be able to compare results for example with those shown by Wang and Robertson 2011 Water Resources Res. 47, p2546.

P691. It would be interesting to see if this decrease in probability of observed flows is also seen in the other catchments (perhaps the authors could add this information?). This may then be indicative of climate change or a shift in rainfall rather than extractions. In particular for the ‘naturalised’ Balonne time series to investigate the issues raised on the comments related to p685.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 8, 681, 2011.

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