

Interactive comment on “Extrapolating regional probability of drying of headwater streams using discrete observations and gauging networks” by Aurélien Beaufort et al.

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This paper makes a valuable contribution to the study of the hydrology of intermittent rivers and ephemeral streams. In particular, it is the first time observations of river flow and groundwater level have been used in combination with observations of hydrological state in a regionalisation approach, marking a step forward in the modelling and mapping of intermittency at national scale.

The ONDE dataset is unique in the literature, notably the large number of sites, the coverage of headwater streams and the national extent, but has limitations in the summer-only timing and small number of observations. The merging of the “no visible flow”

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status with the “dried out” status means that a key benefit of the dataset is not utilised, as the two-status classification of flowing and drying that remains is no advantage over that available from gauged river flow data. Discussion of the network would benefit from broader contextual comment on the contribution and application of these data.

The paper is well written and referenced and is recommended for acceptance with minor revisions.

Please also note the supplement to this comment:

<https://www.hydrol-earth-syst-sci-discuss.net/hess-2017-630/hess-2017-630-RC2-supplement.pdf>

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., <https://doi.org/10.5194/hess-2017-630>, 2017.