

Interactive comment on “Hydrology of inland tropical lowlands: the Kapuas and Mahakam wetlands” by H. Hidayat et al.

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In this paper, the authors look at the hydrology of two poorly gauged wetlands. They combined point data of soil moisture and groundwater levels and discharge data from a downstream station with remote sensed data of rainfall and images for deriving the lake area.

However, I missed a clear objective or research question. The title says that this manuscript deals with the hydrology of these wetlands, but no clear explanation is given which part of the hydrology is considered. In fact, the Results section is absent and replaced by the ‘Hydrological characterization’ section.

To me this manuscript reads like a synthesis of previous findings with just some additional measurements. Most ‘novel’ methods or insights have (apparently) already been

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published previously: e.g. the use of PALSAR images to estimate flood area has been discussed in Hidayat et al. (2011, 2012); the influence of backwater at the discharge location has been discussed in Hidayat et al. (2010) and Wuis (2014); The filling and spilling of the lake has been discussed in Hidayat (2013); the construction of a rating curve with a neural network model and only a short period of data has been presented by Hidayat et al. (2014).

I was also rather surprised when I read the in the conclusions that 'The present study highlights the merits of H-ADCP continuous flow measurements to obtain accurate discharge estimates when rating curves fail'. To me, this statement came out of nowhere: In the manuscript two discharge curves and rating curves have been shown, but no accuracy of this method has been reported, nor has it been compared with other methods. Instead the authors mainly suggest that it is possible to move the device after a year of observations after which the neural network model of Hidayat et al. (2014) can be applied to construct a rating curve.

Also, as one of their main findings, the authors state that: "This work has also contributed to the understanding of tropical lowlands. We find two important features, namely 1) widespread flooding and strong surface water-groundwater linkage, and 2) strong backwater effects." However, these features are characteristic for all kind of wetlands – not only tropical ones. In the same manuscript this is already mentioned in the introduction (P2, L10-14).

Altogether, this lack of novel aspects and the fact that no clear objective is given is reason for me to advice rejection of the manuscript.

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