

Interactive comment on “Flooding dynamics in a large low-gradient alluvial fan, the Okavango Delta, Botswana, from analysis and interpretation of a30-year hydrometric record” by P. Wolski and M. Murray-Hudson

Anonymous Referee #2

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General comments

This study fits the hydrology research focus of HESS as well as the multi-disciplinary approach that is encourage by HESS. This ecosystem is a good example for hydrologists but also has important implications for earth scientists and biologists. The paper is an important commentary on the flooding dynamics of the Okavango Delta. However, the study lacks sufficient background for the reader to understand basic annual flooding patterns, overbank conditions, in-bank conditions, off-channel flows, and other hydrological states unique to this ecosystem. More detail (rather than citations of previous studies) would be helpful for understanding the dominant hydrological processes

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in the Delta. In addition to the terms already mentioned, a better explanation of rainy season flooding and aggradation of channels due to sedimentation and tectonics would be helpful.

Specific comments

P1. L21: the concept that “flood frequency distribution itself can change, compared to that at upstream location” is not clear. Please describe in more detail.

P3. L18: What is meant by little floodplain flow in the longitudinal direction? Does “lateral flow” refer to flow away from the main channels? Leakage to adjacent swamps?

P4. L3: What does hydrotechnical mean?

P4. L20: Instead of “in the order of”, it would be more clear to use “of approximately”

P6. Section 4.1: needs a little more background on the flood event. This probably should be added earlier. It would help to differentiate the annual flood from the rainy season, and specify the meaning of rainy season flooding.

Technical comments

P4. L3: Instead of they, you mean “their”.

P4. L6: Add a comma after Delta.

P4. L27: In this sentence add “the” as follows: Further downstream, [the] presence of chains

P5. L6: “Access” instead of accession.

P5. L21: Add (DWA) after “dept of water affairs”.

P5. L25: remove “mainly”.

P6. L4: remove “obviously” and add “the” after the phrase, “The elevation of

P6. L21: Instead of “a reduction in rainfall” it would be better to say “The lowest

rainfall”, otherwise you are suggesting a reduction from some state.

P7. L12: What is a peculiar pattern? If the authors mention this, they should specify in more detail.

P8. L2: Add “(Fig.4)” after Duba?

Figure 5: The authors may want to add marks/lines at each 10 year mark to show the 10-year cycle described in L11 of P8.

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