

Interactive comment on “Hydrological differentiation and spatial distribution of high altitude wetlands in a semi-arid Andean region derived from satellite data” by M. Otto et al.

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We are thankful for the referee interactive comments and would like to respond to it. Specific Comments of the Referee (RC:) and authors response (AR:):

RC: Is PAV = "Photosynthetic active vegetation" a commonly used technical term?? How is it defined?

AR: We propose to first introduce abbreviation PAV when introducing spectral indexes at page 1295 line 8 to 10 (chapter 2.2.2 Spectral Indices)

RC: Try to shorten technical introduction with basics in digital image analysis or data

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AR: We think that our study provides a transparent methodology for HAWA site mapping within a remote and data sparse region of the central Andes. Hence the potential reader of the manuscript should be able to follow all steps of the HAWA mapping procedure applying own data to his/her study region. This is the reason why we described the applied remote sensing methodology in such details.

RC: Page 6 : PAV(HAWAp) ! Is it not possible to write HAWAp only ??

AC: We would change the sentence to:

HAWA can be situated along rivers or lakes (open water in Fig. 2) and gradually or abruptly change from perennially dense cover of PAV within HAWAP to vegetation of just temporarily high fractions of PAV within HAWAT. HAWAT also contain temporarily flooded areas (HAWAT,tf).

In this way we think it is more understandable.

RC: In chapter "results" it is rather difficult to easily comprehend the text like: " In September 2000 P5% of Gra(gt) and P95% of Shr(gt) are slightly overlapping and therefore P95% of Shr(gt) was applied as threshold to separate Grasslands (Gra) from Shrublands (Shr). Since this is not the case for May 2001, the P5% NDVI threshold of Gra(gt) 10 was applied. B&S(gt) shows only small changes in P95% due low vegetation content."

AC: We will rewrite this sentence to make it more understandable to the reader and in general we will try to avoid abbreviations where it is possible throughout the revised manuscript.

RC: To figure out the classification design figure HAWA_mapping_procedure_supplement is very important. Why not integrate this figure earlier in the text. My impression is that it is planned to put it in an appendix??

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AC: We agree with the referee's idea to put the Figure into the appendix since both referees state the high importance of this information. The supplement material gives an overview how the concept of HAWA subtypes is technically transformed to HAWA subclasses via the HAWA mapping procedure. Therefore, we refer to it right at the beginning of chapter "2.3 Development of the HAWA mapping procedure". Also the introduction of a new table in 2.1 "The concept of HAWA subtypes" as proposed by the first referee will make it clearer to the reader at an early point of the text.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 8, 1287, 2011.

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