Hydrol. Earth Syst. Sci. Discuss., 5, S2033–S2035, 2008

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5, S2033-S2035, 2008

Interactive Comment

# Interactive comment on "Hydrologic and land-use change influence landscape diversity in the Ebro River (NE Spain)" by A. Cabezas et al.

### A. Cabezas et al.

Received and published: 29 November 2008

I would thank the referees for their interesting and positive contributions. Their diverse approaches to review the manuscript will clearly help to the authors in improving their document prior to the final submission to HESS. Undoubtedly, when a review is done well the successive manuscript resubmission requires new effort and some additional research. Within this perspective the main concern of my commentary is to help the authors to elaborate a more linear and coherent text. Next I have three main points:

1) Having in mind that the main audience of the HESS/D come from hydrological science I miss a figure that describe the temporal dynamic of the discharge at the Zaragoza discharge gauging during the entire study period. This figure will help to contextualize in a hydro-historical perspective the entire study. In this way the reader

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will be able to distinguish the time elapsed from the main storm events and/or dams construction to the aerial images acquisition (see for instance the comments from the referee #2). In addition the figure will help to a more unambiguous identification of the start of the discharge decline (see referee #1).

AUTHOR RESPONSE (AR) 1.. This figure will be included in the revised manuscript. We will try to choose a hydrological parameter which reflects the idea that the editor think is important for a easier interpretation of the discharge dynamic by HESS audience.

2) I fully support the suggestion of the referee #3 to rewrite the section 3.2. In my opinion the tables do not really enhanced the text comprehension. There are too tables and most of them are excessively dense. Then, my suggestion is to eliminate tables 2 (data well explained in the text) and 5 (data not really relevant). In addition I suggest to reduce table 3 by eliminating the columns that describe the "Area occupied by Natural Ecotopes". In fact in the text I found exclusively connections with the "Floodplain Area" data.

AR.2. In the light of the comments both form reviewer 2 and the editor we will denitively rewrite this section.

Finally, I recognize that I am rather perplexed with table 4. For instance, in the text (pag. 2768, line 15) we can read: "During this period [1957-1981], only the gravel& area diminished (Table 4)". Nevertheless I found this information in table 3 but not in table 4 (In table 4 everything is decreasing during the 1957-81 interval) Does the table 4 is really necessary? Remove the last two very strange sentences from section 3.2.

- AR.3. Table 4 was included for an easier interpretation of figure 5. We will try to rewrite this section as clear as to eliminate this table as suggested.
- 3) Discussion is too large (nearly the 50% of the entire text). An important work of synthesis is required. For instance, the concept of "synergic effect of flow regulation"

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and flood protection" is repeated twice (page 2771 line 8 and page 2772 line 16). I agree with referee #2 with respect to the section 4.3. Undoubtedly in this section some degree of speculation is welcome however it should not cover more than a page.

AR.4. Those suggestions will be correctly addressed in the revised manuscript, trying to both shorten and specify the contents of section 4.3.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 5, 2759, 2008.

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