

Interactive comment on “The dynamics of cultivation and floods in arable lands of central Argentina” by E. F. Viglizzo et al.

E. F. Viglizzo et al.

Received and published: 21 November 2008

Comment of REF 1:

¶ In the section 3.1 the correlation between the percentage of cultivated land, annual rainfall and groundwater level (is the annual mean? this is not clear!) is investigated. In all cases a weak correlation is observed (generally R^2 is lower than 0.46) and this is sufficient for the authors to state that ¶ in terms of flooding potential, the analysis would support the argument that while groundwater might have a larger effect in highlands than in lowlands, rainfall might be more influential in lowlands¶. Honestly, I can understand where and how this result comes out¶.

Reply from Viglizzo EF I agree with reviewer about section 3.1. Table 1 does not

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper



provide results to deliver definitive conclusions. Regarding his concern, I think that conclusions from correlation analysis based on average values of rainfall, groundwater level and % annual crops at a broad regional scale sound weak and trivial. On the other hand, we should say that analysis in Table 1 was only a first step to treat later in deep such issues. I think that Referee 1 doubts can probably in part be clarified in section 3.2, where we undertook the problem of groundwater and floods at the district scale (five districts in highlands and five districts in lowlands). The second referee (Dr D. Le Maitre) also suggested re-analyze relations between rainfall and groundwater, especially in terms of the time lag between rainfall and groundwater dynamics. This analysis was already done and we discussed our results in this same discussion session.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 5, 2319, 2008.

HESSD

5, S1939–S1940, 2008

Interactive
Comment

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper

