Hydrol. Earth Syst. Sci. Discuss., 5, S1636–S1637, 2008

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## **HESSD**

5, S1636-S1637, 2008

Interactive Comment

## 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: 28 October 2008

Comment of D. LeMaitre

Given the extremely flat nature of lowlands, how well defined is the catchment boundary in such flat terrain?

Response E. Viglizzo:

The so-called spill-over area in the Quinto River area does not behaves as a conventional watershed. During flooding periods, water excesses come from the Quinto River overflows, but also from rainfall and groundwater. Thus, the random combination of different water sources can explain the unpredictable distribution of sporadic lagoons and stream channels across the spill-over area (Kruse et al., 2001). This represents a ma-

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jor constraint to define precise watershed boundaries, because they are not constant in time and may change from year to year.

Kruse, E., Forte Lay, J.A., Aiello, J.L., Basualdo, A., Heinzenknecht, G., 2001. Hydrological processes on large flatlands. Case study: Northwest region of Buenos Aires province (Argentina). Remote Sensing and Hydrology 2000, IAHS Publication, 267, 531-536.

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

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