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Hydrology and Earth System Sciences Discussions

Interactive comment on "The European Flood Alert System – Part 1: Concept and development" *by* J. Thielen et al.

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First, the authors would like to thank the referee for contributing to the discussion on our paper and for stressing, in the review, the complexity and importance of our approach to flood forecasting and warning of large river basins. Except for one, the suggested revisions by the referee are easy to address:

a) some more information on the hydrological model are requested and will be added without problems. A full paper on LISFLOOD is ready for submission and will be cited also in the final publication.

b) The reviewer wants to know why only the Meuse (1995), Po (2004) and Odra floods (1997) were chosen as case studies. These were selected by the EFFS project partners as representative trans-national river floods. To consider more would have been

beyond the scope of the EFFS project. Within the framework of EFAS more floods have been analysed, e.g. the 2006 floods, and Part II of the paper looks at a 2 year analysis of all floods during 2005-2006. A sentence will be added in the paper to clarify this issue.

c) The referee wants to know why LISFLOOD was chosen: this model has been developed by the JRC specifically for floods on larger scale, and has been adapted with inhouse expertise for EFAS. One advantage of the model is, for example, that it can be set up with datasets that are available at the JRC on European scale.

Overall, the referees comment are positive except for the concern, that in Part I the scientific part of the paper is not sufficiently developed. The referee concludes that the paper is ” rather short, general and descriptive”, and recommends combining Part I (EFAS: Concept and Development) and Part II (EFAS: Results), into one publication instead.

The authors do not agree, however, that Part I is short. In fact, Part I has a length of 30 pages and the number of pages currently published on HESSD ranges between 20-37 pages. Part II of the paper has 33 pages. Joining the two papers into one would, in our opinion, result in a lack of focus. It would either become very long and exceed by far the usual HESS page limits or important aspects of either the concept and development phase or the results would need to be taken out. We think that keeping the material in an easy-to-understand format is especially important in our case since, as the referee says, EFAS results "can be seen as innovative for operational hydrology in a warning system. The system described in the paper presents a step forward in the exploitation of available information for the improvement of these forecasts.”

We have stressed in both Part I and Part II that the reader should refer to both papers to get the complete overview concerning the development and the performance of the system. Already at the end of the introduction of Part I (page 261), where we describe the layout of the paper, it is mentioned that the results of EFAS are described in Part II

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which follows as consecutive paper. This is repeated at pages 269 and 271 of Part I. In Part II equally Part I is referred (pages 291, 293, and 295).

We argue that EFAS is a unique system and both “concept and development” as well as its results are novel and should be described in detail. Splitting the paper into Part I and Part II is the best solution to satisfy the description of EFAS with appropriate content and format.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 5, 257, 2008.