



## **Living with floods in the Jamuna floodplain (Bangladesh): fight or flight? Technological and societal responses**

Md Ruknul Ferdous (1), Anna Wesselink (1), Luigia Brandimarte (2), Kymo Slager (3), Arthur Mynett (1), and Margreet Zwarteveen (1)

(1) UNESCO-IHE Institute for Water Education, Delft, Netherlands (r.ferdous@unesco-ihe.org), (2) KTH, Stockholm, Sweden, (3) Deltares, Delft, Netherlands

Building onto the general theory introduced by Di Baldassarre, this paper uses a socio-hydrological approach to describe human-flood interactions in the Jamuna floodplain, Bangladesh. In this vast space (a braided river bed of 6-16 km; floodplains up to 50 km wide) the differences between land and water are temporary and shifting. Government flood defence structures were constructed on the west bank only, while community initiatives exist on the east bank. As a result, there are several kinds of socio-hydrological spaces along, but also in the river, with different livelihoods and flood characteristics. This variety gives rise to co-existence of 'living with floods' and 'fighting floods' approaches. The analysis is based on recent fieldwork, in which information on historical and current livelihoods, migration and the floodplain system was collected at household level. Our analysis enables us to tentatively confirm the levee effect described by Di Baldassarre et al. (2013); however, his hypothesis that people move away from unprotected floodplains is only true to some extent. Adaptation in Bangladesh means first of all literally 'living with floods': being flooded with greater or lesser frequency.

Key words: Bangladesh; Jamuna River; river flooding; socio-hydrological dynamics