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# BOOK OF ABSTRACTS

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Session **SP17****Influence of invasive Himalayan balsam on the structure of native vegetation communities and morphological processes on river banks**

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Study of the impact of invasive Himalayan balsam was undertaken on eight sites at the River Brenta in Italy. The main aim was to clarify the interaction of Himalayan balsam dominance as an invasive species and morphological activity (erosion and deposition) on river banks. In order to achieve this aim, a combination of transect-based surveys and measurements of individual plants characteristics was used and three main groups of results were obtained. Firstly, Himalayan balsam dominance over native vegetation differed between sites, from partial cover to full dominance. This gradient was quantified and it was revealed that it varies widely depending on the microhabitat conditions and native plants present on each site. Secondly, transect-based measurements of morphological activity established no conclusive difference in erosion and deposition between transects covered by native vegetation and Himalayan balsam. While this finding was unexpected, it is at least partially influenced by the destruction of two sites during a mass flooding event that occurred in the middle of the survey. Thirdly, in contrast to the previous finding, measurements of individual plant traits that are known to influence the impact of vegetation on morphological activity demonstrated significant differences between native vegetation and invasive Himalayan balsam. In light of these results, the potential impacts of Himalayan balsam on geomorphological processes are discussed.