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## THE PEAK FLOW BASED ON MEAN DAILY DATA AND INSTANTENIOUS FLOW IN THE FLOOD FREQUENCY ASSESSMENT CASE STUDY

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### ABSTRACT

In the flood frequency assessment, engineers often face the problem of mixed peak data in the data record: some peaks are instantaneous daily flows (IDF), while some are mean daily flows (MDF). If the problem is recognized, correction factor to the MDFs in the dataset is usually applied. In our research, we use flood flow datasets from 8 hydrologic stations with catchment area up to 1000 km<sup>2</sup> in the Sava river basin. Four hydrologic station locations are in Bosnia and Herzegovina (BiH) and four in Serbia. We apply Sangal's procedure to establish correction factor for single station analysis to produce the IDFs from MDFs. We use three annual maxima datasets at each hydrologic station, comprising: 1) IDF only, 2) MDF only, and 3) mixed IDF and MDF, as officially available. Each dataset we subject to flood frequency assessment according to USACE HEC-SSP Bulletin 17b and 17c analysis. The results show diversity of flood quantile estimates at each station, i.a. influenced by detected high and low outliers, and large data gaps present in the BiH datasets.

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