



Environmental flow by-law development for Bosnia and Herzegovina

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The main aim of this paper is to present the results of the application of several methodologies for environmental flow assessment, in order to find appropriate one(s) to be used in Bosnia and Herzegovina. Several methods were tested, mostly belonging to the category of hydrological environmental flow assessment methods. Additionally, instream ecological values and critical parameters for environmental flow assessment were evaluated. Pilot areas were also assessed in terms of its geography, climate conditions, historic heritage of the river, demography, geology of the river and its tributaries, river hydrology and morphology, ecological characteristics, river pollution, river use and river management.

The research highlighted very important criteria for environmental flow evaluation are disregarded by the some of these methodologies, i.e. river ecology and river morphology. As a consequence additional criteria were considered with the aim of preserving the river and riparian ecosystem.

In the first phase of the project hydrological EF assessment method GEP (guaranteed ecological flow) was assessed in details and exercise carried out led to the conclusion that the GEP methodology provides some advantages, but also has remarkable disadvantages

During next phase 4 selected methods of EF assessment were tested. Large difference was the cause of elimination for three of these methods for EF estimation. Considering the advantages and disadvantages of tested methods, MNQ approach was selected as the most acceptable method to use in BiH, still in need for important methodological improvements that are stressed. In case of protected areas or the presence of endangered and rare species, the holistic approach of EF assessment was proposed too and both of methods are part of drafted By-law on EF.