



Determination of status, processes and targets in the planning of the nature protection aspect rehabilitation of the southern Hungarian Danube floodplains

E.A. Tamas (1), L. Zellei (2), J. Sziebert (3), L. Szlavik (4), B. Kalocsa (5)

(1) Dipl. Ing. Civil Engineer, Eur. Ing., Assistant professor, Eötvös József College Technical Faculty, Department of Hydraulic engineering and Water management, H-6500 Baja, Bajcsy-Zs. u. 14., Hungary, (tamas.eniko@ejf.hu), (2) Dipl. Ing. Civil Engineer, Senior lecturer, Eötvös József College Technical Faculty, Department of Hydraulic engineering and Water management, H-6500 Baja, Bajcsy-Zs. u. 14., Hungary, (zellei.laszlo@ejf.hu), (3) Dipl. Ing. Civil Engineer, Senior lecturer, Eötvös József College Technical Faculty, Department of Hydraulic engineering and Water management, H-6500 Baja, Bajcsy-Zs. u. 14., Hungary, (sziebert.janos@ejf.hu), (4) Dr. Ph.D., Eur. Ing., MSc in Hydrology, Professor, Department leader, Eötvös József College Technical Faculty, Department of Hydraulic engineering and Water management, H-6500 Baja, Bajcsy-Zs. u. 14., Hungary, (szlavik@hu.inter.net), (5) Civil Engineer, Department leader, Lower Danube-valley Environmental and Water Authority, Department of Informatics, H-6500 Baja, Széchenyi u. 2/c, Hungary, (kalocsa.bela@adukovizig.hu)

The authors introduce the status of the southern Hungarian Danube reach, and the deterministic processes which have lead to it. In frame of the study being carried out since the early 90's, the investigation of the direct and indirect effects of river regulation took place, in relation to the main bed of the river Danube and its floodplain as well – which supports a unique natural value and as such, is designated as National Park, Ramsar site, IBA, SPA and Natura 2000 area. However, negative impacts of human activities induced the slow agony of floodplain habitats, therefore the need for technical intervention in order to improve natural conditions has risen. To form a basis for planning rehabilitation measures, and later to follow up the effects of the measures taken, thorough hydrological, morphological, hydraulic and ecological monitoring activities were carried out. During the conceptual planning phase engineers faced the problem of the definition of ecological targets, and different conflicts which rose in relation to the various interests and expectations appearing in the area. The

authors would like to introduce the first phase of rehabilitation works carried out since 1998, and the methods and structures which were planned and implemented with the wish to improve the spatio-temporal diversity of habitat conditions with minimal intervention, taking into account different aspects such as those of forestry, ecotourism, hunting, fishing, navigation on the main channel or the maintenance of flood safety. The authors express the need for further refining ecological target definitions in order to increase success and effectiveness of rehabilitation measures. Doubts and contradictions encountered during data evaluation will be analysed, and as a conclusion, recommendations on different elements of the comprehensive monitoring system and further planning will be given.