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## RESTORING WETLANDS AND NATURAL FLOODPLAIN ALONG THE LOWER BAȘEU RIVER IN ROMANIA

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### Abstract

In Romania many rivers have been canalized by non-submersible damming, flow diversions and channeling towards new routes, transversal arrangements, etc. The modifications of natural flow regimes brought severe impacts on all ecological functions of wetlands and on the natural functioning of river-floodplain systems. Due to damming only few of the floodplains function nowadays in a natural manner.

Rivers and wetlands rehabilitations are bringing the well-known environment benefits, reason for which engineers are seeking for the best ways to conduct such works. This paper presents a solution for reinstating the natural hydrological functions of a floodplain by restoring an old abandoned water flow route and extending the floodplain's wetlands.

The opportunity for such a rehabilitation solution is assessed in terms of environment protection and durable development, this being related to the next factors: the preserving of bio-diversity by recovering the original wet habitats (riparian wetland, swampy areas, abandoned meanders, shallow lakes, oxbows), the increasing of water and soil quality by sediment trap and nutrient decreasing, ensuring anti-flooding protection systems and drought effects mitigation by the possibility to store the floods volumes within floodplain and aquifer layer (during high water level) and, respectively, by the possibility to release water volumes stored into the aquifer into the riverbed (during low water level).

This studied area, after ecological restoration, shall become a near-natural relict of floodplain located on Prut River in Romania, downstream of the Stâncă Costești Reservoir.

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