Rehabilitation of an impounded section of the Danube in Vienna (Austria) – evaluation of inshore structures and habitat diversity

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With 5 figures and 2 tables in the text

Abstract: River regulation, urban development and the construction of a hydroelectric power plant have considerably changed the ecological condition of the Danube section in Vienna. In 1997, the previously straight shoreline of the Danube in this area was reconstructed by creating shallow water areas, coves, gravel banks and side channels. These inshore structures were created to increase habitat diversity in this area and to establish, together with existing ponds, a system of stepping stone biotopes, which serve as migration linkage through the municipal area of Vienna. A monitoring programme (1998–2001) was established to assess the functional integrity of these structures. A multi-species-approach using odonates, amphibians, and fish was developed to cover aquatic, amphibious and terrestrial habitat components. As demonstrated in this study, rehabilitation of heavily altered systems may play an important role in improving ecologically degraded areas and in reconnecting isolated landscape patches. A new metric (Floodplain Index) was applied for defining an ecological management objective, for characterizing the newly created structures and for assessing habitat heterogeneity.

Key words: Key words: biological assessment, rehabilitation, riparian corridor, impoundment, Floodplain Index, Danube.

Introduction

During the last years restoration and rehabilitation schemes have been worked out aiming at the improvement of the ecological integrity of anthropogenically im-

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