

# The Danube Basin Analysis – Pressure/Impact Analysis as Basis for Future Danube River Basin Management

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The implementation of the *EU Water Framework Directive* (2000/EC/60) is currently a declared priority in the Danube River Basin for all contracting countries within the frame of the Danube River Protection Convention (EU Member States, Accession Countries and Non EU Member States). According to the WFD requirements the Danube River Basin Management Plan (DRBM Plan) has to be compiled by the end of 2009.

The *Danube River Basin Analysis* is the first important step towards the DRBM Plan and was reported to the European Commission in March 2005. The analysis includes a general characterisation of the entire Danube River Basin District focusing on both surface water and groundwater bodies. Further, a pressure/impact analysis has been performed identifying water bodies, which are *at risk of failing* the WFD environmental objectives.

The findings of the Danube River Basin Analysis 2004 identify *hydromorphological alterations*, pollution by organic, nutrient and hazardous substances as the four Significant Water Management Issues (SWMI) in the DRB. Consequently further management steps related to these SWMIs will be taken as part of the DRBM Plan and the corresponding Joint Programme of Measures (JPM) to achieve the WFD environmental objectives by 2015.

Referring to the findings of the Danube Basin Analysis the extent of hydromorphological alterations in the DRB has been significant over the past centuries. Anthropogenic influences on the type-specific hydromorphological characteristics of surface waters are manifold and impact the status of these aquatic systems in a corresponding way. Different drivers which cause hydromorphological alterations can be identified and include hydropower generation, *navigation* and flood defence. Resulting pressures are morphological alterations like the interruption of the longitudinal continuity of rivers as well as the disconnection of riverine floodplains and the disturbance of the natural lateral connectivity of river systems. Pressures form hydrological alterations have been identified, which frequently result in a decrease of status. As a result, the main hydromorphological impacts on the riverine status that have been observed include the decline of species biodiversity, the decline of species abundance, altered population composition and hindrance of species migration (focus fish species) and the corresponding decline of naturally reproducing fish populations.

## **Steps towards the DRBM Plan 2009:**

The DRBM Plan will address all SWMIs. The Joint Programme of Measures will be based on clear operational management objectives and will include basin wide measures to guide all Danube countries towards a commonly agreed aim. The measures will address hydromorphological alterations and therefore existing as well as future pressures, which result from the driver navigation. Besides the strategy of the ICPDR towards the DRBM Plan the *Joint Statement on Inland Navigation and Environmental Sustainability in the Danube River Basin* should additionally contribute to the guidance towards the Joint Programme of Measures in order to achieve the EU WFD environmental objectives in a sustainable way.

The presentation will provide an overview on the findings of the Danube Basin Analysis including an outline regarding the pressures resulting from navigation. The steps towards the DRBM Plan and JPM will be described.