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Technical aspects on sediment monitoring crossing international borders

W. Summer, A. Weidl

FH-Campus Vienna, Daumegasse 1/2, A-1100 Vienna, Austria, (bau@fh-campuswien.ac.at, ph.:+43/1/606 68 77 -2120, fax: +43/1/606 68 77 -2129)

This project on „Strategic and Technical Aspects on Sediment Monitoring Crossing International Borders" was drawn up as part of the work programme of the ICCE task force on „the standardization and comparison of methods used for evaluation and comparison of sediment crossing international borders". The activities are intended to assist governments and joint bodies in developing and implementing procedures for monitoring and assessment in their region in a harmonised way.

Certain general features of the sediment cycle distinguish it from the hydrological cycle:

1. Firstly the overall relatively slow movement of eroded sediments in comparison to the surface water. It means that the residence time in the sediment cycle is orders of magnitude longer than in the hydrological water cycle. But once in motion, initiated by single storm events, the natural processes of through-flushing are very fast and often occure in extremes.

2. Secondly, there is a considerable degree of physico-chemical interaction between the sediment and the water. The properties of both, the deposited material and the water are important, and the scope for quality to be modified by interaction between the two is enhanced by the residence times. These features can have major implications on management actions and related monitoring and assessment.

Since monitoring and assessment activities have a cyclic character (objectives change, thus, the related monitoring will also be modified), a so-called „monitoring cycle" is

used, which reflects the chain of activities from „the information needs of management“, to information collection, towards the information product, which should satisfy the specified information need. An important aspect lies in the joint identification and specification of the objectives of transboundary monitoring and assessment.