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International Hydrological Programme



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International Workshop on

Ecological, sociological and economic implications of sediment management in reservoirs

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Organized by

ICCORES



International Coordinating Committee On Reservoir
Sedimentation



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I n t r o d u c t i o n

Since long time, sediment management has been recognised as a major problem in water resources projects. The reservoirs water storage capacity will be progressively reduced by sedimentation, unless expensive and complex mitigation measures are adopted in the upstream reaches and watershed of the dammed river and/or at the dam site. However, the sedimentation management is usually faced with special or exclusive attention to what is regarded as the utmost objective to be attained, that is the structural safety of the dam itself and the restoration of the lost capacity of the reservoir.

As a matter of fact, many other aspects concerning sediments have to be considered and analysed. Indeed sedimentation management involves, among others, ecological, sociological and economic implications. Suffice it to mention the strong opposition of people living downstream a reservoir to sediment bypassing (sluicing, venting, flushing through dam's outlets), due to the high sediment and polluting concentration in the discharged water and possible negative effects downstream on hydraulic infrastructures, fishing and other recreational activities. Besides, the mechanical removal of sediments deposits and their disposal far from the reservoir may be extremely expensive and have negative impact on the sediment balance of the entire river system, down to the beaches near the river mouth. On the other hand, the reduction of the sediment input by soil conservation in the watershed surface (usually obtained by a substantial reduction of the arable land and/or by modifying the local agronomy) may have, in some countries, serious economic and sociological consequences.

The sediment management intercepted in reservoirs requires the combined action of different disciplines and can benefit from experiences gained in different countries. With this aim, four leading water-related international associations (IAHR, ICOLD, IAHS and IRTCES) founded the International Coordinating Committee On Reservoir Sedimentation, ICCORES, in 1992 in Bergamo, Italy. A formal agreement of cooperation was subsequently signed in 1993 by the Secretaries General of each one of the four associations. Later on, two more organisations (IAWQ and IWRA) joined the Committee. During the following years, several initiatives were taken by ICCORES in its field of competence, very often under the auspices of