

Preface

The International Symposium on Erosion and Sediment Transport Monitoring Programmes in River Basins was organized by the International Commission on Continental Erosion (ICCE) of IAHS and the Norwegian Water Resources and Energy Administration and co-sponsored by UNESCO, WMO, the Norwegian Geophysical Union and the Norwegian National Committee for Hydrology.

The symposium was held in Oslo, Norway, 24-28 August 1992. The main objective of the symposium was to focus on methodology, on the design and implementation of programmes to monitor the processes of erosion and sediment transport and on the need to obtain consistent information about environment change and the associated problems.

Throughout the last decades there has been an increasing need for integrated programmes to monitor erosion and sediment transport in river basins. Increases in population, urbanization, industrial development and other changes in human activities have caused a multitude of sediment-related problems. In many countries, soil erosion reduces crop yields and is a threat to sustained productivity. Downstream transport of increased sediment loads may cause further problems, including reservoir sedimentation and impairment of irrigation, water supply schemes and aquatic habitat. In some areas sediment-associated nutrients and contaminants also cause serious pollution problems.

On a global scale soil erosion is one of the main environmental issues of our time. If the global climate is subject to changes, monitoring programmes in rivers are required to record possible effects on soil erosion, sediment transport, river morphology and habitat.

Rivers and the contaminants they carry cross political boundaries and may pollute water bodies shared by several nations. There is a growing need for large scale international programmes and better strategies to coordinate and integrate sediment transport monitoring into water quality and hydrological monitoring programmes. New methods and new technology should be developed to meet the need for more detailed and reliable data and information needs pertinent to environmental issues.

The 57 papers included in this volume cover a wide range of topics within the field of erosion and sediment transport. The papers have been grouped under four main themes: *Development of measurement techniques*; *Sampling strategies*; *Monitoring networks and programmes*; and *Case studies*. Developments and experience in a great variety of environments are reported. It is hoped that these presentations will stimulate discussion and form a basis of increased international cooperation.

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