

Preface

Over the past 10 years, the International Commission on Continental Erosion (ICCE) has organized a number of important and successful symposia dealing with different aspects of erosion and sedimentation. These have included: the Symposium on Drainage Basin Sediment Delivery held in Albuquerque, New Mexico, in 1986; the Symposium on Sediment Budgets held in Porto Alegre, Brazil, in 1988; the Workshop on Erosion, Transport and Deposition Processes which took place in Jerusalem, Israel, in 1987; the Symposium on Sediment and the Environment held in Baltimore, USA, in 1989; the Symposium on Erosion, Debris Flows and Environment in Mountain Regions which took place in Chengdu, China, in 1992; the Symposium on Erosion and Sediment Transport Monitoring Programmes in River Basins staged in Oslo, Norway, in 1992; the Symposium on Sediment Problems: Strategies for Monitoring Prediction and Control, held in Yokohama, Japan, in 1993; and the Symposium on Variability in Stream Erosion and Sediment Transport which took place in Canberra, Australia, in 1994. These symposia have emphasized the wide-ranging interest of ICCE in the field of erosion and sedimentation and its key role in promoting interdisciplinary contacts between hydrologists, geomorphologists, earth and environmental scientists and agricultural and hydraulic engineers. When it was originally established as a Commission of IAHS, one of the primary interests of ICCE was in drawing together information from different parts of the world on sediment loads and sediment yields in order to obtain an improved understanding of global and *continental erosion*. In those early days, ICCE benefited greatly from the efforts and drive of Dr Fred Fournier who was its President during the period 1971 to 1983 and who succeeded both in promoting interest in this global perspective and in establishing erosion and sedimentation as an important area of IAHS activity. It is therefore highly appropriate that in 1996 ICCE should once again focus attention specifically on *continental erosion* and the global perspective. Recent expansion in monitoring activity in many areas of the world has provided the basis for improved documentation and understanding of the transport of sediment from the land to the oceans and of the global and regional patterns involved. Furthermore, the recent growth of interest in land degradation, sustainable development of the world's resources, global biogeochemical cycling and global change has added further relevance to this global perspective. In many situations, increased rates of soil loss and sediment yield have important economic implications relating both to on-site loss of soil productivity and to the downstream impact of mobilized sediment, including reservoir sedimentation. There is therefore an important need for a global assessment of current rates of soil erosion and sediment yield and their response to environmental change, as well as for more detailed regional assessments of the patterns and rates involved.

This *International Symposium on Erosion and Sediment Yield: Global and Regional Perspectives* aims to draw together information currently available on global and regional patterns of erosion and sediment yield and their sensitivity to environmental change, to examine the trends and patterns involved and to identify key areas for future research and international collaboration. Co-sponsored by UNESCO, the symposium represents a contribution to Projects 2.1 and 2.2 of the Fifth Phase of the International Hydrological Programme (IHP-V) which focus on vegetation, land use and erosion processes and on sedimentation processes in reservoirs and deltas. Any attempt to draw together current information on global and regional patterns of erosion and sediment yield must necessarily involve participants and contributors from different areas of the world. The task of bringing together participants from more than 30 countries has been greatly assisted by the generous financial support made available by the UK Overseas Development Administration (who also co-sponsored the symposium), and by UNESCO, IAHS, the Royal Society of London and the British Council.

The 61 papers published in this proceedings volume cover a wide range of topics. They have been grouped into six main themes. The papers on *Global patterns* and *Regional and national patterns* are primarily concerned with sediment yields and provide a valuable synthesis of existing information both at the global scale and from specific areas of the world. They are complemented by a group of papers dealing more specifically with *Soil erosion perspectives* which emphasize the significance of soil erosion in many parts of the globe. Any attempt to explain global and regional patterns of erosion and sediment yield must clearly take account of contrasts in the erosional and sediment conveyance systems operating in different morphoclimatic zones, and a further group of papers therefore focuses on *Sediment dynamics in contrasting environments*. Attention is also given to the sensitivity of erosion and sediment yields to environmental change in a section devoted to *Trends in sediment yield*. The wider environmental and economic significance of increased sediment loads in rivers and associated management issues are emphasized by the final group of papers dealing with *Sedimentation problems and sediment management*.

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