

Preface

The International FRIEND research programme (Flow Regimes from International Network Data) is an initiative of the International Hydrological Programme of UNESCO bringing together people from a broad range of institutions including operational hydrological agencies, water users, policy makers and research scientists to generate and share scientific knowledge, tools and information. One of the main objectives of the FRIEND programme is to study the variability of hydrological regimes in order to improve the management of water resources at a catchment, regional and global scale. Since the inauguration of FRIEND in 1985 the initiative has grown to a worldwide network of scientists belonging to different regional FRIEND groups (Northern European FRIEND (1985), Alpine and Mediterranean (AMHY) FRIEND (1991), Southern Africa (SA) FRIEND (1991), West and Central Africa (AOC) FRIEND (1994), Hindu-Kush Himalayan (HKH) FRIEND (1996), Nile Basin FRIEND (1996), Asian Pacific FRIEND (1996) and Caribbean/AMIGO FRIEND (1999)).

The Fourth International Conference on FRIEND was held in Cape Town, South Africa. It was the first time a FRIEND conference took place outside Europe. The previous conferences were held in Bolkesjø (Norway, 1989), Braunschweig (Germany, 1993), and Postojna (Slovenia, 1997).

Recently the United Nations Environment Programme has identified the water issue as one of the major environmental problems in the twenty-first century. To address the various water-related aspects, the conference has focused the attention on bridging the gap between knowledge, research and practical applications. The conference topics are:

- * *Hydrological Data—policy, international rivers, databases, real time, dissemination*
- * *Managing hydrological risk—floods, surface and groundwater droughts*
- * *Water scarcity—overexploitation and poverty reduction*
- * *Sustaining water-related ecosystems—definitions, methodology and operation*
- * *Continental hydrology—regimes, water sharing, tele-connections, snow, ice, international basins*

The volume contains 63 selected reviewed papers from a total of over 130 abstracts. The papers demonstrate how advances in hydrology can be used for the development of integrated river basin management to ensure the sustainable development of water resources. Furthermore examples are given for in-cooperating research results in operational hydrology and water resources planning, including numerical and statistical models and visualisation techniques.

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