chapter one

Introduction and Background to the Meeting

Preamble

A four-day meeting was held from 15th – 18th May 2001 in Kathmandu to discuss a Framework for Flood Forecasting in the Hindu Kush-Himalayan (HKH) Region. The meeting attracted over 60 high-level government officials and experts from six countries of the HKH region, viz., Bangladesh, Bhutan, China, India, Nepal, and Pakistan and international experts on floods and flood forecasting (the list of participants is given in Annex 3). The meeting was organised jointly by the International Centre for Integrated Mountain Development (ICIMOD) and the World Meteorological Organisation (WMO) and co-hosted by the Department of Hydrology and Meteorology (DHM) of His Majesty's Government of Nepal (HMG/N). The US Department of State (Regional Environment Office for South Asia), USAID/OFDA, and DANIDA sponsored the programme. On the first day of the meeting, the participants were taken on a field trip to the border areas of Nepal and the Tibet Autonomous Region of China to observe the effect of floods on people and property along the Bhote Koshi River. This provided an opportunity for the participants to observe what ICIMOD and other organisations are doing to mitigate disasters caused by floods at the field level. The rest of the three days were devoted to technical presentations by regional participants and other international experts on floods and flood-related issues, discussions on flood forecasting and flood information sharing, and presentation of outcomes.

On the second day of the meeting an inaugural ceremony was held in Kathmandu which was inaugurated by the

Honourable Minister for Science and Technology of HMG/N. The Director General of ICIMOD, officially welcomed the participants, observers, and guests to the meeting. Others, representing the organisers and sponsors, made brief remarks emphasising the importance of the meeting and the need for participants to ensure that concrete steps are taken to develop a workable framework to help prevent the disastrous effects of floods in the HKH region. A summary of the opening speeches and remarks are given in Chapter 2. Soon after the inaugural ceremony, the working sessions commenced and continued until the afternoon of the fourth day. An 'Action Plan for Regional Cooperation for Flood Information Exchange' was endorsed by the participants in the concluding session.

Rationale, Objectives, and Methodology of the Meeting

The mountains of the HKH extend over about 3,500 km from west to east across Afghanistan, Pakistan, China, India, Nepal, Bhutan, and Myanmar and are the largest storehouse of fresh water in the lower latitudes. The mighty rivers of South and Southeast Asia, namely, the Indus, the Ganges, the Brahmaputra, the Mekong, the Yangtze and the Yellow river, originate in these mountains and the Tibetan Plateau. These rivers not only provide sustenance to millions of people in south, southeast, and east Asia but also possess tremendous potential for hydropower generation, which could accelerate the pace of economic development of the countries of these two regions. However, these mighty rivers also cause extensive damage to life and property every year due to devastating floods.

Timely warning of such disasters is therefore crucial not only to save lives and property but also for the development, operation, and management of large water resources' projects. Better quality data and careful planning using the latest flood-forecasting technology, equipment, and communication systems, such as those envisaged in the World Hydrological Cycle Observing System (WHYCOS) of the WMO, are needed to share information and data on a real-time basis. Although there has been some success in the sharing of historical data, very little has been done with regard to sharing real-time data, which is critical for flood warning and forecasting to prevent damages to lives and property.

The need for developing early warning systems and flood forecasting is obvious. Better systems for collecting good quality hydro-meteorological data and their quick transmission based on a thorough understanding and cooperation among the regional countries will help in effective management of the vast water resources and the mitigation of flood disasters. The participants from the region, therefore, appreciated that such a meeting was held to help develop strategies for flood forecasting and flood information exchange in the HKH region.

Main Objectives

The main objectives of the consultative meeting were to develop a framework for regional cooperation in flood forecasting and to devise concrete options for its implementation using the WHYCOS concept formulated by the WMO. The meeting focused on the following:

- achieving consensus among the regional participants on the needs for a regional approach to flood forecasting and flood information sharing,
- developing a technical concept to define the capacity-building needs of the participating countries in hydro-meteorological services, and
- preparing an action plan to implement a technical concept in terms of an operational regional flood-forecasting system.

Methodology

Presentations were made by representatives from the participating countries and international experts on invited policy and technical papers. The participants also discussed in detail, specific topics on flood forecasting and information sharing in break-out sessions. The outcomes of the break-out sessions were presented for further discussions and endorsement at the plenary sessions.

The Report

This report is divided into six chapters preceded by a foreword, an executive summary, and a list of abbreviations and followed by Annexes. Chapter one gives an introduction and background to the consultative meeting. Chapter two covers the Inaugural Session and gives a summary of the speeches. Prior to the inaugural session, a one-day field visit was organised and a brief report on this can be found in Annex 1. Chapter three covers the country case studies and the first part of the technical presentations on flood forecasting systems and highlights the key issues. Chapter four covers the second part of the technical presentations, the issues covered by the break-out groups, a summary of the key issues raised, and the development of an action plan for the establishment of regional flood-forecasting systems. Chapter five primarily includes the presentation of the Action Plan and the Framework for Regional Cooperation in Flood Forecasting and Management. Chapter six covers the key achievements and conclusions. Annex 2 provides the programme agenda of the meeting while Annex 3 gives the list of participants.