

## Session One

### Background of the Regional Working Group on Mountain Hydrology

**Chairman:** Mr. Mohammad Rahim, Director General, Hydrology and Water Management, Ministry of Water and Power, Kabul, Afghanistan.

**Professor S.R. Chalise** opened Session One with a brief note on the background of the Regional Working Group on Mountain Hydrology and its past efforts to initiate a regional FRIEND-type research project in the HKH. He stated that this was the fifth meeting of the Regional Working Group and that the goal was to establish a FRIEND-type project in this region.

**Mr. L.A. Mandalia** noted that, in accordance with the recommendations of the Third Consultative Meeting of the Regional Working Group on Mountain Hydrology, the fourth meeting of the RWG had been held on July 1995 in New Delhi. The meeting elicited suggestions on how to organise a FRIEND-type project, its name, workplan, guidelines, and so on. He noted that the support of participating countries was crucial and could be stronger. This should change, considering the benefits the countries would receive. One of the drawbacks, he said, was the constant change of representatives from participating countries. This hindered continuity. He emphasised the need for more permanent committee representatives, from both government and non-government institutions, for the successful launching of a FRIEND-type project. "It might also help," he added, "to treat FRIEND in the HKH as a highly scientific and technical project, rather than an official one."

**Dr. A. Gustard**, from the Institute of Hydrology, U.K., described the FRIEND project's conceptual background, structure, and facts about its inception in different parts of the world. He explained that the primary objective of FRIEND was to develop a better understanding of hydrological variability and similarity across time and space in order to develop the hydrological sciences and improved practical designs. He also stated that there were four project groups of FRIEND; viz., (1) North European, (2) Alpine and Mediterranean Hydrology (AMHY), (3) South African FRIEND, and (4) West and Central African FRIEND; and that there were future plans to expand FRIEND into the HKH, South East Asia, Latin America, and the Nile region. He mentioned some of the training, fellowship, and exchange programmes within FRIEND. He also outlined the difficulties in implementing FRIEND projects, especially the new ones: (i) determination of common research objectives; (ii) agreement on a work programme and common methods of analysis; (iii) funding; (iv) establishment of a coordination centre, secretariat, and central database facilities; and (v) data security while exchanging national data. Listing the advantages, he said that an international database transcended the constraints of national boundaries; promoted the exchange of project staff, models, analyses, and techniques between countries; and also meant that the specialisation lacking in one country could be provided by another. The paper presented by Dr. A. Gustard on the implementations, achievements, and further plans for the Northern and Western European FRIEND project is given in Annex 4.

Professor A. Herrmann pointed out that hydrological behaviour, particularly at the micro-level, was poorly understood in the HKH region. In outlining the activities of FRIEND in Europe, he said that an HKH-specific project would be aimed at solving regional problems. He emphasised the need to begin research on hydrological processes in places where the infrastructure for hydrometeorological monitoring was already available. Further details of his presentation are given in Annex 5.

## Discussions

Dr. S. Shah, from Pakistan, suggested the acronym THHUND-FRIEND for the proposed project.

Dr. B.P. Parida, from IIT, New Delhi, said there was a dearth of data in the region. He suggested establishing a research institute for regional hydrological studies.

Professor M. Hussain, from Bangladesh, suggested that the same acronym recommended at the meeting in Delhi the previous year be used.

Professor M.F. Bari, from Bangladesh, stated that his institution had been working on drought and in small catchments and expressed an interest in cooperating with the proposed project work.

Professor B.A. Chandio, from Pakistan, expressed willingness to cooperate. He asked how the project would be supported. He also queried whether it was only UNESCO or other organisations also who were supporting the project.

Dr. R.P. Singh, from the Indian Institute of Technology (IIT), Kanpur, India, pointed out that there was too much government control in the region. Such regional workshops should not be restricted to a few official delegates only. The message should go to larger scientific communities. He also insisted that universities had greater freedom and flexibility for exchanging data and that funding was the critical issue in undertaking such studies.

Dr. L. Molnár, of the Slovak IHP, pointed out that this was the introductory stage of the project. Appropriate ways, appropriate institutions, and appropriate personnel for carrying out the work had to be identified. The second stage would be devoted to research and operations.

Mr. K.S. Yogacharya formally presented the proposal prepared for launching a FRIEND project for the Hindu Kush-Himalayan Region for discussion and comments. He presented the background, name, objectives of the project proposal, names of the participating countries, funding, the structure of the project administration, and programme activities. He highlighted the priority activities which were: (i) to collect existing datasets and catchment characteristics from participating countries, (ii) to locate existing hydrological/meteorological stations in the region, and (iii) to establish and maintain liaison with research projects/institutions. He stated that the proposal envisaged the establishment of a regional database centre at ICIMOD.