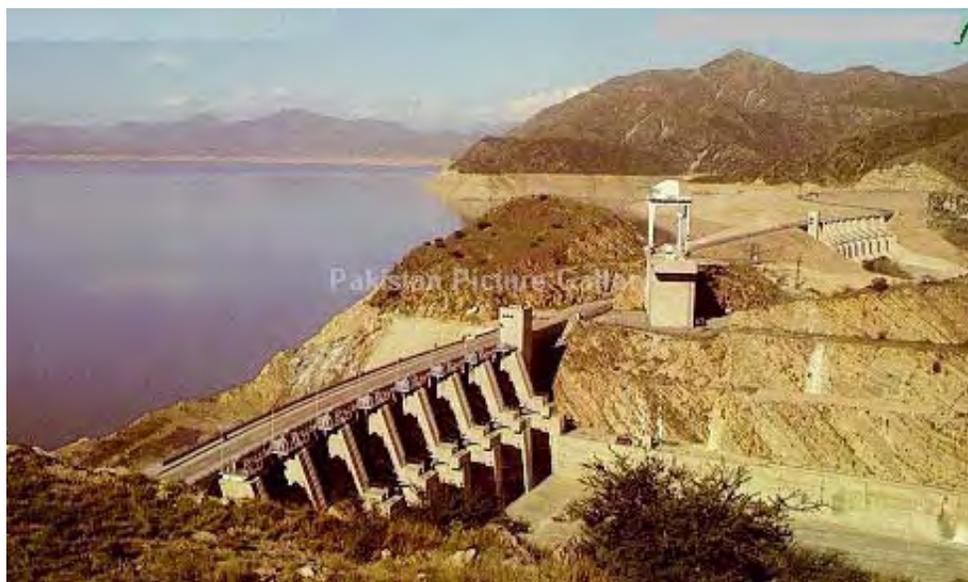


Summary of the
Pakistan National Consultation
On
The Establishment of a Regional Flood Information System
In the Hindu Kush Himalayan (HKH) Region
9 February: Lahore
11 February : Islamabad
Pakistan



ORGANIZERS

Flood Forecasting Division of Pakistan Meteorological Department with the collaboration of Hydrology and Research Division (HSR Division) of Water and Power Development Authority (WAPDA), Relief Department (Punjab), Federal Flood Commission

International Centre for Integrated Mountain Development (ICIMOD)

World Meteorological Organization (WMO)

SPONSORS

US Department of State (Regional Environment Office for South Asia)

United States Agency for International Development, Office of Foreign Disaster Assistance (USAID / OFDA)

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1 INTRODUCTION

This document is a **summary** of the **Pakistan National Consultation (PNC)** for the ‘Establishment of a Regional Flood Information System in the Hindu Kush-Himalayas’ that was held on 9th and 11th February 2004. The consultation was carried out as part of the activities recommended during the 2nd High Level Consultative Meeting in March 2003. The consultation was organized by the Flood Forecasting Division of Pakistan Meteorological Department with collaboration of Hydrology and Research Division (HSR Division) of Water and Power Development Authority (WAPDA), Relief Department (Punjab), Federal Flood Commission, International Centre for Integrated Mountain Development (ICIMOD) and World Meteorological Organization (WMO).

2 BACKGROUND

Starting in 2001, a long-term project was initiated by ICIMOD and WMO that aims at establishing a regional flood information system to reduce flood vulnerability and minimize the negative impacts of floods in the Hindu Kush-Himalayas. As part of this project a series of meetings have been held and reports and papers prepared, and a website <www.southasianfloods.org> has been set up to facilitate sharing of data and information.

As of this report, two High Level Consultations and a meeting of The Panel of Experts have been conducted. The second High Level Consultation recommended National Consultations in member countries to identify the national needs and priorities for timely and accurate flood forecasting and for selecting pilot basins for pilot testing a regional flood information system. Following this recommendation, National Consultations have been held in Bangladesh, Bhutan, China and Pakistan. The Consultation in Nepal will be held in March 2004 and the Consultation in India is being planned.

The project is supported by the US Department of State Regional Environment Office for South Asia (USDS/REOSA) and the US Agency for International Development Office of Foreign Disaster Assistance (USAID/OFDA).

2.1 Objectives of National Consultations

The objectives of holding National Consultations as endorsed by the 2nd High Level Consultation are:

- To assess the current institutional capacities including technical know-how and human resources, needs and requirements and recommend specific institutional linkages, frameworks and cooperative mechanism required within the country and outside for a regional flood information system.
- To identify specific national needs of equipment and communication systems (including possibility of using satellite communication) at a basin level to be installed for pilot testing of the technical feasibility of real time data acquisition and communication systems for an operational regional network.
- To define a hydro meteorological network that is adequate for national requirements in the framework of the regional project.
- To help prepare a realistic assessment of funding requirements based on national needs and priorities for the pilot scale project.

2.2 Expected Results

Within the scope of the above objectives, the following results are expected from the meeting:

Nomination of candidate basins and hydro-meteorological network for pilot studies finalized.

Assessment of institutional capabilities, needs, requirements (human, technical know-how and equipments) and cooperation mechanisms for testing and development of a flood information system based on a fully participatory approach that, involves national and international institutions.

2.3 Criteria for selection of Pilot Basins

Operational feasibility: the basins (sub-basins) need to be operationally feasible for pilot studies

Suitability for testing: the basins (sub-basins) need to be suitable for testing of different equipment and models

Saving of lives and property: the implementation of the project in the basins (sub-basins) should help in a tangible way to save lives and property through an improved framework for flood forecasting

Expansion of coverage: the selected basins (sub-basins) should allow expansion of the existing station networks, i.e. the network, selected for the pilot basins can become part of the regional flood information network

Trans-boundary: the basins (sub-basins) from trans-boundary rivers should be selected for pilot studies as a priority

3 PAKISTAN NATIONAL CONSULTATION

The Pakistan National Consultation was held at Hotel Holiday Inn premises on 9th February 2004 in Lahore and on 11th February in Islamabad. The following section describes the preparation and outcomes of the Consultation:

3.1 Participation

National and regional agencies, consultants, local government, non Government Organization, Educational Institutes, Federal Agencies, press and mass communication attended the Lahore & Islamabad conference. Besides the local decision makers, professionals, Technocrats; experts foreign consultant and experts from WMO, USAID/OFDA and ICIMOD also exchanged



their views. The Lahore meeting was inaugurated by Honorable Minister for Power (Punjab) and the Islamabad conference was inaugurated by Chairman Federal Flood Commission Mr.I.B.Sheiah along with Director General, Pakistan Meteorological Department Dr. Qamar-Uz- Zaman. On 8th & 10th of February two field trip was made to visit the Telemetry H.F. radio network of WAPDA and Mangla Hydrological Station in the River Jhelum.

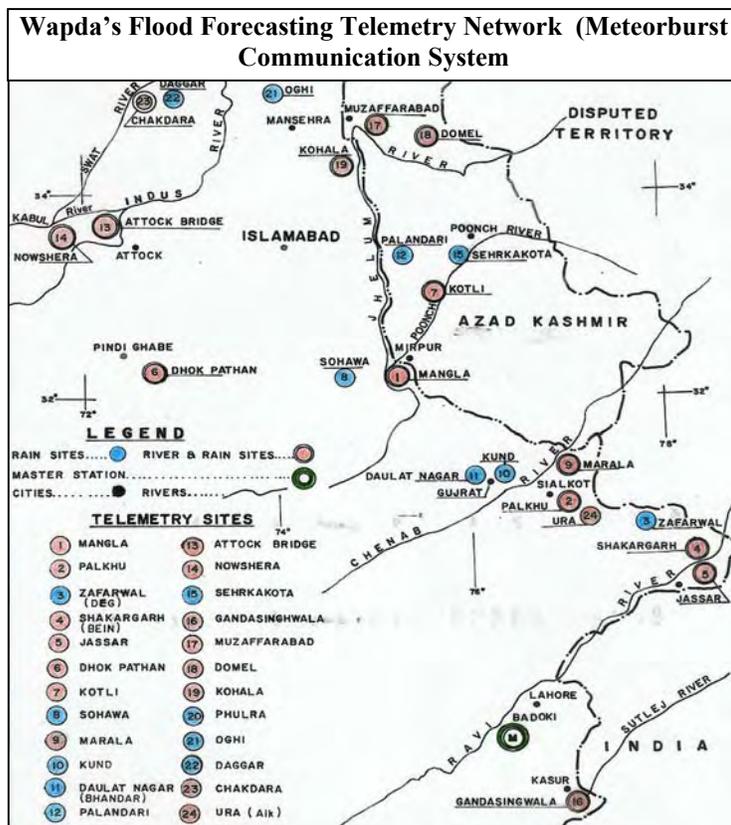
3.2 Consultation

The consultation was successful in meeting its main objectives and expected results. This section measures the outcomes of the Consultation with the set objectives.

3.3.1 Current institutional capacities including technical know-how and human resources, needs and requirements

Experts from various organizations made constructive presentations that themed around the current national capacities and initiatives. The Indus Treaty facilitating data transmission between India and Pakistan was elaborated. Particularly, the presentation by WAPDA, FFD and Relief Department centered on current on the following issues:

- water management,
- flood forecasting and disaster management network and strategies
- data collection, equipments used for observing, collecting and transmitting data
- communication technologies in use
- disaster preparedness and disaster relief regulations
- risk communication strategies



3.3.2 Institutional linkages, frameworks and cooperative mechanism

Participants regarded the Consultation as a platform or mechanism for National Organizations to inform and exchange their initiatives and experiences and took the opportunity to promote networking among the stakeholders. The participants pledged support for the project in their respective areas of expertise. The current institutional linkages were discussed, which are:

A. Institutions responsible for Flood Forecasting

- FFD of PMD : Main Flood Forecasting
- WAPDA : Quantitative hydrological data for flood forecasting
- Irrigation Department : hydrological data from limited station in its network
- Provincial Irrigation Departments : Quantitative hydrological data for flood forecasting

B. Institutions involved with disaster management, mainly relief

- The Pakistan Army

- Health Department
- Livestock And Dairy Development Department
- Food Department
- Industries Department
- Home Department
- Communications & Works Department
- Pakistan Railways
- Water And Power Development Authority
- Lahore City District Government
- Water And Sewerage Authority

C. Institutional Commitments

Participating institutions pledged support in the form of providing

- available human resource, office space, infrastructure, data, experience and expertise for the project.
- Hydrological and Meteorological data including radar data, flood damages data and socio-economic data.

During flood season, daily press briefings are issued by FFD in consultation with the Relief Commissioner Punjab. The Relief Commissioner Punjab or the Minister for Revenue & Relief Government of Punjab may call for special flood briefing.

In case of Category-111 flood situations a forecast of PMF in respect of Mangla/Tarbela is issued and Member (water) WAPDA is personally informed of it by Chief Meteorologist, FFD.

3.3.3 Specific national needs of equipment and communication systems (including possibility of using satellite communication)

Institutional needs were categorized into 3 levels:

1. National Needs

The needs & priorities were too large & were not discussed during the national consultation.

2. Institutional Needs

- Upgrading of the existing two hydrometeorological stations with automatic recording equipment
- Human resources strengthening for recording observations, computerized data management, maintenance of hi-tech equipment and analysis and interpretation of data for end users.
- Technology transfer for data observation, analysis, forecasting and communication through staff exchange programmes
- Development and strengthening of numeric weather prediction model for regional flood forecasting.

3. Pilot Project Implementation Needs

1. Human Resource

- Trained staff for observing, acquiring, quality checking and communicating hydrometeorological data

- Experts for repairing and maintaining rain gauge, water level, data logger and communication equipment
- Strengthening staff for data processing, GIS and web publishing.

2. Technical Know-how

- Hydrological modeling and application monitoring and forecasting floods, landslides and flashfloods
- Modern data collection system
- Technical knowledge sharing between regional countries
- Knowledge of existing and emerging state of the art technology for flood disaster management

3. Equipment

- Upgrading observation systems with State of the art equipment, especially automatic weather stations at pilot basins
- Communication Facilities
- V-SAT system for National Center for transmitting data to regional center
- Telemetry system, like meteorburst, connectivity from National Center to pilot basins with alternate back up systems such as HF radio.

3.3.4 Realistic assessment of funding requirements

ICIMOD will provide financial support to upgrade the hardware and strengthening institutional capabilities.

3.3.5 Nomination of candidate basins and hydro-meteorological network for pilot studies finalized

Developing on the selection criteria recommended during the II High Level Consultation, the Flood Forecasting Division recognized the following factors as complementing the criteria

- a. Maximize life saving in transboundary basin
- b. Minimize duplication of efforts
- c. Easy accessibility to selected basin
- d. Availability of energy and communication facilities for testing high tech equipment
- e. Existence of downstream hydropower projects therefore, need for flow control and security.

The Marala site on the Chenab river basin and the Mangla site on the Jhelum river basins were selected for the pilot studies.

4 CONCLUSION

The consultation was successful considering that the main objectives were met and pilot basins selected. It not only brought together experts from various fields of disaster mitigation and response but also provided a platform for exchanging and sharing expertise.

Productive queries for discussions were brought forward, mainly

- Regional meta data catalogue
- Need to address GLOFs and develop an alarm system
- Inclusion of the Kabul river to cover North-Western region

- Capacity building in flood mapping using GIS
- Time frame for implementing the pilot phase
- Data collection, analysis, checking and processing system from stations to National Center and eventually to Regional hub
- Linking information available on various websites through www.southasianfloods.org
- Optimizing existing network

Themes centered on strengthening existing national capacity through human resource training and information and use of new state of the art equipment were discussed. The Consultation recognized the need for a proto type data collection and transmission system, which should be discussed in a regional meeting.