

**Summary of the
Nepal National Consultation
On
The Establishment of a Regional Flood Information System
In the Hindu Kush Himalayan (HKH) Region
March 16 –17, 2004
Kathmandu, Nepal**



ORGANISERS

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International Centre for Integrated Mountain Development (ICIMOD)

World Meteorological Organization (WMO)

FACILITATORS

Association for Research and Management (ARMS)

SPONSORS

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

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1 INTRODUCTION

This document is a **summary** of the Nepal National Consultation (NNC) for the ‘Establishment of a Regional Flood Information System in the Hindu Kush-Himalayas’ which was held from 16-17 March 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 HMGN Department of Hydrology and Meteorology (DHM), 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, Nepal and Pakistan. The Consultation in India is yet to be held.



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 NEPAL NATIONAL CONSULTATION

The Nepal National Consultation was held at Hotel Yak and Yeti from 16-17 March 2004. The following section describes the preparation and outcomes of the Consultation:

3.1 Participation

The organizing committee (See point 3.2.1) identified and sought participation from various government organizations, including Ministries and Government Departments, International Organizations, donors, humanitarian organizations, media, academicians and independent experts in the country.

3.2 Pre-Consultation

3.2.1 Organizing Committee

An organizing committee was formed to ensure the smooth functioning of the consultation. The organizing committee comprised of members from DHM, DWIDP and ICIMOD.

The organizing committee appointed the Association for Research and Management Services (ARMS) to facilitate the consultation. The organizing committee felt the need to form a core group for pre-consultation and selection of priority basins.

3.2.2 Core-Group

The core group was formed comprising key national organizations that were associated with water resources and disaster mitigation, including Nepal Telecommunication Corporation (NTC), whose contribution for transmitting data is imperative to the project.

The core group for the Nepal National Consultation met on 9 March 2004 to pre-select pilot basins for discussion during the National Consultation.

The core group members considered and measured the river basins against the selection criteria. In addition the criteria for the selection of the basin recommended by the 2nd High Level meeting the core group also reasoned that owing to political unrest in the country, physical security, for both human resource and equipment, also should be considered as a decisive criterion. A tabular summary is presented in Table 1.

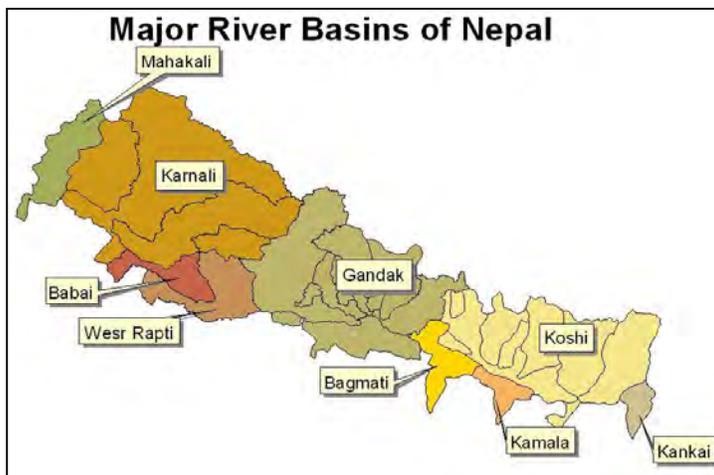


Table 1: River basins measured against selection criteria

Basin	Regional Fit	Operational Feasibility	Saving lives/ Range of National Interest	Expansion of Coverage	Access-ibility	Physical Security	Remarks
Bagmati	Immediate Bilateral-with India extending regional with Bangladesh	Infrastructure in place though inadequate, ideal for building on	Effects most number of people in Nepal 35 km stretch	Very Good	Good	Good	Manageable size basin
Koshi	Regional-with China, India and Bangladesh	Some	Effects 1 VDC within flood the flood plain 25 km stretch	Good	Fair	Fair	Other big projects proposed in this basin
Narayani	Immediate Bilateral-with India extending regional with Bangladesh	Infrastructure in place though inadequate, ideal for building on	90 kms stretch	Very - Good	Good	Good	
West Rapti	Bilateral-Unresolved standing issues with India	Discussion ongoing with India to set up infrastructure	15 kms stretch	Limited	Moderate		More beneficial for India. More appropriate for bilateral dialogue

The basins and hydrometeorological stations recommended for consideration during the National Consultation is given in Table 2.

Table 2: Selected basins and stations for pilot study

River Basin	Station	Station type
Bagmati	Karmaiya	Hydrological
	Kathmandu	Meteorological
Narayani	Devghat	Hydrological
	Pokhara	Meteorological

3.3 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. Particularly, the presentations by DHM, DWIDP, WECS and MoHA centered on current national initiatives and capacities, including existing hydrometeorological network in Nepal, the Water Resources Strategy of Nepal, river trainings in Nepal and the legal provisions in Nepal for Disaster Management. These and further issues regarding national capacity and including response mechanisms and telecom infrastructure are addressed in detail in a fuller report of the consultation that is being prepared.

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, which are:

Member Commitments

- Institute of Engineering (IoE): Mobilize students/Engineers during vacation or as part of thesis
- Central Department of Hydrology and Meteorology (Tribhuvan University (TU)-CDHM): mobilize students/meteorologists as part of thesis
- Department of Roads (DoR): Information on road networks and study on waterway in Narayani river, study possibility to establish hydrological stations in bridge
- Department of Hydrology and Meteorology (DHM): Data,existing network, human resources
- Ministry of Science and Technology (MoST): Provide facility to use the tele-centers for transfer of information.
- Ministry of Home Affairs (MoHA): Disaster data and mitigation measures
- Department of Water Induced Disaster Prevention (DWIDP): disaster data, Master Plan of Rivers, Hazard maps and will cooperate on after disaster mitigation works, sharing of resources for mitigation
- Department of Electricity Development (DoED): Hydro-meteorological data on the Pancheshwar and other projects
- Nepal Telecommunication Corporation (NTC): Data transmission facility
- Natural Disaster Management Forum (NDMF) Nepal: community mobilization
- OXFAM: community mobilization

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

With regard to anticipated technical capacity building and other needs, key National organizations identified a wide range of needs, mainly

- **DHM** : Real time data acquisition and transmission system, modeling software, human resources, training, high budget for national level implementation
- **NPC** : budget is made available on a priority basis, the departments should prioritize their needs themselves
- **IoE** : Short term trainings for lecturers
- **DWIDP** : Human resources, training

With regard to available telecommunication systems and the possibility of using satellite, NTC stated that it was now possible to link the entire country via V-SAT. However, more possibilities of data transmission like dial-up and mobile services could be explored once the data type and frequency of transmission were provided.

3.3.4 Realistic assessment of funding requirements

With regard to a realistic assessment of financial requirements, participants agreed that while a real implementation of the project would necessarily mean employment of huge funds and resources, the pilot study should be conducted with minimum upgrades utilizing existing infrastructure and resources.

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

The participants endorsed the Bagmati and Narayani Basins for the pilot study and hydrometeorological stations as indicated in Table 2.earlier.

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. Themes from national capacity building to curriculum development were discussed.

Productive queries for discussions were brought forward, mainly

- Project sustainability
- Adaptation to the regional framework
- Transmission strategies
- Institutional linkages
- Capacity building
- Adequacy of the national hydrometeorological network
- Centralized archives for independent organizational initiatives like hazard maps, flood reports etc. to minimize duplication of efforts.

A number of participants suggested that the project should build on, and benefit from, **existing** and emerging partnerships, stakeholder dialogues, and means of communication.

The consultation also provided an opportunity for the key organizations like DHM and DWIDP to assess their own institutional capacities in flood management and forecasting. It enabled DHM to assist in the planning process of design network, cross institutional dialogues like with NTC at a national level and plan for a flood forecasting system which is not in place currently.

Following all National Consultations, ICIMOD and WMO are expected to finalize the draft of the project document incorporating the recommendations and suggestions of National Consultation Meeting, which will then be submitted to each national Government of the region for endorsement.