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# Day Two: Inaugural Session

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## **Inaugural Session**

The inaugural session was held in the morning of Wednesday 16<sup>th</sup> May 2001. The chief guest was the Honourable Minister for Science and Technology, Mr. Surendra Prasad Chaudhary. Over 90 persons including participants, observers, and guests attended the opening session. A summary of the speeches in the order that they were made is presented below.

### **Welcome Remarks: Dr. J. Gabriel Campbell, Director General, ICIMOD**

Dr. J. Gabriel Campbell welcomed the Honourable Minister for Science and Technology, the distinguished participants from the regional countries, international experts, organisers, and sponsors to the meeting. He noted that the focus of the meeting was to save lives and to encourage productive investments by exploring frameworks for flood forecasting and timely warning for people in downstream areas.

Dr. Campbell stressed that the existing bilateral agreements and regional networks were a good basis for expanding regional collaboration. He mentioned that ICIMOD had been active in supporting regional efforts to increase scientific and technical collaboration on water issues – from watershed management and micro-water harvesting to regional research data sharing through the HKH-FRIEND (Flow Regimes from International Experimental Network Data) project supported by UNESCO. In addition to WMO and UNESCO, he also expressed gratitude to the United States

and Denmark for bringing invaluable expertise, financial support, and enthusiasm to the effort.

Based on consultations already conducted informally, he suggested some tentative areas for follow-up for the participants' consideration. These included the following areas.

1. Mapping and analysis of flood disasters by experts from governments and institutions in the region using state-of-the-art tools and technologies so as to better assess where to invest most efforts to save lives and property
2. Development of compatible technical standards in collaboration with national experts from governments and principal institutions in the region to facilitate the potential for real-time flood forecasting
3. Study of the mechanisms and regulatory frameworks for collecting and sharing hydro-meteorological data through international data-sharing protocols
4. Follow-up meetings to this one to periodically review progress and map out follow-up actions
5. Coordinated national investments, supported by international agencies, to strengthen the capacity needed to turn hopes into reality

Dr. Campbell stated that the people of the region have learned to seek in the Himalayas both spiritual solace and the means to improve the livelihoods of people living both upstream and downstream. He expressed the view that collective wisdom and practical experience could be shared to formulate concrete steps that all the participating countries could take to save lives and improve economies while safeguarding the irreplaceable environment from floods.

### **Inaugural Speech: The Honourable Minister for Science and Technology, Mr. Surendra Prasad Chaudhary**

In his inaugural address the Honourable Minister for Science and Technology, Mr. Surendra Prasad Chaudhary, mentioned that the existence of the HKH countries predominantly depends on their rivers, which have given birth to civilisations in ancient times. The great civilisations in this region flourished along the banks of the great rivers originating from the HKH. Water still dominates the contemporary cultural, economic, as well as the socio-political activities and aspirations of the people of the region. He went on to state that, *"Water can turn out to be a blessing as well as a formidable challenge for the countries of the HKH region. Every year millions of people are rendered homeless and several hundreds lose their lives in disasters caused by floods. Heavy precipitation from June to September, saturated watersheds, steep slopes, and strong river gradients contribute to the magnitude of floods occurring regularly in many countries of this region."* The Honourable Minister appealed to the participants to arrive at a consensus on developing a practically-workable agenda for flood forecasting in the region, in order to enable the participating countries to better manage and mitigate the adverse impact of floods in a spirit of genuine regional cooperation and good will.

The Honourable Minister further added that larger social and economic forces are operating to trigger the expansion of human settlements to river basins and the proliferation of agriculture into flood-affected plains. It will, therefore, be a daunting and unrealistic task to attempt to prohibit the people from living in flood-prone areas or to prevent more people from further migrating into such areas. A more pragmatic and attainable

approach would perhaps be to assist the people living in the river basins to adjust to and cope with flooding instead of attempting to forcibly regulate human settlements in these plains. Maybe the people living in the flood plains should be taught the philosophy “*of living with floods.*” Accordingly, he suggested that along with flood forecasting and warning systems, in view of the short lead-time in which floods reach the settlements along the numerous rivers subject to flash floods, we should also place emphasis, where feasible, on “*local preparedness*” and “*social protection*”. This should be done with a view to promote, adapt, and live with flood strategies.

The Honourable Minister also pointed out that, today, when the information technology is unfolding wonders hitherto not witnessed in the history of humankind, the people of the region deserve to get an optimum level of service from the use of such technologies to relieve them from the adversity caused by floods. He expressed the belief that the sharing of information and real-time data, particularly between and amongst co-riparian nations, is essential in the protection of lives and property from the devastation of floods. In this connection, he mentioned that His Majesty’s Government of Nepal was in the process of finalising Nepal’s National Water Resource Strategy, which focuses on joint regional cooperation in flood management, information sharing, and forecasting and warning systems as important components. The prime objective of the strategy is to harness and develop Nepal’s water resources in a sustainable and equitable manner for the benefits of its people as well as its neighbours.

He expressed confidence that the consultative meeting would arrive at consensus on developing a practically-workable agenda for flood forecasting for the region. In conclusion, he thanked the organisers and sponsors for their support and welcomed the regional participants and international experts.

**Remarks: Mr. Adarsha P. Pokhrel, Director General, DHM, HMG/  
Nepal**

Mr. Adarsha P. Pokhrel began his remarks with a quote from the old scriptures which describes the fundamental science behind the hydrological cycle as: “*Adityad Jayate Bristi*” or ‘the sun is the creator of precipitation’. The scripture also states “*Aapoh Nara*”, meaning ‘water is life’. He argued that these statements teach people the importance of water in sustaining life and hence the need to ensure effective management in times of water scarcity and overabundance. He pointed out that the overwhelming nature of seasonal rainfall and run-off in the HKH region and its impact, both positive and negative, on millions of people who inhabit this region constitute the primacy of water. Every monsoon, torrents of water flow unpredicted across national frontiers, often with devastating fury bringing in their wake immense damage to life and property. Yet, if harnessed judiciously, prosperity through water resource development is the cherished dream of many in the region. He pointed out that mitigation and management of floods, together with water resource development for realisable multiple benefits and consequently the creation of wealth to alleviate poverty in the region, is an aspiration that all share. He stated that the consultative meeting aims to support the technical management of ‘too much’ water in the region.

Mr. Pokhrel recounted the recent history of flood disasters in Nepal and other neighbouring countries. In Nepal, he stated that in a relatively quiet year –1999– water-induced disaster claimed the lives of 209 people. The loss was estimated to be NRs 365 million (USD 4.8 million approx.). The 1993 flood, one of the worst seen recently in Nepal, claimed 1,336 lives with an estimated property loss of NRs 4,904 million (USD 64.5 million approx.). He stated furthermore, that every year due to floods Bihar, Uttar Pradesh, Assam, and other Indian states experience heavy losses of lives and property. In China and Bangladesh floods are regular events claiming heavy losses of lives and property. The incidence of these recurrent floods every monsoon across the region warrants timely warning of hydro-meteorological disasters to save lives and property, and also the development, operation, and management of water resource related projects. He also opined that for the consultative meeting to be of any support to reduce this heavy loss, it is important that all should make a joint effort to ensure effective flood management.

Mr. Pokhrel pointed out that the acquisition and dissemination of hydrological information was essential not only for flood mitigation but also to judiciously harness the weather resources abundantly available in the region. This, however, requires substantive investment as testified by a recent initiative undertaken in India. A hydrology project was set up in 1996 to collect hydrological information covering 8 southern states of India with a loan from the World Bank of US\$162 million and credit from the government of the Netherlands of US\$ 17 million.

Mr. Pokhrel concluded by saying that he was convinced that the meeting will be successful in achieving consensus on a regional approach to the problem. This, he said, would be achieved by defining the capacity building needs of the participating countries in hydro-meteorological services and by preparing a workable action plan for an operational regional flood-forecasting system. He suggested that periodic follow-up meetings should be held, as these would be essential in ensuring that the action plans agreed to are practically implemented.

#### **Remarks: Dr. Wolfgang Grabs, Chief, Water Resources' Division, WMO**

Dr. Wolfgang Grabs expressed pleasure in seeing the interest shown by the participating governments by sending high-level officials to the meeting. He noted that this demonstrated a growing awareness of the need for regional collaborative efforts aimed at improving flood information systems and the management of floods. He said that improved forecasting and risk management would be an incentive to draw the much-needed investments, especially in low-lying areas. Dr Grabs stated that the development of well-defined and demand-driven projects was the key for attracting donor assistance for the implementation of these projects. He emphasised that significant progress had been made by the hydrological services of the world to cooperate in the exchange of know-how and technologies. He also noted that the development of joint products for forecasting and other hydrological applications and the exchange of data provide a basis for forecasting and water resources' management.

In order to demonstrate the political will and technical capacity for cooperation, Dr. Grabs mentioned that within the framework of the WHYCOS project of WMO, six out of 14 regional HYCOS projects were in various phases of advanced planning or

implementation with the participation of 78 countries. The World Bank, the European Union, and bilateral donors such as France provided funding for these projects.

Dr. Grabs stated that the meeting provided a unique platform for deliberations and mutual information sharing about the current state of flood issues and forecasting in the HKH region. Furthermore, the meeting will provide a foundation for an assessment of needs and opportunities for cooperation and the development of an action plan for the establishment of a framework for a regional flood-forecasting system. In conclusion, he also stressed that the meeting provided an excellent opportunity to make or refresh personal contacts between eminent persons in the areas of flood management, cooperation in river basins, and the donor agencies.

**Remarks: Ms. Deborah Seligsohn, First Secretary, The US Embassy - Kathmandu (Regional Environment Office for South Asia)**

Ms. Deborah Seligsohn expressed her happiness to see that almost all countries in the region were represented by high-level participants. She also welcomed the representation of international experts and hoped that their representation would help enrich the discussions of the meeting. Ms. Seligsohn stressed that floods can have tremendous impacts on people and economies causing adverse damages to lives and property. No matter how high the design of infrastructure, floods could still be higher. Ms. Seligsohn suggested that safety paradigms were needed to mitigate the destructive effect of floods. She also stated that floods would not follow national borders or policies and hoped that participants would endeavour to reach an agreement that will help deal with flood-related problems in the region. She further stressed a need to build a bridge between society and science.

**Remarks: Dr. Guna Paudyal, DANIDA/DHI Water and Environment, Bangladesh**

Dr. Guna Paudyal stated that the low-income economies of this region were gravely handicapped by recurrent natural disasters such as floods and cyclones. Increasing use of the flood plains and increased economic activities in flood-prone areas have resulted in extensive damages to life and property in all the countries. The South Asian society as a whole lives under the risk of floods for at least 4 months a year. He warned that the structural flood control measures alone cannot completely overcome the devastating floods that occur every year. No matter how high a design flood is, there is a possibility of even higher floods that will cause losses. He suggested therefore, that there is an urgent need to make societies in the HKH region more disaster conscious and be better prepared to deal with floods. Since a flood protection system guaranteeing absolute safety is an illusion, a shift in paradigm is needed; it is necessary to live with the awareness of the possibility of floods.

Dr. Paudyal concluded his remarks by pointing out that among the non-structural means of flood alleviation the most effective ones are:

- flood hazard mapping,
- flood insurance, and an
- effective flood mitigation system comprising of flood forecasting and warning, dissemination, evacuation, relief, and post-flood recovery.

He further added that being able to forecast floods well in time with acceptable accuracy and in a way that is easily understood by those who will be affected as well as those involved in relief operations is the key to a successful forecasting and warning system.

### **Remarks: Prof. Suresh R. Chalise, ICIMOD**

Prof. Suresh Chalise provided a background as to why there is a need for a high-level regional consultation to develop a framework for flood forecasting in the HKH region. He mentioned the increasing frequency of extreme weather events by citing the flood disasters in the region in recent years. During the 2nd Steering Committee Meeting in April 2000 of the HKH-FRIEND, which is one of the eight groups of the FRIEND project of UNESCO under its International Hydrological Programme, regional experts, members of the HKH-FRIEND Steering Committee, and representatives from supporting organisations had discussed the idea of holding a high-level regional consultation on flood forecasting. He was pleased to inform the participants that the idea of holding a high-level consultative meeting received wide support and encouraging response from collaborating partners including the DHM, HMG/N, WMO, and the US State Department Environmental Hub Office for South Asia, USOFDA, and DHI/DANIDA. He also pointed out that the major rivers of the HKH originate in the Tibetan Autonomous Region of China and pass through the HKH mountains and reach the ocean only after passing through at least two or three countries of the region. Hence cooperation in the sharing and exchange of hydro-met data, particularly real-time data, is of utmost importance for flood forecasting in the downstream regions. Experience, he stated, has shown that engineering solutions alone cannot prevent devastation caused by flood disasters, whereas dependable flood forecasting and warning systems could help considerably in reducing the damages to life and livelihoods of the people. Examples of initiatives on flood forecasting systems are available at national, sub-regional, regional, and global scales (e.g., WHYCOS of WMO). Furthermore, we now have access to new data tools and techniques such as remote sensing, satellite data and information, the Internet, and the use of GIS and GPS.

Professor Chalise concluded by requesting the participants to consider the planned activities suggested earlier by Dr. Campbell for future work of sharing information on floods and flood forecasting in the region.

### **Vote of Thanks: Dr. Binayak Bhadra, Director of Programmes, ICIMOD**

Dr. Bhadra started by thanking the sponsors and participants for making the meeting possible. He opined that the meeting was about how to make the people of the HKH region less vulnerable. He stressed that as far as floods are concerned, the problems are not just in relation to upstream or downstream countries as it affects all the countries. He believed that the meeting was an opportunity to begin action that would help mitigate floods in the region. He further argued that, *"We have the possibility to carry on forward, provided that we are able to come up with a successful framework for greater regional cooperation in developing the water resources of the region."* The mountains of the world have contributed a lot to humanity. The future in terms of clean energy, conservation of bio-diversity, and in being able to mitigate disasters and also the possibility of getting over these hurdles, does provide the governments in the region with the incentive to cooperate and collaborate, he stated. Dr. Bhadra concluded by stating that regional collaboration will very much depend on the test case of being able to collaborate and develop a framework for the future.