

**Address of Welcome
by
Engr. Husnain Ahmad
at the event of
International Workshop on Floods in Pakistan – 2010
(Lessons Learnt & Way Forward)
held on March 12, 2011**

Honorable Syed Naveed Qamar Sahib, Federal Minister for Water & Power

Dr. Kamran Emami Chairman Working Group on Comprehensive Flood Management of ICID

Mr. Asjad Imtiaz Ali, Chairman PANCID

Distinguished Delegates

Eminent Scholars

Dear Colleagues

Ladies & Gentlemen !

Asslam-o-Alaikum !

It is indeed a matter of great honor for me to welcome you all here for attending this workshop on behalf of Pakistan Engineering Congress as well as on behalf of ICID.

Pakistan experienced floods of biblical proportions in 2010, in the Indus River System, which was unprecedented when compared with the last 80 years of the recorded history of floods in this region. Thereby, on one hand it set new records in terms of discharge that was experienced at various cross-sections, while it also created havoc, causing enormous losses throughout the country. At one point in time almost one fifth of Pakistan was submerged. The unprecedented rainfall for extended duration kept on adding to the passing floods, which resulted in the incomparable losses. The detail of damages caused by 2010 floods is far worse than the destruction caused by 2005 earthquake in Pakistan. The losses of flood 2010 included; 20 million homeless people needing food and shelter, around 2 million houses got damaged, 17 million acre of most fertile land submerged, several 100 bridges and hundreds of kilometers of roads got damaged, more than 1300 schools and more than 600 health facilities were destroyed, more than 1.2 million large and small animals and over 6 million poultry was lost, apart from massive loss of infrastructure more than 3.6 million job loss resulted in a decrease of over 3% GDP.

Ladies and Gentlemen !

This is not something ordinary, many theories starting from Russian fires, Greenhouse effect of emissions and to laser experimentation in space are presented as a possibility, in a quest to find reason(s) resulting in unusual collusion of Easterlies and Westerlies over Afghanistan causing flashy floods through western rivers in Pakistan.

In October 2010, in Yogyakarta, Indonesia, during the annual moot of ICID, the Pakistan delegation headed by myself drew the attention of international experts, towards the suffering of people of Pakistan as a consequence of the unprecedented floods.

Ladies and Gentlemen !

I am grateful to the entire fraternity of ICID, comprising of 108 member countries, who not only expressed their solidarity with Pakistan in fighting out the problems related to relief and revival of life through rehabilitation but also accepted our request for lending their technical support and expertise in formulation of future policy to avert such losses by sharing of experiences and getting engaged in this process by way of holding this workshop in Pakistan. The support is even evident in the message of the President ICID Prof Dr. Chandra Madramotoo and read by Dr. Kamran Emami.

Therefore, It is important that while I place on record my tributes for ICID, PANCID, WWF and my colleagues at Pakistan Engineering Congress for supporting this workshop, I extend my special gratitude to all foreign delegates for joining us here in Pakistan, despite their hectic schedules.

Ladies and Gentlemen !

Here it would not be out of place to mention that no expense, including travel cost of any delegate including foreign guests has been borne by Government of Pakistan or even by the Pakistan Engineering Congress; as they are voluntarily participating in this workshop and, therefore, deserve a special approbation.

Ladies and Gentlemen !

In our region, especially in Pakistan, since its creation, floods of varying intensity have been experienced. These floods have also differed in terms of resulting losses. Although, predicting intensity of very next flood at any one point in time is difficult but this does not diminish the need to evolve a mechanism and strategy to mitigate possible losses due to a high flood in future at any time. The urgency to act in this direction gets manifold especially after experiencing such a high flood of unprecedented proportions because, the disastrous events, such as, high floods of biblical proportions not only impedes national growth in terms of GDP but also poses threat in terms of food, health and shelter.

Any comprehensive flood management may not result in averting future floods but it certainly enables us to combat any eventuality through better planning and address the resulting adversities, which take place in absence of proper planning, such as insecurity to life and property in addition to problems such as food insecurity, disease and shelter. It is high time that we may reconsider a way to create national consensus over issues such as construction of dams, in the prime national interest, for not only the safety of our national assets during floods but also for survival of our future generations to meet their food demands.

Ladies and Gentlemen !

Creation of an effective and efficient flood management system is not a simple recipe; rather it involves a large number of controllable and uncontrollable parameters, chiefly depending on topography of the area. Pakistan has great variations in its topography,

which accordingly, poses greater challenges to flood managers involving both structural as well as non-structural measures.

However, the primary objective is to focus on the reduction of flood losses in an economically sound manner; Prioritizing of areas of greater economic hazards; Protecting the cities and vital infrastructural installations; Exploring the possible use of existing flood control facilities; Promoting appropriate land use in flood hazard areas; Minimizing adverse effects on national ecosystem and environment; and Creating flood awareness and adaptability in the riverine areas.

Therefore, we may.

Review existing Flood Forecasting & Early Warning Systems *and thereby suggesting Improvements, including identification of additional locations for installation of additional weather radars.*

- I. Establishment of Regional as well as in the areas of hill torrents Flood Forecasting & Warning Centers*
- II. Assess the need for installation of Telemetry System and HF Radio Network to cover upper catchments of Kabul and Indus Rivers, as well as secondary/tertiary Rivers;*
- III. Examine option of trans-boundary data sharing using WMO and UNESCO networks.*
- IV. Mapping and modeling snow and ice cover;*
- V. Real time flood inundation modeling;*
- VI. Assess the need for capacity building and training of professionals involved in flood forecasting at PMD / FFD.*

Carry out a detailed review of the issues and options in flood management;

- I. Review the existing traditional flood management practices in vogue viz-a-viz the modern concept of integrated flood management;*
- II. Identification of future reservoirs that would have high flood mitigation role in addition to their agriculture and hydropower benefits;*
- III. Review of existing Standard Operating Procedures (SOPs) of Tarbela and Mangla Dams, as well as barrages and develop new SOPs to mitigate high magnitude floods with considerations to avoid superimposition of floods peaks at tributary confluences of Indus River System for management of floods ;*
- IV. Identification of floods escape channels to desert areas/off channel storages that would provide major reductions in flood peak discharge in Indus Basin, Also identify possible sites for underground reservoirs, retarding basins, etc.*

Thirdly, reviewing design of hydraulic structures & flood protection infrastructure in all provinces/agencies is needed

- I. *Review and revise design return period of barrages on the Indus River system to enhance their safe flood discharging capacities.*
- II. *Review and revise the design criteria for the design of bridges / communication infrastructure and flood protection bunds keeping in view the likely damages to the populated areas, agriculture and vital installations ;*
- III. *Upgrading the flood protection facilities/ bunds that provide protection to the cities and towns and important installations such as power stations, oil refineries, industries etc ;*
- IV. *Review of breaching sections and areas inundated as a consequence of breaches ;*
- V. *Hill Torrent Management (flood dispersion structures) ;*
- VI. *Mutual Support Insurance System on country-wide basis to support recovery for infrastructure and effectees.*

Fourthly, flood plain mapping / zoning ;

- I. *Flood Plain Mapping / Zoning along all the Indus river and its tributaries for restricting/prohibiting by law permanent settlements in high and medium flood risk areas (provinces to enact laws) ;*
- II. *Submergence plans for critical reaches along flood embankments ;*
- III. *Identification, resettlement and relocation of villages in flood plains to safe areas outside the flood bunds ;*
- IV. *Identification of low flood risk areas for future cities, towns and villages, industrial areas etc ;*
- V. *Urban planning for flood resilient communities ;*
- VI. *Community participation and awareness campaigns.*

Ladies and Gentlemen !

I am confident that as a result of this workshop by way of sharing of experience and expertise by world known experts, different aspects of the flood related issues and their solutions shall evidently emerge that shall help in reaching some unified stance and shared vision for a comprehensive plan. The recommendations as a result of this workshop are expected to form the basis of broad parameters to cater for economic aspects as well, and to define some guidelines, not limited to design alone but also to cover other aspects, such as, changing demographic patterns. This is imperative to respond to ever changing conditions in real times and to achieve sustainable results.

Ladies and Gentlemen !

I would like to conclude by once again thanking you all for being with us !

May God bless you !

Pakistan Zindabad