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INTERNATIONAL COMMISSION ON IRRIGATION AND DRAINAGE

Climate Services User Forum for the Water Sector in South Asia (2nd Water Users Forum, SA)

Dhaka, Bangladesh 22-23 April 2015 (2 days)

Back to back with South Asian Climate Outlook Forum (SASCOF-6) of WMO

CONCEPT NOTE

Introduction

The International Commission on Irrigation and Drainage (ICID) and WMO signed a Memorandum of Understanding (MoU) on 6th July 2013 in recognition of the fact that WMO and ICID share mutual goals of poverty alleviation through food and water security. For this purpose they support interventions to reduce risks due to water related extremes – floods and droughts, and effective adaptation to climate change. To achieve these goals, both WMO and ICID have a mutual interest and commitment to work on better management of floods, droughts and agriculture water using the latest tools and information. Under this MoU, ICID proposed a series of Climate Services User Forums (CSUFs) for the Water Sector in South Asia in conjunction with WMO's South Asian Climate Outlook Forum (SASCOF).

The first CSUF was jointly organized by ICID and WMO in conjunction with SASCOF-5 held from 22-23 April 2014 in Pune, India and was hosted by Indian Institute of Tropical Meteorology (IITM). About 40 participants participated in the two day Forum which included 20 participants from Bangladesh, Bhutan, Nepal, Maldives, Myanmar, and Sri Lanka belonging to Meteorological Agencies, Irrigation Authorities, Water and Sanitation Departments, Agriculture Departments etc. and six participants from WMO, GWP, ICID and SARC Meteorological Centre. A number of Indian national institutions generating regional climate information were also invited and participated in the discussions and shared the information being developed by them. The present proposal is for organizing 2nd Climate Services User Forum for Water sector or the 2nd Water Users Forum for South Asia.

The 2nd Water User's Forum

For risk management and adaptation to the impacts of climate variability and change, climate predictions regional climate outlook forums (RCOFs) conceived by World Meteorological Organization (WMO), have proved to provide substantial benefit in many parts of the world. RCOFs take the overarching responsibility to produce and disseminate a regional assessment of the state of the regional climate for the upcoming season. Built into the RCOF process is a regional networking of the climate service providers and representatives of various user sectors including agriculture, water and disaster management.

The South Asian Climate Outlook Forum (SASCOF) implemented since 2010 addresses the climate information needs of nations affected by the Asian southwest monsoon climate. The long-term historical patterns of the summer monsoon rainfall over South Asia, characterized by remarkable spatial and temporal variability, provide the general reference points at the respective locations for the rainfall anomalies indicated in the outlook.

For SA region, with heavy dependence for its water resources on the monsoon with its large temporal variability, it is imperative that the limited but intense events of rainfall limited to a few days are reliably and dependably predicted. The variability of monsoon is responsible in extreme events resulting in floods and droughts including events of long dry periods of temporary droughts. A timely prediction of such weather and climate events along with their hydrological consequences provides important tool for the water managers to meet various demands, particularly during the periods of shortages. It is of vital importance that the flood waters are appropriately stored in reservoirs. In order to make the best use of stored water it is essential that hydrological predictions are available in time. Given that most of the reservoirs are multi-purpose, operating these systems under reduced supplies during droughts pose multiple challenges. Reservoir operating policies if supported by seasonal predictions and early warning systems can derive the best benefit by satisfying the system's objectives.

The extreme flood flows inundate large areas occupied by humans for their economic activities. Their moderation with reservoirs attenuates the flood peaks. The hydrological prediction of inflows in to reservoir helps better attenuation of extreme events. Operating rules generally provide a schedule indicating what releases are to be made and what storage volumes are to be maintained at any time of the year. A special approach in reservoir operation is necessary when dealing with an impending drought. A decision has to be made as to what the optimal operating policy should be for the severity level identified based on the Early Warning System.

At the same time the prediction of flood magnitude and flood forecasting is one of the soft tools to mitigate the adverse impacts of extreme flood events by enabling the disaster management authorities take disaster response initiatives in flood prone areas. The timely prediction of floods in the vast flood plains

Objectives of the 2nd Water Users Forum

The purpose of the Water Forum is to bring better synergy between the water community and the climate community within the South Asian countries with the long-term objective of making best use of the climate services and information provided through SASCOF efforts, and otherwise available in the region. The SASCOF-6 will be held in Dhaka, Bangladesh from 19-22 April 2015. It is therefore proposed to invite the water managers from the South Asian countries on 22 and 23 April. They will participate in the 2nd CSUF that will expose them to the climate outlook that would be issued with its limitations and give them the exposure to how the seasonal climate outlook could be effectively used in water management operations, particularly during extreme events such as floods and droughts. The objective of the 2nd CSUF would be:

- To introduce the seasonal climate information and seasonal hydrological prediction available in the South Asian Region;
- To strengthen long range flood forecasting by way of extended weather predictions; and
- To explain how to make use of the climate information in managing irrigation water.

Details of the Forum

Date: 22-23 April 2015 – 2 days

Venue: Bangladesh Meteorological Department, **Dhaka**, Bangladesh

Language: English only

Participants:

Experts in flood forecasting engaged from each of the country from SA will be invited to participate in the Forum. More than one representative from Bangladesh belonging to different subsectors of water would be invited. Participants will be invited from: Afghanistan (1), Bangladesh (3+), Bhutan (1), India (1), Maldives (1), Myanmar (1), Nepal (1), Pakistan (1), and Sri Lanka (1).

The participants will be presenting case study of their respective countries on the “**Status of Flood Forecasting**” within their countries, briefly describing in about 2000 words, the existing flood forecasting network within their country, the methodologies being used for making flood forecasts, the collaboration between the flood forecasting authorities and the meteorological authorities providing weather and climate information, interaction between the flood forecasting and disaster management authorities and the capacity building needs for improvement of flood forecasts. The case studies should also cover the need for regional cooperation for better extended flood forecast.

Faculty members would be drawn two from World Meteorological Organization (WMO), and one each from the Bangladesh Meteorological Department (BMD), International Commission on Irrigation and Drainage (ICID), International Water Management Institute (IWMI), International Centre for Integrated Mountain Development (ICIMOD) and Institute of Water Modelling (IWM).
