



AWCI Training Workshop on Assessment of Climate Change Impact on Watershed Hydrology

Training Workshop Outline

Islamabad Hotel
and
Pakistan Meteorological Department,
Islamabad, 15 – 17 September 2014



Objectives of the Workshop

- Capacity building on climate change impact assessment techniques for water resources management support
- APN CAPaBLE program project (Dr. Rasul, PMD):
 - Impact of Climate Change on Glacier Melting and Water Cycle Variability in Asian River Basins
- Thematic Lectures on relevant topics
- In-depth explanation of the techniques
- Demonstration
- Practical, hands-on exercises



Agenda – Monday 15 September

- **10:00 – 11:30** **1. Opening and Welcome Remarks** (*Chair: TBD*)
- **Keynote Speech:** Prof. Dr. Toshio Koike, *University of Tokyo*
- Remarks by the Chief Guest
- Group Photo
- **11:50 – 12:00** **2. Training Workshop Outline**
- **12:00 – 14:50** **3. Pakistani Contributions to AWCI** (*Chair: Dr. Arshad M. Khan*)
 - Pakistani activities under AWCI – overview of past, present, and future (Dr. Bashir Ahmad, *PARC*)
- *12:30 – 14:00 LUNCH*
 - Indus project – climate and water nexus (Dr. Ghulam Rasul, *PMD*)
 - Indus project – water and food (agriculture) nexus (Prof. Dr. Ashfaq Chatta, *University of Agriculture, Faisalabad*)



Agenda – Monday 15 September

- **14:50 – 16:15** **4. Hydrological modeling in cold region watersheds**
(Chair: Prof. Dr. Ashfaq Ahmad Chattha)
 - UNESCO Flood Project (Mr. Muhammad Riaz, *FFD/PMD*)
 - Disaster Management Plan of Pakistan (Mr. Ahmad Kamal, *NDMA*)
 - Distributed hydrologic modeling in cold region and high elevation watersheds in an integrated approach (Dr. Maheswor Shrestha, *UT*)
 - Discussion

- *16:15 – 16:45 BREAK*

- **16:45 – 18:00** **5. Data Integration and Analysis System (DIAS) and Data Support Services** *(Chair: Mr. Ahmad Kamal, NDMA)*
 - Expansion and Linkages of Water Cycle Initiative (Prof. Dr. Toshio Koike)
 - DIAS data upload, quality control and metadata support system (Dr. Petra Koudelova, *UT*)
 - CEOS Water Portal data service (Dr. Petra Koudelova, *UT*)



Agenda – Tuesday 16 September

Venue: PMD

Training: GCM Bias Correction and Statistical Downscaling, Hydrological Analyses – using a demo case of the Soan Basin, Pakistan

- **08:30 – 12:00 6. Training Part 1.1: GCM Selection**

- Introductory lecture + Hands-on: Selection of suitable GCM output for the Soan basin region – using an on-line tool and MS Excel sheet

- *10:40 – 11:00 BREAK*

- Hands-on

- *12:00 – 13:30 LUNCH & PRAYER*

- **13:30 – 15:00 7. Training Part 1.2: GCM Rainfall Bias Correction, Statistical Downscaling**

- Introductory lecture + Hands-on: Correction of the rainfall data of the selected GCMs and downscaling them using an on-line tool; visual inspection and discussion

- *15:00 – 15:30 BREAK*

- **15:30 – 17:30 8. Training Part 2: Hydrological Simulation Preparation and Analyses**

- Introductory Lecture + Hands-on: Preparing hydrological simulation, WEB-DHM demonstration, Analysis of results including high and low flows, Discussion



Agenda – Wednesday 17 September

Venue: PMD

Training: WEB-DHM-S, Dynamical Downscaling

- **08:30 – 09:30** **9. Hydrological Modeling in Cold Regions:
WEB-DHM-S model**
 - Physical and technical details, applicability discussion
- **09:30 – 12:00** **10. Dynamical Downscaling**
 - Methodology Introduction Lecture
- *10:40 – 11:00* *BREAK*
 - Case studies presentation, Discussion
- **12:00 – 12:30** **11. Certificate Ceremony**
- **12:30 – 13:00** **12. Closing Remarks**
- *12:00 – 13:30* *LUNCH & PRAYER*
- **13:30 – 15:00** **Excursion**



Logistics

- **Transportation for international participants:**
 - Airport → hotel; hotel → airport: assured by the hotel
 - Hotel → PMD; PMD → hotel; excursion: assured by PMD
- **Assignment for Trainees**
 - A participant report – including own impression plus a few simple tasks
- **Presentation Material & Photos**
 - Plan to share in the pdf format through the Workshop website -> is that acceptable for the presenters?
 - Photogallery accessible through the website