

Capacity Building Program

Needs/requirements

Dr. Bashir AHMAD

Muhammad Yasin

The 3rd GEOSS Asian Water Cycle Symposium

Humane Resource Development Requirements in

- **Flood Inundating Modeling and flood hazard map training**
- **Flood and drought forecasting and management system**
- **Rainfall downscaling and forecast**
- **Water quality monitoring using RS products**
- **Watershed management and planning**
- **Data integration & Q C**

Case Study Modules

Requested Topic	No.	
	1	Flood Inundation modeling
	2	Data Integration Service
	3	Q C service

Web Based Learning

Requested Topic	No.	
	1	Flood Hazard Map
	2	Rainfall Downscaling
	3	Data Integration Service
Available contributions to the program (ie. Existing materials, etc)	1	Existing material, new approaches and techniques
	2	Existing material, new approaches and techniques
	3	Existing material and techniques

**Resources Available
At
Water Resource Research**

- Irrigation program
 - Soil & water Conservation
 - Spate Irrigation
 - Resource Use Planning
 - Impact of climate change on natural resources
 - National landuse plan
 - Image based glacier inventory
 - Identification of soil erosion prone areas
 - Water resource assessment
 - Database development
 - Rehabilitation plans flood & earthquake areas
- Support master degree student research, short term training and Internees**

Data services available in Pakistan

- **Hydrological & Meteorological data (still very sparse)**
- **Meteorological data service would be improved in 2009**
- **Data on radiation, fluxes, atmosphere and water quality is still missing or very sparse**

Hardware & Software availability

- **Hardware support is available**
 - **Most of remote sensing and GIS software are available**
- **Would require some hydrological model**

Resource Group

Dr. Bashir Ahmad (Water Resources Research Institute)

Mr. Muhammad Yasin (Water Resources Research Institute)

Mr. Shoukat Awan (Flood Forecasting, Pakistan Met. Department)

Mr. Azmat Hayyat (Pakistan Meterological Department)

Dr. M. Latif (CEWRE, Engineering University, Lahore)

Mr. Gazanfar Ali (GCISC)

---- (Water & Power Development Agency)

Participation Institution

WRRI, PARC

Flood Forecasting Division, Pak. Met. Department

Engineering University, Lahore

GCISC

WAPDA

Thank you

The text 'Thank you' is rendered in a bold, sans-serif font. Each letter is a different color, following a rainbow spectrum: 'T' is pink, 'h' is red, 'a' is orange, 'n' is yellow, 'k' is green, 'y' is blue, and 'o' is purple. The text has a slight 3D effect with a grey shadow cast to the left and slightly behind it.