



Pakistan Meteorological Department



THE UNIVERSITY OF TOKYO

## **AWCI Training Workshop 15-17 Sep 2014, Islamabad-Pakistan**

APN PROJECT-CBA2012-03NMY-RASUL

# **Impact of Climate Change on Glacier Melting and Water Cycle Variability in Asian River Basins**

*by*

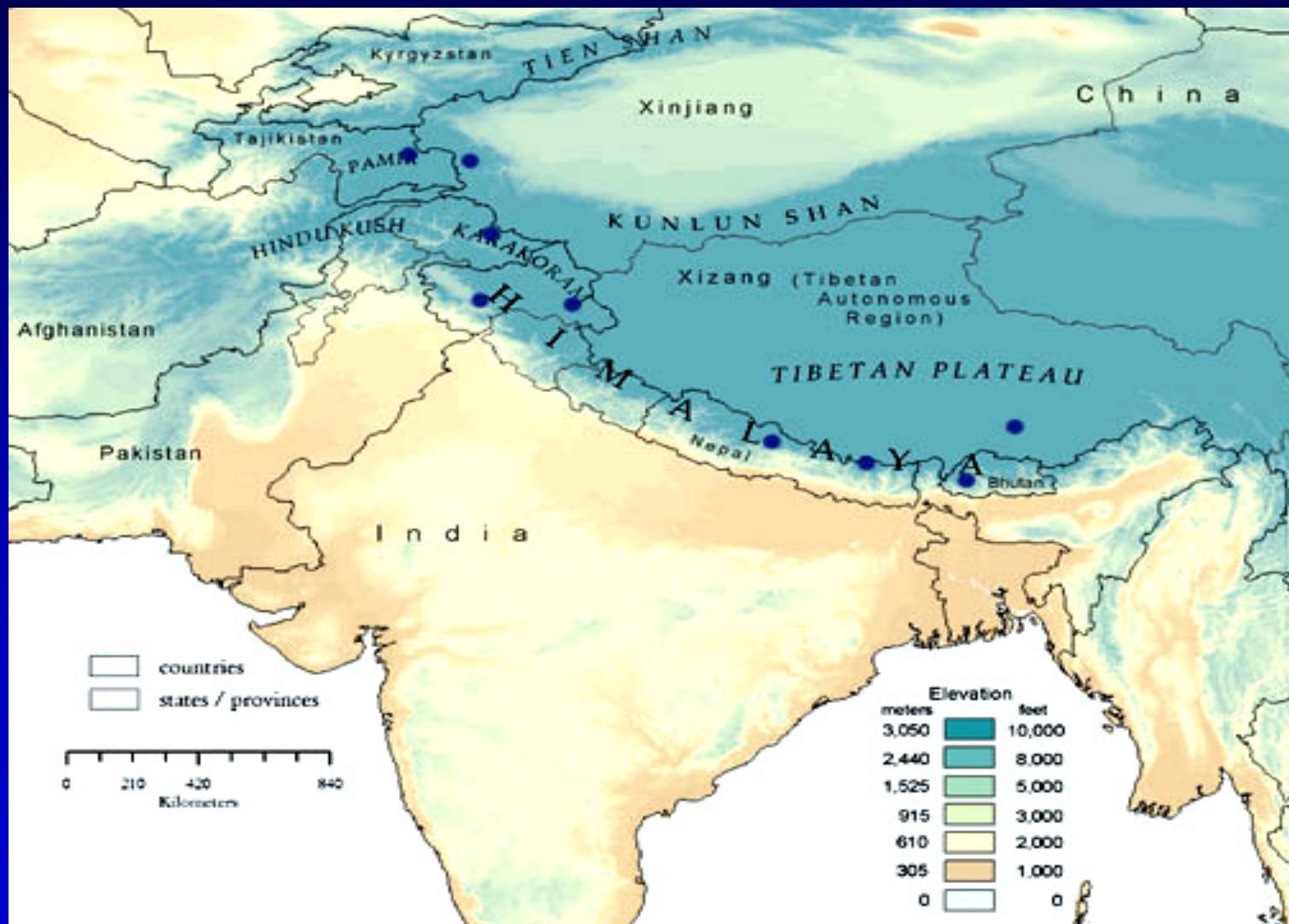
**Dr. Ghulam Rasul**

Chief Meteorologist

**Pakistan Meteorological Department**

**[rasul@pmd.gov.pk](mailto:rasul@pmd.gov.pk)**

# HKKH – Origin of Major Asian Rivers



## Impact of Climate Change on Glacier Melting and Water Cycle Variability in Asian River Basins

- To improve climate change assessment and downscaling techniques;
- Building the capacity of member countries for climate projections;
- Training of professionals to apply WEB-DHM-S (Hydrological Model);
- Assessment of glacier melt and hydrological regime shift in the light of climate change scenarios;
- Assessment of water cycle variability and Guiding Development of early warning system.

# Participating Countries

(APN Project under AWCI Umbrella)

- Bangladesh
- Bhutan
- Cambodia
- China
- India
- Indonesia
- **Japan**
- South Korea
- Laos
- Malaysia
- Mangolia
- Myanmar
- Nepal
- **Pakistan (Leading)**
- Philippines
- Sri Lanka
- Thailand
- Uzbekistan
- Vietnam

# APN Project Activities



# AWCI Training Course on Improved Bias Correction and Downscaling Techniques for Climate Change Assessment/Drought Indices

Tokyo, Japan, 18 – 20 June 2013



## Expected Outcomes

- Enabling scientists of the region on Assessment of Climate Change
- Future Projections of temperature and precipitation using GCM output for participating countries on basin scale.
- Training of professionals on application of WEB-DHM-S
- Application of Water Cycle Variability to allied Disciplines e.g. Agriculture, Energy, Socio-economics
- Flood/Drought Climatology and climate variability
- Development of Early Warning System.
- Promotion of Research on Atmosphere-Cryosphere-Hydrosphere interaction

**Thank You**