

Breakout session 2
Implementation Proposal
Snow and Glacier

(Snow and Glacier Hydrology Group)

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Issue 1

Steps and Strategy

- Dense monitoring network of hydro-meteorological variables in mountainous regions. (Financial support for establishment, operation and maintenance)
- Increase understanding of Himalayan Glaciers – potential causes of GLOF.
- Climate change assessment
 - Downscaling of GCM to basin scale
 - Bias correction
 - Flow/Snow-cover variability in past and future - assessing the detailed contribution of snow/ice melt and rainfall to the river system.

Issue 1

Steps and Strategy

- Development of integrated physically based distributed hydrological model for snow/glacier melt runoff and GLOF.
- Mainstreaming the snow and glacier issues in national policy.
- Develop regional collaborative plans to secure fundings from international funding agencies
- Creation of regional knowledge for studying impact of climate change on snow/glaciers for AWCI member countries.
- APN proposal on assessment of CC impacts on snow/glacier melt runoff and water cycle variability on Asian river basins.

Issue 2: Additional Resources – potential collaborators

- ICIMOD
- World Glacier Monitoring Service (WGMS)
- International Commission on Snow and Ice (ICSI)
- Japanese Society of Snow and Ice
- National focal point on climate change of each member country
- ADB/WB/JICA/ETH/GIZ/DFID
- UN adaptation Fund
- APN

Issue 3: Special Request to GEOSS

- A complete glacier inventory of Asian mountain regions
- Identification of potentially dangerous Glacier Lakes.
- Establishment of GLOF early warning system/communication system
- Transboundary data sharing related to Cryospheric hazards.
- Establishment of regional GEOSS data center.
- RS/GIS tools application.

Issue 4: Coordination between water cycle integrator and capacity development

- Organization of short term trainings/workshops for GCM downscaling/bias correction/hydrological modeling and snow/glacier melt runoff modeling.
- Snow estimation via remote sensing
- To estimate the total volume of water locked in glaciers.
- Ground Penetrating Radar (GPR), ice core drilling and proper logistics and lab facilities

Issue 5: Schedule

- Total duration: 6 years
- Bi annual meetings

Year 1	CC scenario generation in basin scale human resource development Hydro-met. observations/Instrumentation (Continuous process)
Year 2-5	Inventory of snow/glaciers Development of Snow/glacier melt model, GLOF warning system. Methodology for GLOF and inundation
Year 5-6	Assessment of CC/ Reporting Finalization of inventory