

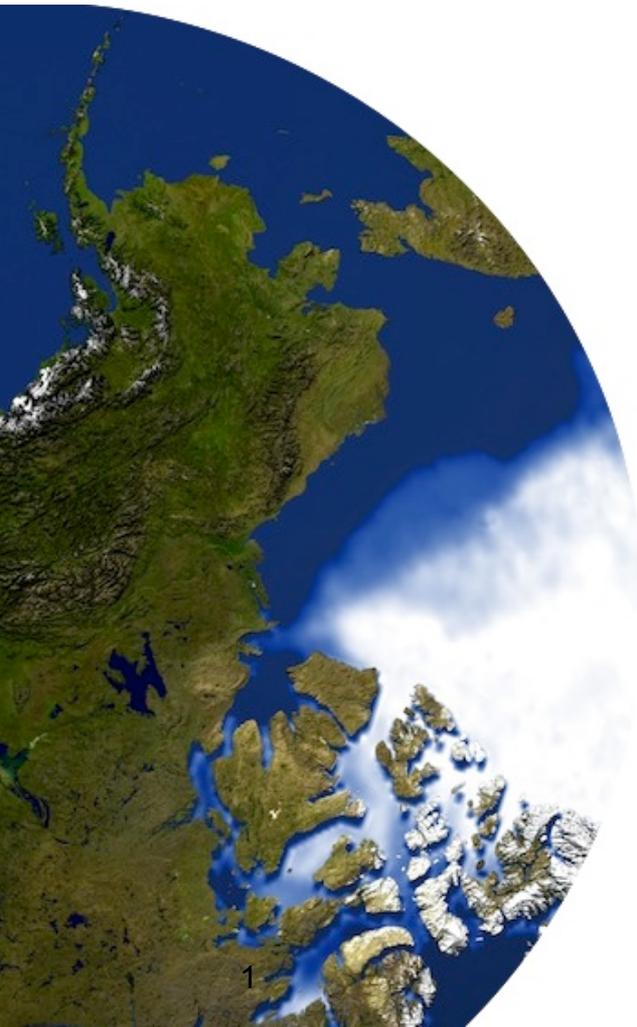


# The Global Cryosphere Watch

## CRYONET ASIA FIRST WORKSHOP

(Beijing, China, 2-5 December 2013)

Barry Goodison,  
Vice-Chair, GCW Steering Group



# ***Purpose of Asia CryoNet Workshop***

***To continue efforts in implementing CryoNet and addressing identified gaps, with an emphasis on the measurement sites, observations, and issues in Asia. This included, but was not limited to, the “Third Pole Project” region of the Himalayas***

Presentations are available:

[http://www.wmo.int/pages/prog/www/OSY/Meetings/GCW-CN-Asia/CryoNet\\_Asia\\_Documentation\\_Plan.html](http://www.wmo.int/pages/prog/www/OSY/Meetings/GCW-CN-Asia/CryoNet_Asia_Documentation_Plan.html)

Final report of workshop:

[http://www.wmo.int/pages/prog/www/OSY/Meetings/GCW-CN-SouthAmerica/CryoNet\\_Asia\\_FinalReport.doc](http://www.wmo.int/pages/prog/www/OSY/Meetings/GCW-CN-SouthAmerica/CryoNet_Asia_FinalReport.doc)



# Background

**Participants:** from China, Pakistan, India, Japan, Russia, Kyrgyzstan, Kazakhstan, Tajikistan, Uzbekistan, USA, Canada, Austria, Italy, and Switzerland.

**Gaps identified with respect to cryospheric observation and monitoring:**

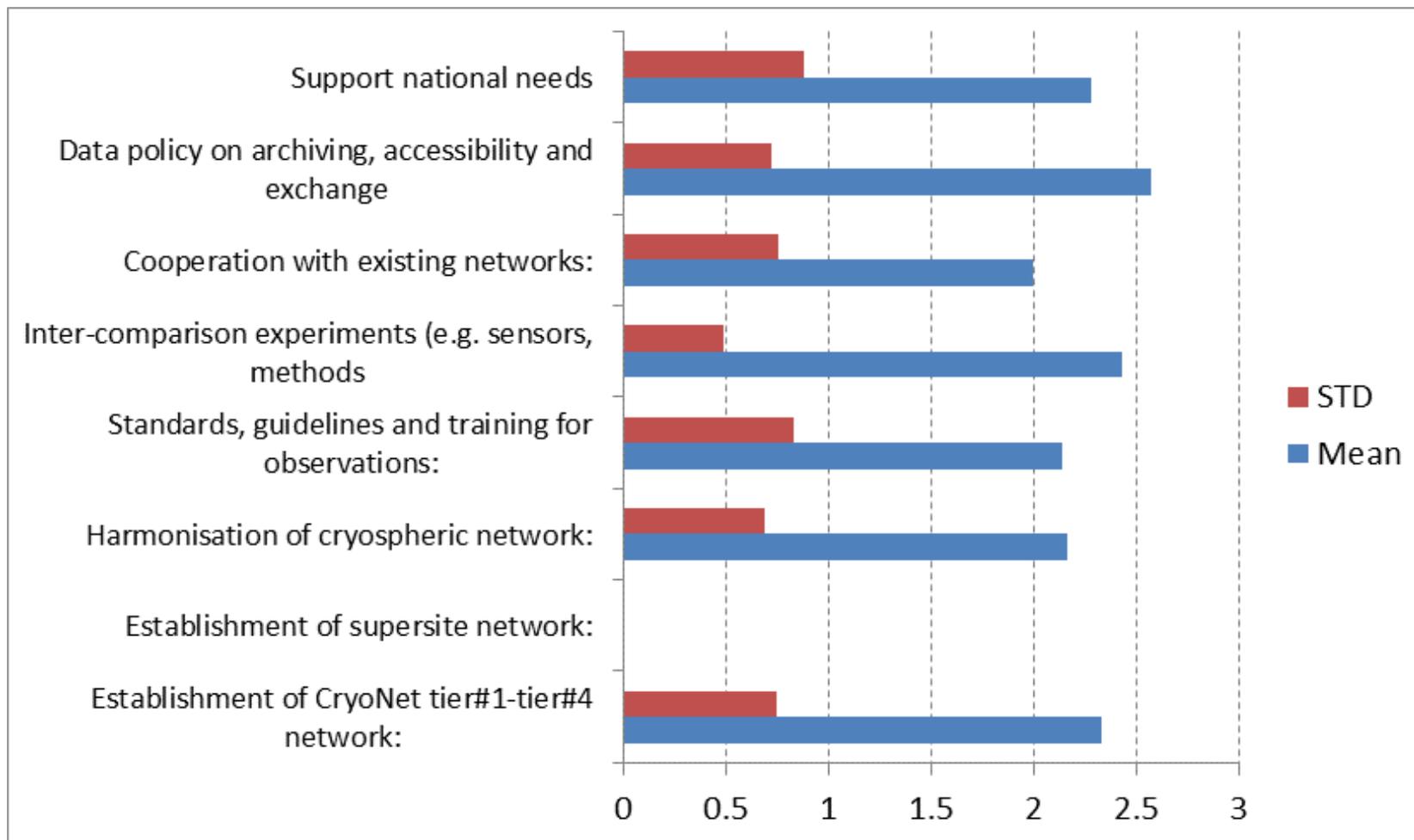
CryoNet had identified that an improved and integrated global cryospheric network of surface observations was of utmost importance for assessing the state of the cryosphere. Gaps identified by the CryoNet community included:

- lack of harmonization in cryospheric observations
- lack of network-hosts for several cryospheric observations (e.g. glacier flow measurements, automatic weather stations on glaciers)
- lack of guidelines for the measurement of some cryospheric properties
- need for improved training, especially at the international level
- access to cryospheric observational data.

General and site questionnaires were completed by participants.



# Questionnaire Responses - Asia



Summary of participant questionnaire responses (1=low priority, 2=medium priority, 3=high priority)



# *Key Messages from Questionnaires*

- **For CryoNet**, establishment of a tiered network was ranked as the highest priority
- High need for harmonization as well as standards and guidelines in cryospheric observations
- Existing cryospheric networks are highly interested in cooperation with GCW
- CryoNet should fill gaps in existing networks
- **For the cryospheric community**, data policy and data accessibility is of highest priority

Participants then helped refine the CryoNet network strategy, levels of observation, requirements for site inclusion in the network, and measurement practices.



# Workshop Presentations and Discussion

- **Potential GCW and CryoNet sites presented and discussed**; updated site questionnaires submitted for further review and discussion;
- **High Elevation stations in Central Asia were the focus** of most participants;
- several Chinese stations were proposed to be part into CryoNet Asia;
- Reviewed existing observation sites/observatories over the “Third Pole” region. **Achievements and gaps in observations were identified.**
- **Need to pursue continuous support and upgrade for observations** in Third Pole region toward the GCW standard.
- Defined the boundary of Asia CryoNet - will not limited to “Third Pole” only, but whole Asia except Arctic; **Asia CryoNet will coincide spatially with WMO Region II.**
- Set up guidelines on how Asia CryoNet to be organized.
- Need to complete list of focal points (station leaders) for stations/sites,
- Highlight the importance of GCW to the responsible bodies in China, like CAS and CMA



# Key Outcomes

## To build CryoNet Asia

- First step is to draft the site classification system and then try to assign sites submitted by participants to test its applicability.
- Develop a data exchange mechanism,
- Compile appropriate best practices, guidelines, and standards currently being used by different agencies, organizations
- Identify and pursue funding opportunities. As CryoNet sites would be operated by national entities, it is important to start the dialogue with national ministries to seek commitments to operate these sites.
- GCW Asia CryoNet will follow WMO's resolution on data policies and data sharing
- Asia CryoNet representative on GCW CryoNet



# *Further Thoughts from Xiao Cunde*

**CryoNet should be set up step by step; it would be good to have a model station, guided by GCW standards, in Asia, South America, and elsewhere.**

- Because of the harsh condition of cryosphere region, having this kind of station is not always an easy task. To save man-power and make the station more accessible, it is smart to choose a relatively easy site or longer history (good background) station at our initial stage.
- New and high-level technologies for data saving and transmitting should be encouraged and introduced to these stations. “If people can receive data comfortably at home/office sent by satellite and don't need to visit the cold and high-altitude sites very often to take care of the instruments and retrieve data, I believe CryoNet will soon become very bloom around all cryospheric regions”.
- WMO should seek innovative techniques, including training at a model station, while being very patient.
- After establishing a standard station, then we should discuss more in detail about agreements, rules/regulations, management (globally) for CryoNet or GCW, and these will become much easier than what we can do today.



