

International Workshop on Capacity Building in Asia "Earth Observations in the service of Water Management"

September 26-28, 2006, Bangkok

Co-hosted by GEO, IGWCO, JAXA, Univ. of Tokyo, AIT, UNU, WMO, WCRP, UNESCAP, ICHARM





Asian Water Resource Management Capacity Building Workshop

IGOS Context

- In 2005, IGOS Water Theme planned three regional WRM capacity building workshops in South America, Asia and Africa.

GEO Context

- GEO 2006 work plan task (WA-06-06) called for promotion of best practices in WRM through the three regional workshops.
- GEO 2006 work plan task (WA-06-07) calls for initiating a capacity building program in Latin America. The program will then be extended to Asia and Africa.



Asian Water Resource Management Capacity Building Workshop

Objectives

- To **exchange information on best practices** for applications of Earth observations for water resource management in Asia and other regions.
- To **exchange information on available data and tools** for applications of Earth observations for water resource management in Asia.
- To **consolidate regional requirements** upon existing requirements for Earth observations and capacity building activities for water resource management in Asia.
- To discuss and **propose a next step of the regional capacity building projects** for applications of Earth observations for water resource management in Asia.



Asian Water Resource Management Capacity Building Workshop

Outline of the Meeting

- Date: September 26, 2006 Tue ~28 Thu
- Place: Rama-Gardens Hotel, Bangkok, Thailand
- Co-hosted by: GEO, IGWCO, JAXA, University of Tokyo, AIT, UNU, WMO, WCRP, UNESCAP, ICHARM
- Attendees: Total 121 people participated from 22 countries
- Agenda:
 - Day 1: Workshop for policy makers
 - Review of international programs and national programs
 - Day 2 and 3: Workshop for WRM managers
 - Review of international research programs
 - Three WG sessions (Flood, Drought and Water Quality)



Asian Water Resource Management Capacity Building Workshop

Outcomes

- Day 1 Workshop for policy makers
 - Increasing frequency and severity of floods, droughts and water quality problems were reported
 - Capacities for IWRM, modeling and satellite data use were found rapidly emerging in the region

- Day 2-3 Workshop for WRM managers
 - Water quality WG reported arsenic contamination of drinking water in Bangladesh and serious needs for alternative water resources. It was proposed to submit an urgent proposal on this specific task to GEO.
 - WGs recommended initiation of demonstration projects based on regional needs
 - Improvement of access to satellite data was required
 - Needs for regular workshops to address WRM issues were recognized.



Flood WG Summary

RECOMMENDATIONS

1. High resolution satellite data are important for flood damage reduction and risk management. These data can be utilized for preparing existing infrastructures inventories, especially, in high risk areas. Space agencies are requested to make such basic data easily accessible and available on a basin scale.
2. Space agencies are requested to make available data for disaster management purposes especially rainfall and flood inundation in real time.
3. The realization GPM project is crucial for the implementation of flood forecasting and warning system in ungauged or poorly-gauged river basins, including Tran boundary ones.
4. More microwave imaging sensors are required for cloud-free flood disaster monitoring in a timely manner. Besides, their processing and application systems for flood analyses are also required.
5. Capacity Development on data acquisition, information extraction and end user product generation for flood analysis and risk reduction is urgently required in almost all of the developing countries in Asia.
6. Considering the disparity in existing capabilities among different countries as well as their varied needs, it is recommended to work out capacity development programs based on prior need assessment.



Flood WG Summary (cont'd)

PROPOSED ACTION PLAN

- it is proposed to **develop some demonstration projects** in conjunction with the framework of AWCI, Sentinel Asia, etc. for the evaluation of applicability of earth observations in flood risk reduction.
- In order to implement the demonstration projects, some volunteer members would **draft a proposal as a GEO demonstration project** starting from the fiscal year 2008. The preliminary draft would be reviewed by the volunteer members and be proposed at the next Flood WG, which is planned to be held, hopefully, in the 2nd Asian Water Cycle Symposium in Tokyo, January 2007.



Drought WG Summary

PROPOSED ASIAN DROUGHT INITIATIVE UNDER THE GEO FRAMEWORK

- This activity will start initially through the **formation of a project proposal** on capacity building on drought assessment for Asian countries.
 - The basic structure of the proposal will be firstly to **organize a workshop to give training** on existing drought monitoring techniques using GIS and RS to participants from national and local agencies from Asian countries.
- This will be **followed by mini project on drought monitoring** in the respective countries.
- The ultimate goal is to improve drought monitoring and management in Asian countries



Drought WG Summary (cont'd)

PROPOSED ACTIVITIES AND TIME FRAME

- Step 1:** To form a task team by the end of October 2006 and draft the first concept note of the proposal and submit it to GEO. Initial proposal to GEO
- Step 2:** The initiative to be recognized by GEO as a GEO program. Immediately after the recognition the GEO will inform the countries about the opportunity of the capacity building workshop, January 2007. The workshop is tentatively proposed be held by June 2007.
- Step 3:** The task team will look after the proposal development for mini project by respective countries and submit to GEO for approval and mobilization of funds by 2007.
- Step 4:** The initiative approved, funds allocated and implementation of activities started by early 2008.



Water Quality WG Summary

PROPOSED ASIAN WQ INITIATIVE UNDER THE GEO FRAMEWORK

- This activity will proceed initially through the **formation of a demonstration project**, calling for a collaborative and cooperative effort between national and local agencies, institutions, NGOs and space agencies.
- Parallel with these activities will be a **workshop to develop a full proposal**.
- The ultimate goal is to improve regional water quality management by bringing together disparate data sources and information, addressing interoperability and synthesis issues together while addressing stakeholder needs.



Water Quality WG Summary (cont'd)

PROPOSED ACTIVITIES AND TIME FRAME:

- Step 1:** To draft and submit one paragraph about the proposed initiative to GEO.
- Step 2:** To form a task team by the end of October 2006 and draft the first concept note of the proposal and submit it to GEO.
- Step 3:** The initiative to be recognized by GEO as a GEO program. Immediately after the recognition, the GEO will inform the countries about the opportunity and about a proposal development workshop, January 2007.
The workshop is tentatively proposed be held by June 2007.
- Step 4:** Planning, holding the proposal development workshop, final proposal developing, and implementing the demonstration project(s) by 2007.
- Step 5:** The task team will submit the final proposal to GEO, participating countries and agencies for approval and mobilization of the funds by end of 2007.
- Step 6:** The initiative approved, funds allocated and implementation of activities started by early 2008.



GEO 2007-2009 Work Plan

New tasks

- WA-07-01: Global Water Quality Monitoring
“This task is built on the outcomes of the water quality workshop in 2007 (1st Inland and Coastal Water Quality workshop) and **first pilot projects being planned to begin in Asia as a result of the Asian Water Resource Management Capacity Building Workshop.**”



Conclusions

- The Asian WRM Capacity Building workshop was very successful by identifying regional requirements, and proposing next steps for capacity building projects in the region.
- Demonstration projects for floods, droughts and water quality were proposed.
- Further development of the proposals, partnership and mobilization of funding are necessary.
- It is anticipated that the 2nd AWC Symposium and the GEOSS Asia Pacific Outreach Symposium provide an opportunity to combine “convergence of observation” and “capacity building” for WRM and to develop demonstration projects.