



United Nations / Morocco / PSIPW / ESA / ISNET / GEO

3rd International Conference on the Use of Space Technology for Water Management

Hosted by the Royal Center for Remote Sensing (CRTS), Morocco

1-4 April 2014



**Working Groups' Discussion Session
– Summary –**

Introduction

The Working Group (WG) discussion sessions were held on 3 April 2014 from 14:30 to 18:00 and on 4 April 2014 from 09:00 to 11:00.

Two Working Groups were established as follows:

1. *WG 1 - Cooperation and Capacity Building*

Moderators: Dr. Douglas Cripe, GEO Secretariat; and Dr. Katarzyna Dabrowskazielska, Institute of Geodesy & Cartography, Poland

2. *WG 2 - Future Challenges for Water Resources Management*

Moderators: Dr. Zoltan Verkerdy, ITC, The Netherlands; and Eng. Ali-Wafa Abu-Risheh, PSIPW Director of Technical Affairs

Working Group 1: Cooperation and Capacity Building

Moderators: Dr. Douglas Cripe, GEO Secretariat; and Dr. Katarzyna Dabrowskazielska, Institute of Geodesy & Cartography, Poland

The members of Working Group 1 (WG 1) call on the United Nations to encourage and promote the use of space technology for water resources management, and more generally as tool for problem-solving in the water sector.

To achieve this, WG 1 further recommends:

- Enhancing existing, and support the creation of, sustainable resource centers featuring remote sensing expertise, for the transfer of knowledge at national and regional levels (for education, research and training), and support international capacity building strategies for water resources management, such as those outlined in the Global Earth Observation System of Systems (GEOSS) Water Strategy Report (support for Individuals, Institutions, and Infrastructure).
- Building strategic public-private partnerships between existing remote sensing research institutions, universities and private sector, networking with all important stakeholders. In particular, support should be provided for experts and participants in mechanisms in and between developed and developing nations, and South-South knowledge transfer.
- Encouraging trans-boundary integrated water resource management projects (IWRM), involving both universities and institutions with technical expertise, to help nations identify common problems and work together to find solutions (e.g. development of earth observing constellations for monitoring).
- Implementing sustainable solutions for water resources management through promotion of use of space technology into education curricula, continuing the practice of knowledge sharing, on line education, organising international symposia and workshops, establishing scholarship and student exchange programmes continuing, education and experts visits.
- Supporting portals that focus on the use of space technology for water management; establish and promote websites for the dissemination of : 1) best practices and lessons-learned; 2) knowledge and data gained from international projects funded by various agencies and EC and others 3) databases containing contact information for professionals and research experts available for consultation.
- Promoting full and open data sharing and access by supporting the Data Sharing Principles (DSP) of the Group on Earth Observations (GEO), and Data Democracy Principals developed by CEOS and encourage other agencies and governments who are not part of GEO and CEOS to consider the membership.

Each of these recommendations aim to improve international cooperation, and build, enhance, and retain capacity globally. This body also suggests that follow-up be carried out with respect to these recommendations. Potential enabling agencies include ESA, EC (Horizon 2020), World Water Council, UN, World Bank, ODAs, etc.

Working Group 2: Future Challenges for Water Resources Management

Moderators: Dr. Zoltan Verkerdy, ITC, The Netherlands; and Eng. Ali-Wafa Abu-Risheh, PSIPW Director of Technical Affairs

Water is a source of conflicts and a peace-enabling commodity. It is currently and naturally not distributed uniform over the Globe in terms of its quantity and quality. Thus, a global and local improvement of its availability and related efficiency of water uses shall be done. In these regards, space-based technology could hugely help to handle the local watershed issues and from it a global sustainable development can be pursued.

Water is a crucial key, enabling good for the overall ecosystem. Its quality deterioration shall be a relevant target of pollution-concerned policies in a cost-effective way for everyone. In this regard, space-based technologies could be supportive for assessing, monitoring and evidence provisions.

For these purposes, Work Group 2 (WG 2) offers the following recommendations:

1. Greater effort should be made to adopt integrated water resource management at hydraulic base. level benefiting from satellite-data availability in order to ensure sustainable development.
2. Improvement of data-availability in terms of spatial and temporal features in order to assess sources of water deterioration at local level affecting global concerns.
3. Enhancement of data access that shall be common and open for further users and stakeholders
4. Provision of requested space-based services for water management shall be at minimum cost for clients handling with public purposes.
5. Assessment of climate variability affecting water cycle shall be considered from the global to local level in order to plan and monitor water resources and uses in case of extreme events for proper risk management plans.

Water is a fundamental human right of global concern in relation with local contexts. Space-based technologies could provide uniform data (Earth Observation), signals (GNSS), communication infrastructures (Telecom) and space-borne facilities (life support systems) thus; a minimum standard of those elements shall make able every social community to access information.

Nevertheless, this framework needs a shared vision of Global Water Governance in order to assure sustainability balanced between public intervention (welfare oriented policy approach) and value-added creation (profit-oriented business approach). Space-based technologies again could support the related system making available data, applications and infrastructures.

For these reasons, WG 2 offers the following recommendations:

1. A trustworthy and reliable relationship should be strengthened between water stakeholders and the space community in a stable and continuous way.
2. Public awareness of data availability should play a critical role for furthering efficient water management.
3. Data sharing initiatives should be supported, such as the existing International Water Portal established by the UN and Prince Sultan Bin Abdulaziz International Prize for Water,

with the aim to be a dedicated platform to share knowledge, information, research and data among professional users.

4. Encourage development of value-added services based on EO dedicated to water resource management driven by end-user needs.
5. Provision of space-borne facilities as life support systems for regions of water scarcity to provide relief to people coping with extreme life conditions.
6. Geospatial data infrastructures shall be developed to facilitate data access and sharing best practices and lessons learned.
7. Support of further provision of space system with a proper resolution available to end-users in the right accuracy.
8. Support and establishment of a stable and continuous relationship between R&D institutions (data processing, study, analysis) and national governments (politicians and policy makers).
9. Improvement of capacity building initiatives for wider communities, including end-users, at low cost.