AfriGEOSS Symposium 2017

Technical Session 4- Description (Session 5, Day-1, Tues. 13-June, 16:00 – 17:45)

Session title: Water for life in Africa: Potential of Earth Observation for an Optimal Use

Purpose of the session

a) *Background*

Africa is the world's second-driest continent after Australia. In 2010 it had a human population of about 1,022 million or 15% of the global population. A number expected to quadruple by the end of the century, at which time Africa will represent around 35% of the global population. The continent has 9% of global accessible fresh water resources that are either abundant or scarce depending on the season or the place. Furthermore, water, as one of the SDG, is a crucial element in ensuring livelihoods since more than 40% of Africa's population lives in arid, semi-arid and dry sub-humid areas and about 60% live in rural areas and depend mainly on rain-fed agriculture for their livelihoods. Adding to the scarcity of Africa's water resources, are the predictions of climate change. According to the Intergovernmental Panel on Climate Change (IPCC, 2007), there are likely to be major changes in rainfall, both in terms of annual and seasonal trends, and extreme events of flood and drought.
In this complex and challenging context, adequate information for implementing Integrated Water Resource Management (IWRM) strategies is fundamental for 1) increasing the number of people who have access to safe water and adequate sanitation, 2) ensuring food security by expanding available water resources for irrigation and 3) protecting society and economy by effectively managing the governance of water, including coping with droughts, floods and desertification. For most African countries, policies and management decisions are often based on sparse and unreliable information, which is a major limitation for putting into practice IWRM plans. Without urgent action to increase the availability of water resources information on a sustainable basis, implementation of IWRM will remain unattainable for a large number of African countries.

b) Objectives of the session

The purpose of the session is to promote an exchange of ideas through discussions that will include sharing of knowledge and experience, and to build upon the commonalities of approach through different actors towards addressing integrated water resource management in the context of environmental / climate changes. The expects of the session are the implementation of a plan of action for the management of resources. Adaptation of water management systems, particularly in agriculture will be a major focus of innovations, The outcome of the session is a plan of action to bring to fruition the benefit of Earth Observation to support management of water resources in the African continent.

Key questions to be addressed in the session

1) How IWRM could contribute to address challenges and achieve water security in Africa, by implementing national stages of development in a gradual spiral process and emphasized the need of overall coordination among various sectors? More specifically:
    - How to improve the knowledge base for better water management at basin level (at national or regional level);
    - How to put programs for capacity building, education and awareness raising on earth observation and geo-information; and
    - What about enhancing cooperation, synergy and harmonization.
2) What about the availability of data collection instruments and data sharing over Africa. Do you think that this should be pursued first?
3) How to integrate activities under AfriGEOSS?
4) Which relevant actions should be undertaken after symposium? Which specific opportunities should we address in the next future?

Expected outcomes from the session

The main themes of the session deliberations should include:

- Identify critical issues and the role of Earth observations (EO) in Water Resources Management (WRM) in Africa.
- Assess information needs and the potential benefits of Earth observations and integrated information systems in the WRM.
- Identify governance gaps in addressing WRM issues and requirements for information and strategies to improve the performance of the water sector.
- Identify needs and opportunities for capacity building, and south-south cooperation.

Format of the session and expected audience

Panel discussion, consisting of remarks by speakers followed by a moderated session with speakers and the audience.

Speakers

Name	*Organisation*
Ben Ampomah	WC, Ghana
Bachir Alkali Tanimoun	Niger Basin Authority
Vincent Ssebugwawo	Nile Basin Initiative
Anthony Gidudu	Makerere Univ, Uganda
Antoine Mangin	ACRI-EC, Morocco
Massimo Menenti	TIGER ,TUD, The Netherlands
Li Jia	RADI-CAS, China
Steven Greb (TBC)	Wisconsin Univ, USA

Moderators and Rapporteurs

Name	*Organisation*
Kamal Labbassi (Moderator)	CDU, Morocco
Amos Kabo-bah (Rapporteur)	EORIC-UENR, Ghana

Schedule

- Introduction of the session and overview (Moderator) (5 min)
- Speaker remarks / presentations (5 min each)
    - Ben Ampomah, Water Commission, Ghana (TBC)
    - Satellite Based Water Monitoring and Flow Forecasting System in the Niger River Basin, Bachir Alkali Tanimoun, Niger Basin Authority
    - TBC, Vincent Ssebugwawo, Nile Basin Authority
    - Water quality on Lake Victoria, Anthony Gidudu, Makerere Univ, Uganda
    - Water quality of inland waters using Sentinel-2, Antoine Mangin, ACRI-EC, Morocco

    - Looking after Water in Africa: Highlights of the ESA – TIGER Program Massimo Menenti, TUD, The Netherlands
    - Li Jia, RADI-CAS, China
    - AquaWatch- the GEO water quality community of practice, Steven Greb, Wisconsin, USA (TBC, Remote)

- 30 minute moderated panel discussion – converge on issues of collaboration (*see key questions to be addressed in the session*)
- Summary of session by moderator (5 min)