

**International Workshop
on
Earth Observation for
Integrated Water Resources Management in Africa**

Plan of Action - “Water and Space”

On the basis of the recommendations of the World Summit on Sustainable Development and at the initiative of the European Space Agency and the invitation of the Moroccan Royal Centre for Remote Sensing an high level expert meeting was organised from October 6 to 8, 2003, in Rabat, Morocco. The participants, including the national ministers for scientific research from Morocco and Ivory Coast, some 120 experts from national and international water resources development and management institutions, national and regional space agencies in Africa, the United Nations Economic Commission for Africa, the UN Development Program, the United Nations Office for Outer Space Affairs, UNESCO as well as from scientific and research institutions met to deal with the potential contribution space technology can make to the challenges in water resources development and use on the African continent..

Many African regions and sub-regions face serious, in some cases, increasingly dramatic, shortages of available surface and ground water resources for meeting rising demands from economic and social development and population growth. Water resources management in Africa will require new approaches in water resources policies and management.

Benefiting from the diverse inter-disciplinary academic and professional background of the policy makers and experts present, the workshop concluded that the application of modern space technologies to water resources development and use in Africa can offer cost-efficient responses to the new challenges of coping with growing scarcities and rising costs in the exploitation of available resources. Space based information and services provide a reliable, timely and comprehensive basis for assessing development options and for managing water resources systems. In addition, the objective quality of space-based information can make an essential contribution to the institutionalisation of joint development and management of shared international water resources.

The participants consider that the TIGER initiative is a concrete step towards implementing the recommendations of the Johannesburg World Summit on Sustainable Development in meeting the challenges of “water and space” in the African context.

The policy makers and experts present concluded that a concrete Plan of Action was indispensable and wish to convey the conclusions of their deliberations to policy makers and administrators with responsibilities in the field of water resources at national, sub-regional, regional and international levels, institutions of science and research, national and international space agencies as well as programs and institutions for development cooperation and financing, as follows:

1. African water resources policies at national and regional levels (African Water Vision 2025, NEPAD Water Agenda, Millennium Development Goals), including the African Ministerial Conference on Water and UN Water/Africa, should foster recognition of the potential of space technology for integrated water resources development and use through a series of policy dialogues.

- December 2003 ongoing

2. The application of space technology in integrated water resources management requires the identification/establishment of a national focal point for “water and space” within the national water resources administration.

- April 2004.

3. UN Water/Africa, in close liaison with the TIGER management team, to foster the inclusion of space applications in the management spectrum of African water resources in the AMCOW/NEPAD “Portfolio of Actions” resulting from the Pan-African Water Conference.

- December 2003

4. The development of the institutional capacity of the African water agencies will receive an important impetus through concrete demonstrator projects (or participation in projects). Within this context, participants are invited to submit proposals of projects for inclusion in the TIGER initiative. Accepted proposals will benefit from preferential access to data, capacity building and expertise within the limits of the supporting partner agencies. A key requirement for the acceptance of proposals is a convincing prospect for sustainability, which implies the access to long-term funding mechanisms.

- October 2003, ongoing

5. A TIGER Steering Committee, composed of sub-regional representatives of focal points, representatives of science and research institutions, as well as other stakeholders will need to be set up by UN Water/Africa and the TIGER management team, in order to

- provide technical advice to AMCOW on policy issues related to “water and space”
- coordinate the needs assessment for TIGER products
- review, jointly with other pertinent institutions, proposals from African users
- facilitate operational linkages between TIGER users, providers and sustainers
- foster the use and dissemination of TIGER products
- foster broad based understanding for the benefits of space applications for integrated water resources management in Africa through the incorporation in teaching curricula and research programs of academic institutions in water resources

6. National and international space agencies, at the request of water resources administrations, are to provide appropriate training and capacity building to the focal

points, keeping in mind the need for operational linkages between “water and space.” It is expected that ESA, in particular its TIGER initiative, would serve as a partner to the African focal points thus established. In addition, small grant support for internships of young African water professionals at CEOS member organisations and related academic, research and administrative institutions accompanies these measures

- 2003, ongoing

7. UNESCO in close coordination with existing African institutions (e.g., CRTS, regional UN centres) and CEOS to foster regional institution building and capacity building efforts in Africa and to link science and water resources stakeholders

- 2003, ongoing

8. National and international space agencies, based on accepted projects or programs, are to provide privileged, possibly free of charge, access to adequate amounts of Earth observation data in a timely fashion to African water managers. Canadian and Japanese offers in this regard were taken note of with great satisfaction.

2003 to 2005

9. At the request of African water resources administrations, programs of technical cooperation and development assistance are to include the institutionalisation of the use of space-based information in water resources development and use.

- 2003, ongoing

10. African water resources agencies are to develop programs of intra-Africa cooperation on regional and sub-regional levels on “water and space” and exchange best practices.

- 2003, ongoing

11. The results of such TIGER projects, including a cost/benefit analysis, shall be shared within Africa. This requires the set-up of appropriate technology, policy and institutional implementation mechanisms.

- 2003, ongoing

12. TIGER management, together with national, sub-regional and regional institutions to address trans-boundary issues on ground and surface water resources management and to demonstrate the potential of space technology to decision makers and users in water administrations.

- October 2003, ongoing

13. UN Economic Commission for Africa (ECA) is to act, on behalf of the participants present, as interlocutor vis-à-vis pan-African institutions such as AMCOW and NEPAD in order to obtain sustainability of TIGER initiatives within the African water resources administrations.

- 2003, ongoing

14. The UN Commission for Sustainable Development (CSD) and UN Committee for the Peaceful Uses of Outer Space (COPUOS) are requested to consider appropriate policy recommendations on “water and space.”

- October 2003, ongoing

15. To reach sustainability, African partners need to become increasingly involved in the management of the TIGER initiative, taking benefit from the initial investment of ESA, UNESCO and other partners. This includes, among others, the set-up and operation of the TIGER Secretariat, the TIGER Steering Committee and other related bodies and activities. The offers by the governments of Ivory Coast and South Africa to host regional and international TIGER events during 2004 have been warmly received as important steps in this direction.

- October 2003, ongoing

16. The TIGER management team offered to prepare a more detailed plan of implementation, which would describe the objectives, implementing strategy, management issues and upcoming milestones in a more comprehensive document, taking account of the debates of the Paris meeting (May 2003), the current Rabat meeting (October 2003) as well as other relevant inputs. This document will be provided to participants before the end of October 2003 for comments.

Rabat, Morocco
October 8, 2003