

# *FIFTH AFRICAN ASSOCIATION OF REMOTE SENSING OF THE ENVIRONMENT CONFERENCE*

## Key Role for GIS in Developing Africa

Around six hundred participants attended the fifth conference of the African Association of Remote Sensing of the Environment (AARSE) held in Nairobi, Kenya from 17th to 22nd October 2004. The author reviews the proceedings.

The conference was jointly hosted by the Regional Centre for Mapping of Resources for Development, the Government of Kenya ministries of Environment, Natural Resources and Wildlife and of Lands and Settlement in Kenya, and the United Nations Environment Programme. Support for the conference came from UNEP, Map Geosystems Ltd, UNESCO, ECA, WRI, ITC, Image Africa, JICA and the Pan African Start Secretariat (see websites); the host institution RCMRD also lent its support to the conference. Mr Kalonzo Musyoka, Kenyan Minister of Environment and Natural Resources, officially opened the proceedings and the conference was closed six days later by Mr Amos Kimunya, Minister of Lands and Housing. Participants from 48 countries attended, including decision-makers, geo-information scientists and practitioners, representatives of satellite companies (NASA, ESA, Space Imaging, QuickBird, Nigeria Sat, South Africa Space programme etc.) and the private sector.

Under the theme of "Geoinformation Sciences in Support of Africa's Development", the conference featured case studies and remote sensing/GIS applications in various national and regional development initiatives. These included urban management (informal settlements, Community GIS, etc.), agricultural applications and biodiversity assessment and conservation, water resources management, marine and coastal resources assessment and management, early warning and disaster management, and land and environmental management. A total of one hundred papers were presented at the conference. Four pre-conference and one-post conference workshops were also held. The workshops, which were attended by about three hundred participants, addressed the following:

- geospatial data standards
- African Reference Frame
- use of remote sensing and GIS in early warning for food security, disaster and environmental monitoring
- introduction to ArcGIS 9.0
- availability and use of Landsat Data Archive for Africa.

### Recommendations

Conference adopted various recommendations for implementation by parties including the New Partnership for African Development (NEPAD), regional economic groupings and initiatives, and individual African countries. Immediate implementation was recommended of the African Reference Frame (AFREF) in the five sub-regions, namely Central African Reference Frame (CAFREF), East African Reference Frame (EAFREF), North African Reference Frame (NAFREF), South African Reference Frame (SAFREF) and West African Reference Frame (WAFREF). Having been endorsed by NEPAD and ECA-CODI, the conference urged these regional bodies to facilitate implementation at national level within the shortest possible time by empowering the National Mapping Agencies and other key players. This was necessary for promotion of trans-boundary and regional development initiatives in Africa. It was also recommended that geo-spatial standards be accorded top priority to ensure that geo-information was not only made available but shared, integrated and reused by and in various applications. The need for immediate implementation of SDI in Africa was identified as key to rapid national and regional development; conference therefore urged African countries to put mechanisms in place towards achieving this.

### Further Recommendation

It was further strongly recommended that the NEPAD leadership adopt the African Resource Management (ARM) Satellite Constellation as a platform for scientific and technological excellence in Africa to enable it to become globally competitive and contribute towards rapid sustainable socio-economic development of the continent. This particularly applied in poverty alleviation, regional integration and food, water and health security. RCMRD, in collaboration with the Government of Kenya and other partners, should make plans for an Earth Observation Satellite for Eastern Africa, which is currently not covered by the African Resource Management Satellite Initiative. Conference strongly commended the GOOS-AFRICA programme as a crucial platform for capacity building in marine science and oceanography in general, and satellite remote sensing in particular. It requested UNESCO and its Intergovernmental Oceanographic

Commission to continue providing more support for both this initiative and the UNESCO Cross-cutting project on the Application of Remote Sensing for Integrated Management of Ecosystems and Water Resources in Africa.

#### Future Tasks

The issue of capacity building (human, infrastructure, organisational reforms and institutional strengthening) emerged during the conference as vital for production, management, dissemination and effective utilisation of geo-information. It therefore called for concerted and focused efforts towards strengthening national and regional capacity-building institutions, in addition to harmonisation of geo-information science and earth observation curricula within a mutually beneficial capacity-building network. Time was also devoted to the issue of Mapping Africa for Africa. Conference noted with concern the serious lack of current and adequate basic maps (especially in digital form) to facilitate proper planning and development. Further noted were efforts already made by the ICA in establishing an ICA Working Group on Mapping Africa for Africa and the inclusion/adoption of this initiative into Committee on Development Information (CODI) activities. African countries and NEPAD were called upon to make this a priority programme to ensure sustainable development in the continent, specially noting that this programme could be facilitated by readily available remotely sensed data from within and outside Africa.

#### Effective Co-operation

Noting ongoing efforts to develop a ten-year Implementation Plan for a Global Earth Observation System of Systems (GEOSS), a science-led, government-driven initiative to develop a comprehensive, co-ordinated, and sustained earth observation system, conference recommended NEPAD's endorsement of this initiative. It also encouraged participants to liaise with the relevant authorities in their countries to ensure effective participation of their governments.

The 6th AARSE conference will be held in Cairo, Egypt in October 2006.

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