



## FROM THE DG'S DESK

Over the years, the Regional Centre for Mapping of Resources for Development (RCMRD) has continued to establish beneficial partnerships and collaboration in capacity development, the application of geo-information for sustainable development and research with relevant institutions within Member States and beyond the region.

It is my pleasure to present this e-Newsletter, published to provide news and updates on our projects and services, training and success stories. Our member states in Eastern and Southern Africa regions and partners will find this newsletter as a valuable source of information on the services of RCMRD and identifying areas of cooperation and mutual support.

This is the first e-Newsletter in a series of bi-monthly publications that will be sent out to member States, our clients, partners and the general public to further strengthen and support regional synchronization in the development of geo-information.

Please feel free to mention this newsletter as source of information in your correspondence. We have included web-links for accessing further reading from our website ([www.rcmr.org](http://www.rcmr.org)) or other sources. Furthermore, we have availed links to our open-source data portal on projects undertaken by RCMRD and its partners.

*I wish you a happy reading.*

## RCMRD INSTALLS NEW SATELLITE TRACKING SYSTEM



RCMRD's Data Officers James Mumina and Kenneth Kasera working on fitting and orienting the MODIS antenna/receiver in the confines of the Centre

### Nairobi, May 2014:

The Regional Centre for Mapping Resources for Development (RCMRD) has installed a new satellite tracking system suitable for operating at spectrum of X-band and below to provide real-time data which can be processed into different products for a variety of applications.

Known as 2.4AEBP, the antenna is designed and built to provide high reliability and to withstand severe environmental conditions.

The receiving antenna is designed to acquire and receive data from scientific or observation in both Low Earth Orbit and Medium Earth Orbit satellites suitable for Earth Observing System (EOS) X-Band satellites in water, earth climate and the interactions among the

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earth's atmosphere, lands, oceans, and radiant energy.

With the Earth Observing System-Front End Server (FES), RCMRD manages all the automation and management tools needed to control the ground station antenna such that RCMRD is capable of scheduling tracking, monitoring real-time status, and ingesting and demodulating multiple EOS satellites efficiently.

The Director for Remote Sensing Dr. Tesfaye Korme said "We have started receiving data from MODIS Aqua and Terra, NPP, METOP, Fengyong3, NOAA18 and 19. The ground coverage is so huge that 75 per cent of Africa is covered by our receiving station alone."

To give an idea about its ground coverage, Dr. Korme says to the West, the antennae

reaches up to Nigeria (Atlantic Coast), to the East it reaches up to Yemen, Seychelles and Mauritius (Indian Ocean), to the North up to Egypt and to the South up to Johannesburg, South Africa.

"This is very impressive ground coverage, it is my first time to see that ground coverage from one single station," says Dr. Korme.

## IMPACT

With 36 spectral bands in each single real time acquisition for Modis aqua and terra, different features representing different phenomena can be easily monitored with accurate temporal and spatial resolution. Real time acquisition of images has made it possible for crop monitoring as images for pre and post

growing seasons. Mid-season images can then be acquired for crop health and finally yield estimates can be done.

The technology as also enable RCMRD and other researches perform water quality assessments. Water quality parameter example total suspended matter, chlorophyll level and turbidity has become possible to compute and validate with the in situ data. This has been done for Lake Naivasha in Kenya as a test.

Forest fires monitoring has also being made possible with Modis technology, areas for example forested areas where human surveillance cannot reach without performing Ariel photography. The system therefore enables location of this fire sites and the possibility of creating a web based fire system. Example the Automatic fire alert system (AFIS) in South Africa.

# CAPACITY BUILDING FOR MESA-PROJECT STAFF ON USE OF GLOBAL FOREST RESOURCE MONITORING

**Nairobi, June 2014:**

The Monitoring of Environment and Security in Africa (MESA) staff team were trained at the Regional Centre

for Mapping of Resources for Development (RCMRD) on the use of Global Forest Resource Monitoring (GLOBE-TREES) tool and land cover SEGMENTATION as based on PIXEL APPROACH from satellite images.

The capacity building training was carried out by a team of experts from the Institute for Environment and Sustainability; Joint Research Centre (JRC) of the European Commission

RCMRD and Igad Climate, Prediction and Application Centre (ICPAC) are currently implementing MESA – project as phase two of African Monitoring of the Environment for Sustainable Development (AMBSD) that ended in June 2013.

According to Vincent Mtaroni, GIS Officer at RCMRD, the emphasis of the training was on the use of SENTINEL TOOL that has capabilities to reduce time spent when using manual image interpretation including the simplicity of the spatial coding, clustering and classification.



MESA staff team pose for group photo during the training at RCMRD

"The training focused on the high capabilities of the JRC TOOLBOX\_v1.1 for tree processing and procedures for forest land cover VALIDATION. The key concept as an overall forest mapping concept was based on use of "PROCESSING CHAIN TOOL" interactively with Google earth platform," said Mtaroni.

He added that this approach of mapping is still new but has been tested and show to have high potentials in pursuing timely mapping of large areas to Global

level for quick and acceptable land use cover change results that is vital for forest and other land use planning.

The purpose of the MESA project is to increase the information management, decision-making and planning capacity of African continental, regional and national institutions mandated for environment, climate, food security and related responsibilities by enhancing access to and exploitation of relevant Earth Observation applications in Africa.



MESA staff team pose for group photo during the training at RCMRD

## RCMRD ATTAINS ISO 9001: 2008 CERTIFICATION

### ISO 9001:2008 certification award by SGS to RCMRD

The quality management system certification will help RCMRD follow particular procedures and guidelines in generation, application and dissemination of geo-information and allied ICT services and products to meet the needs of her customers/member states' satisfaction for sustainable development.

#### Nairobi, July 2014:

For the Regional Centre for Mapping of Resources for Development (RCMRD), the path to ISO 9001:2008 certification has been a long and an educational one.

The journey at times, seemed to be a bumpy road but nevertheless when the institution initiated the process, management and staff embarked on the journey to achieve a quality management system, knowing that there would be twists and turns along the way.

And from the time RCMRD set out to walk the road to ISO certification in 2010, the contributions of dedicated staff

members have at long last born fruit that have seen the Centre being awarded ISO Certification.

RCMRD was today awarded ISO 9001:2008 on Quality Management System (QMS) that will steer the Centre in achieving customer/member States satisfaction by continually improving its processes, products and services to ensure they meet customers' requirement.

RCMRD developed and implemented the QMS in order to document the Centre's best practices, better satisfy the requirement and expectation of its member's states and other customers and improve the overall management of the Centre.

Being awarded by the SGS-the world's leading inspection, verification, testing and certification company- RCMRD has demonstrated its ability to consistently provide products and services that meet customers' requirement and the assurance of conformity to statutory and regulatory requirements.

Dr. Hussein Farah, the Director General of RCMRD, noted that since the implementation of QMS, the Centre has seen tremendous improvement in its operation through service delivery, customer satisfaction and proper use of resources.

"The certification process was tedious and required patience and total commitment. We are very happy that we

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went through this rigorous process to claim our position in the top league of best management system," he said during the award ceremony.

"We have in the past four years done vigorous training for our staff members on the requirement for this certification under the principle of 'say what you do, and do what you say' by implementing the documented procedures in our

various sections, proper records management and generally applying best practices, which were verified by independent external auditors on our commitment on quality management system," Dr. Farah explained.

Hon. Charity Ngilu, Cabinet Secretary, Ministry of Land, Housing and Urban Development lauded RCMRD on this achievement.

"The certification is indeed a major milestone in RCMRD commitment to quality service delivery within all levels of its process and procedures and is proof that the organization is continually striving to attain international standards," said Hon. Ngilu in speech read on her behalf by Mariam El Maawy, Principal Secretary at the Ministry.

## THE SMALL GRANTS PROGRAMME TO GENERATE PRODUCTS AND TOOLS FOR INFORMED DECISION MAKING



Group photo during the Small Grant kick-off workshop meeting at RCMRD

### Nairobi, August 2014:

The Small Grants Programme of the SERVIR-Eastern and Southern Africa Project, an initiative under implementation at the Regional Centre for Mapping of Resources for Development (RCMRD) with support of United States Agency for International Development (USAID) and in partnership with National Aeronautics and Space Administration (NASA) will fund nine successful projects to the US\$22,000 within the region.

The objective of the Small Grants Programme is to improve environmental decision-making by dissemination of Earth observation data, products, and tools to empower government-affiliated institutions to make better-informed decisions.

The anticipated projects outcome is to stimulate the innovative use of geospatial tools and information to translate science into sustainable policy and practice that addresses the environmental and developmental challenges posed by climate stresses.

The purpose of the kick-off workshop is to orient grantees with various aspects of grant operation including USAID rules and operational provisions, monitoring and evaluation aspects of the grant programme and communication guidelines for grant activities. The meeting also creates an opportunity to build networks amongst the grantees as well as create forum towards mutual awareness as communities of practice.

In his welcoming remarks during the workshop meeting held at RCMRD, Dr. Hussein Farah, Director General RCMRD noted that the Small Grants is the first major programme of its kind to support Geo-spatial information for development.

He pointed out that through the grantees' proposals, they should be able to demonstrate how Science, Technology and Innovation (ST&I) can benefit the society.

He said there is concerted need by the grantees to exchange scientific experiences, research methodologies and to work with the local communities who will benefit from the projects' output.

Dr. Patrick Warugute, Director Department of Remote Sensing & Resource Surveys Kenya, in his remarks noted that the Small Grants Programme is an important initiative since the funded projects' output will go a long way in addressing global environmental, water and climate change challenges affecting the humanity.

"The project results which are going to have impacts in various countries are the most important aspect of this programme," he said, adding that the proposals will generate tools and products that will address various socio-economic challenges in different countries.

He added that such outcomes should support decision making by informing planning for sustainable development.

# MONITORING AND EVALUATION TRAINING

July 2014, Arusha, Tanzania.

**M**embers from RCMRD attended a training session on Monitoring and Evaluation held in Arusha, Tanzania. The training hosted a team from DAI, Dr. Oleksandr Rohozynsky and Dr. Leona Ba as the training facilitators. 28 members from RCMRD went through intensive training that covered topics such as USAID approach to project Monitoring

and Evaluation, Theory of change, M&E concepts and definitions, How to conduct evaluations, The role of M&E in helping the end-users of SERVIR products understand their usefulness, Comparisons between monitoring and evaluation and USAID M&E expectations.

The training was coached under the objectives of training SERVIR staff on USAID approach/requirement for M&E,

how to Work with SERVIR staff in defining SERVIR development indicators as well as training SERVIR staff on data collection and reporting. Ms. Mutiga, the M & E officer stated that Monitoring and Evaluation is an important part of any project, an good understanding of the workings of these will lead to successful implementation of projects.



RCMRD team members.