



**GMES  
AND AFRICA**



**REGIONAL CENTRE FOR  
MAPPING OF RESOURCES  
FOR DEVELOPMENT**

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The Centre is using Earth Observation to monitor three application areas i.e.

- I. Land Degradation Monitoring and Assessment
- II. Wetlands Monitoring and Assessment
- III. Open Geographical Regional Reference Vector Database for water and & agro-ecological zoning

## Land Degradation Monitoring Training at Makerere University

Land Degradation Monitoring and Assessment is one of the Services that RCMRD is conducting for GMES and Africa Program. Makerere University as a Partner has organized the training for the stakeholders for five days within the College of Engineering, Design Art and Technology (CEDAT). Prof. Anthony Gidudu, a Focal Person for the RCMRD GMES and Africa Program at Partner Organization (Makerere University) had briefed on the opportunities of the training and how the trainees can benefit. Further he presented the role has been played by RCMRD GMES and Africa Program to support the users in Eastern Africa.

Mr. Degelo Sendabo, Project Lead of RCMRD GMES and Africa presented on the objective of the GMES and Africa and ongoing activities of the program in Eastern Africa countries. Further, he briefed on the opportunities of the program where the users can benefit and play an important role on the use of EOs to improve the life of people through sustainable development strategies. The training focused on the methodologies of Earth Observation data processing and analysis using different tools of the geoinformation technology.



## RWFA organizes stakeholders workshop for the GMES and Africa

The Rwanda Water and Forestry Authority has organized workshop for the Global Monitoring for Environment and Security (GMES) and Africa Project.

This one-day workshop, that has taken place in Home Inn Hotel located in Musanze, has gathered different institutions' representatives from MoE, MoD/ Reserve Force, MINAGRI, UR, RWFA, RLMUA and GMES Africa. "It is the workshop which aims to convene stakeholders to discuss and have concrete strategies and methodologies to use Earth Observation products in wetland monitoring and assessment," explains GIS Specialist Christelle Umwali.

She adds that RWFA and stakeholders could be familiarized with the activities, services and products of the project besides being an opportunity to identify areas of interest through user management. GMES & Africa is an initiative contributing to the Earth Observation domain of the African Outer Space Flagship program. GMES & Africa initiative builds on the existing projects in the continent that have generated intellectual and infrastructural capacities in use of Earth Observation applications to enhance decision making in environmental management, through provision of evidence-based information.

The expanded rationale of GMES & Africa is to continue addressing the growing needs of African countries to access and use space-derived data for sustainable development policies through deployment and integration of Earth Observation systems responding to African requirements and needs in identified nine thematic areas.

Currently, the Regional Centre for Mapping of Resources for Development (RCMRD) has signed an agreement with AUC GMES and Africa Program as well as Partner organizations to implement this project.



## GMES and Africa AUC Monitoring Mission at RCMRD

The GMES and Africa programme management unit (PMU) led by Dr. Tidiane Ouattara the GMES & Africa Coordinator visited the Regional Centre for Mapping of Resources for Development (RCMRD) team on a monitoring mission. The visit took place on July 18 and 19, 2019. In his welcoming remarks, Mr. Paul Idude the Director of Common Services speaking on behalf of RCMRD Director General Dr. Emmanuel Nkurunziza thanked the GMES PMU team for visiting RCMRD and promised them maximum cooperation so as to meet their objectives. He invited them to seek any clarification that they needed from the DG's office. He further advised the RCMRD staff to take note of any advice or suggestions that might be given by the PMU to improve on the deliverables.

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take note of any advice or suggestions that might be given by the PMU to improve on the deliverables.

Addressing the meeting Dr. Ouattara said the purpose of the PMU visit was to monitor the technical progress of the GMES & Africa as agreed in the contract signed with RCMRD. He added that GMES and Africa Support Programme is managed on daily basis by a programme management unit (PMU) located within the African Union Commission (AUC) Headquarters in Addis-Ababa, Ethiopia. The PMU is supported by a Technical Assistance Team (TAT). Additional support is provided by the European Joint Research Centre and EUMETSAT. Dr. Ouattara informed the meeting that his team was keen on identifying any challenges that the RCMRD consortia might be experiencing so as to assess how the PMU technical support team could assist. He further encouraged RCMRD consortia to take advantage of the support provided by the JRC on specific technical gaps that the Consortia may be in need of filling. He reported that the GMES & Africa program have an agreement with JRC on technical support and that the request should be channeled through the GMES & Africa coordination office. Dr. Ouattara was accompanied by Hamdi Kacem the Water and Natural Resource Management, Africa Lead and Mr. Jean Claude Manzi.

Degradation Monitoring & Assessment; Wetlands Monitoring & Assessment and Open Geographical Regional Reference Vector Database for water and agro-ecological zoning. In wrapping up the two day monitoring visit on July , the PMU promised to continuously support RCMRD in its endeavor to implement the GMES & Africa Program and encouraged RCMRD to work hard and meet all its targets. The PMU reiterated the need to speed up involvement of the Private sector, finish up with the Geoportal and support for the student sponsorship program. RCMRD was further advised to organize its training in a way that they will address the set indicators.



## GMES & Africa RCMRD Partners Needs Assessment Workshops



The Global Monitoring for Environment and Security & Africa (GMES & Africa) is an initiative contributing to the Earth Observation domain of the African Outer Space Flagship programme. It builds on the existing projects in the continent that have generated intellectual and infrastructural capacities in use of Earth Observation applications to enhance decision making in environmental management, through provision of evidence-based information. The expanded rationale of GMES & Africa is to continue addressing the growing needs of African countries to access and use space-derived data for sustainable development policies through deployment and integration of Earth Observation systems responding to African requirements and needs in identified thematic areas. Currently, the Regional Centre for Mapping of Resources for Development (RCMRD) has signed an agreement with AUC GMES and Africa Program as well as Partner organizations to implement a project on three service areas namely: 1. Land Degradation Monitoring and Assessment, 2. Wetlands Monitoring and Assessment and 3. Open Geographical Reference Vector Database for water and agro-ecological zonings.

Stakeholders' needs assessment is one of the activities of the program. All stakeholders dealing with the three service areas will meet, share and discuss on the way forward in workshops conducted at Marasa Umubano Hotel in Kigali, Rwanda on November 26 and 27 and at Makerere University in Kampala, Uganda on November 28 and 29, 2018. The GMES & Africa Support Programme Delegation Agreement requires the African Union Commission to coordinate training activities and implement the courses that cut across various needs of all consortia. AUC developed the Training Strategy which aims at "ensur-

ing that Africa's human and institutional capacities in accessing, processing and utilizing earth observation (EO) products and services are improved and information is communicated in the right channels to inform decision making throughout Africa." This strategy underscores the need for continuous trainings in EO for the following reasons: EO technology is dynamic in terms of infrastructure and instrumentation. Novel sensors are continually being developed on emerging technologies; Data specifications are varying with changing instrumentations and hence the need to keep up with the dynamics; Processing software are changing or updating on a continuous basis hence there is need to update users and to satisfy the dynamic user requirements and ensure effective ingestion in the daily decision process.

To this effect, RCMRD organized a two day needs assessment workshops for its GMES and Africa Partners and Associates. The objectives of the workshop include to: Provide a synopsis of the RCMRD led proposal for GMES and Africa; Explain the proposed methodologies and work plans ; Highlight specific roles and responsibilities of different stakeholders at the national level and Discuss and agree on the way forward. The workshop was targeted for participants from Rwanda government and non-government institutions including academia dealing with land degradation, wetland monitoring and management and geographic database. Ideally participants are those who will be actively involved during the GMES & Africa service development cycle from development to delivery. This Workshops took a classroom setting. There were presentations from RCMRD GMES and Africa Team leads on the background, objectives, methodologies and approaches of each service/thematic area. Following that, the participants discussed in groups and forwarded their observations and recommendations through presentations.

RCMRD is among 13 successful consortia of institutions that were selected by the African Union Commission to serve as Regional Implementing Centres for the Global Monitoring for Environment and Security and Africa Support Programme. For more click <https://rcmrd.org/projects/gmes-and-africa>

## Training on Application of Geo-information for Informed Policy and Decision Making



RCMRD GMES and Africa Project launched a two day training on the 'Application of Geo-information for Informed Policy and Decision Making'. The training was between October 3 and 4, 2019, in Addis Ababa. The training was intended to support target and beneficiary organizations in Eastern Africa. Participants were from the project implementation countries like Djibouti, Eritrea, Ethiopia, Kenya, Rwanda, Somalia, South Sudan and Uganda. More than 20 decision makers participated in the training.

The objectives of the training were: Introducing RCMRD GMES and Africa service areas to policy and decision makers in such a way that they can gain more knowledge on the applications; Identifying areas of cooperation on the use of Earth Observation (EO) data for land degradation and wetlands monitoring and assessment; Introducing the benefits of regional vector datasets and Identifying hot spots of the services. Others include sharing experiences and discussing the way forward; identifying hot spots of the services and sharing the experiences and discussing the way forward.

RCMRD Director General Dr. Emmanuel Nkurunziza opened the workshop and in his speech he spoke about the roles played by RCMRD on the introduction and use of geoinformation to improve human life. He said the role has been played by the RCMRD in supporting member countries and beyond in the continent of Africa. "Since the establishment of RCMRD, we have been supporting all member countries in training, projects implementation and research."



He said RCMRD is one of the 13 Consortia of GMES and Africa working on three - Application areas namely: Land Degradations Assessment and Monitoring, Wetlands Assessment and Monitoring and Open Reference Regional Vector Database. The Director General welcomed the participants and appreciated the support from African Union, member countries and technical institutions participating in the program.

Dr. Mahama Baachir from African Union, GMES and Africa Head Quarters made a presentation on the on going activities of the GMES and Africa program as implemented by the 13 consortia throughout the continent. Mr. Degelo Sendabo, RCMRD GMES and Africa Project Lead also presented on the overall activities of the project since the launch of the project at RCMRD in August 2018. His presentation included a historical background, benefiting countries, on going activities, achievements, challenges and the way forward.

The training covered the three service areas which RCMRD as a consortia is implementing namely: Land Degradation Assessments and Monitoring; Wetlands Assessments and Monitoring and Open Geographic Reference Vector Database. The trainees were given an opportunity to ask questions and make comments. At the end of the training the participating policy and decision makers were expected to have background knowledge of the GMES and Africa program, use of geoinformation for planning and decision making, acquiring and application of earth observation data for the sustainable development in regional and national level.

## RCMRD GMES and Africa Internal Training Held



RCMRD organized a three day internal training on GMES and Africa Products and services. The GMES East Africa internal training workshop was held from 24th to 26th October 2018 at RCMRD premises in Nairobi. It was aimed at sensitizing the project team on the project and creating a common understanding of each application.

The workshop was officially opened by Prof. John Kyalo Kiema the Director Technical Services at RCMRD. In his opening remarks, he emphasized on the need for timely provision of services and providing quality products in such a way that the communities would benefit from the project. He highlighted the importance of the project to RCMRD in achieving its mandate in the region.

The project lead, Mr. Degelo Sendabo made a presentation on GMES East Africa project. He informed the project team that the number of countries to be covered under GMES East Africa had reduced to 10 following discussions with AUC and other consortia. The 10 Countries that remain under GMES East Africa are: Sudan, South Sudan, Eritrea, Djibouti, Ethiopia, Kenya, Rwanda, Somalia and Mauritius.

His briefing on the project included understanding the needs of the stakeholders before supplying the services, and ways of meeting the demand through communication, visibility and marketing among others.

The training covered all the methodologies and activities to be applied and accomplished during the project implementation time frame. The three thematic areas include: i) Land Degradation Monitoring and Assessment (LDMA), ii) Wetlands Monitoring and

Assessment and iii) Open Geographical Regional Reference Vector Database for water and agro-ecological zonings (RRVD).

The project partners are Rwanda Water and Forestry Authority (RWFA), Ethiopian Geo-Spatial Information Agency (EGIA) and Makerere University. The three main partners will help with implementation of the project. Makerere will spearhead trainings in the project countries.

The project result areas are:

i) Result 0: Effective overall coordination and communication ensured for delivery of programme objectives, sustainability and visibility

ii) Result 1: Improved access to Earth Observation (EO) Data and Infrastructure support

ii) Result 2: Establishment of operational information system on Consolidation of existing application of Land Degradation Monitoring and assessment and new applications on Wetlands monitoring and assessment and Open Geographical regional reference vector database for water and AEZ for improved decision- making processes

iii) Result 3: Political and policy frameworks strengthened to ensure an active and sustainable participation of GMES East Africa member states in the global environmental surveillance initiatives

iv) Result 4: Improved technical capacity level of GMES East Africa member states in land degradation monitoring, wetlands monitoring and assessment and open vector geodatabase on water and AEZ

v) Result 5: Advanced dissemination of added value information through research and publication

vi) Result 6: A well-established M&E framework for sustainability of application.

The workshop was attended by: Mr. Degelo Sendabo, Ms. Dorah Nesoba, Ms. Rose Waswa, Ms. Eunice Wangui, Mr. Josphat Makanga, Mr. David Ongo, Mr. Joseph Chemutt, Mr. Vincent Mtaroni, Ms. Pauline Ogola, Mr. Patrick Kabatha, Mr. Edward Ouko, Mr. Lawrence Okello, Mr. Abdi Gedi, Mr. Julius Buyengo, Mr. Ngugi Kimani and Mr. Aaron Ochieng'.

## Pictorial

