



FROM THE DG'S DESK

It is with pleasure that I welcome you to the sixth edition of our quarterly E-Newsletter. In this issue we highlight our activities in project implementation and capacity development programmes. We are pleased to announce the launch of the first Hazards and Vulnerability Atlas in Malawi and the launch of National Geo-portal in Rwanda. The Atlas shows clearly different hazards, their intensity, frequency and spatial distribution and the vulnerability of the population to these hazards. This Atlas will be an important tool to mitigate the effect of hazards to the people.

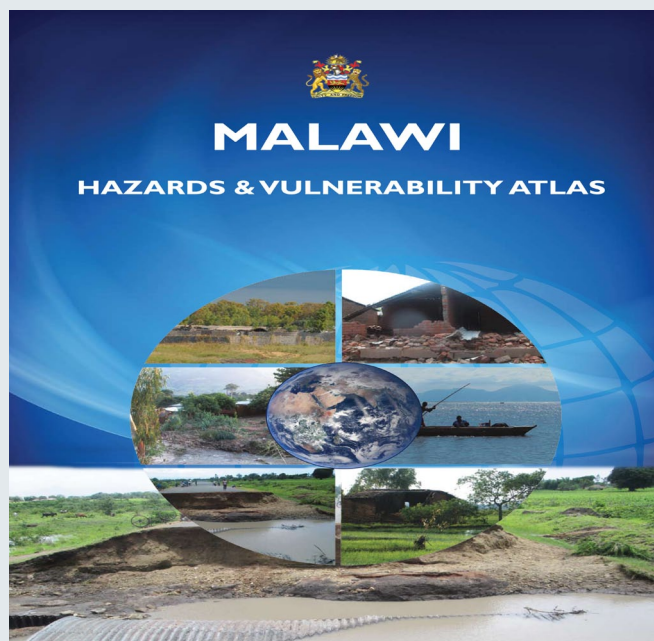
The Rwanda Geo-portal is an online platform for publishing and sharing spatial data sets that are produced by various institutions in Rwanda. The Geo-portal is part of the National Spatial Data Initiative (NSDI) in Rwanda to improve data discovery and sharing among institutions. In Kenya, we launched a project to produce Land Cover maps to support the System for Land based Emission Estimation Programme. The programme is collaboration between the Government of Kenya, Clinton Foundation and RCMRD.

RCMRD organized the first regional workshop on NSDI in July in Kigali, Rwanda. The objective of the workshop was to promote the implementation of NSDI in RCMRD member States. We highlight our training programmes in various themes such as Water Resources, Agriculture, Land Administration, Geodetic Networks, Marine and Coastal Ecosystems, Disaster Management that were held at RCMRD and various member States.

Dr. Hussein. O. Farah

Wishing you a happy reading...

Malawi Hazards and Vulnerability Atlas Launched



Malawi's first hazards and vulnerability Atlas

The first Hazards and Vulnerability Atlas was launched on 18th August, 2015 in Lilongwe, Malawi. The Atlas was officially launched by the Principal Secretary of Disaster Management Affairs, Malawi, in the presence of the Principal Secretary of Lands, Housing & Urban Development, and the Principal Secretary of Defense, Malawi. The Atlas contains maps and statistics that clearly show the different hazards such as floods, droughts, diseases, and earth quakes, and their frequency, intensity and location in a spatial manner. It also gives details of vulnerability of the population to these hazards. The Atlas comes with a geodatabase and web visualization tool for easy use of the information.

The Atlas is an important tool to assist in the effective implementation of disaster risk management activities in Malawi and will help significantly minimize impacts of disasters and losses on citizens. Further, the information will be of help to disaster risk management stakeholders in taking measures to prevent, mitigate, and prepare for response and recovery from disasters.

The Atlas was produced by RCMRD in collaboration with the Department of Disaster Management Affairs and the Surveys and Mapping Department of Malawi. The United States Agency for International Development (USAID) and The United Nations Development Programme (UNDP) provided financial support for the project. Read [more](#)

Launch of the Rwanda Geoportal

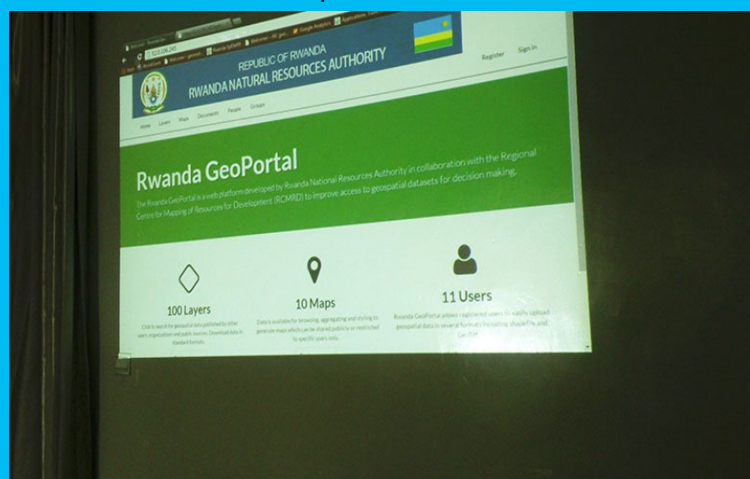
The Rwanda Geoportal was launched on 28th July, 2015. The portal is a web based platform for publishing and sharing of spatial data sets produced by various institutions in Rwanda. The Geoportal forms the data discovery and access component of the Rwanda National Spatial Data Infrastructure (NSDI).

The Rwanda NSDI implementation started in August 2013 after a meeting bringing together technical and policy experts from 10 government agencies and several academic and private institutions. The NSDI is spearheaded by the Rwanda Natural Resources Authority (RNRA) with technical support from RCMRD. A national committee was formed with several working groups to implement and coordinate NSDI activities.

The Geoportal was officially launched by Hon. Vincent Biruta, Minister of Natural Resources. He said that the Geoportal would be important in providing important information to government agencies, potential investors, researchers and tourists. Read [more](#)



Hon. Vincent Biruta when he officially launched the Rwanda geoportal



The Rwanda geoportal

1st Regional Spatial Data Infrastructure Forum held in Kigali, Rwanda

RCMRD organized a two-day Regional National Spatial Data Infrastructure (NSDI) forum on 27-28th July, 2015 in Kigali, Rwanda. The forum was attended by RCMRD member countries' representatives, advisors from countries that have successfully implemented NSDI, experts, Spatial Data Infrastructures stakeholders and RCMRD partners. The objectives of the workshop were to;

- Empower policymakers with the tools and knowledge to engage their countries in advancing geospatial data policy, access, and use
- Bring policymakers, technocrats, practitioners, and users of spatial information under a forum to discuss experiences and lessons learnt
- Establish a community of practice comprising policy and technical stakeholders to champion uptake of SDI policy; and



Rwanda Minister for Natural Resources (third from right) with participants from South Africa, Kenya, Rwanda, and USAID

- Equip participants with the knowledge, tools, and awareness on how to implement a successful NSDI initiative while developing guidelines on best practices for upcoming engagements.

40 participants from 16 member states attended the forum. The forum was opened by the Director General Rwanda Natural Resources Authority Dr. Emmanuel Nkurunziza on behalf of the Minister for Natural Resources, Hon. Vincent Biruta.

NSDI training held in Zambia

RCMRD through the SERVIR program held a five-day technical training to support National Spatial Data Infrastructure (NSDI) in Zambia from 8-11th July 2015. The training followed an assessment done in October 2014 that identified skills gap within the technical personnel of NSDI stakeholders.

The objectives of the training were;

- Introduction to data sharing platforms such as Geoportals;
- Use of tools for uploading, sharing, and visualization of spatial and non-spatial data.

The training attracted 28 participants from 12 government institutions that are stakeholders in the implementation of NSDI in Zambia. The participants were trained on Geoportals; spatial data sharing tools such as Geonode or ArcGIS Online data portal that allow uploading and downloading of spatial and non-spatial data; and viewing and creating maps interactively using GeoExplorer and ArcGIS Online.

The training was graced by Mr. Barnaby Mulenga, the Permanent Secretary, Ministry of Lands, Natural Resources and Environmental Protection, the Surveyor General in the Surveying Department of the Ministry, and Dr. Farah, the Director General, RCMRD.



Dancers entertain the chief guests during the opening of the NSDI training

Web Mapping Training held in Botswana

David Kanyari and Patrick Kabatha of RCMRD trained 22 staff from the Ministry of Lands and Housing, Botswana, on Web Mapping. The one-week training was held at the University of Botswana in Gaborone, Botswana.

The training offered skills on how to deliver and share geographic information so that it can be effectively used by technical staff, decision-makers, and non-GIS audiences.



Web mapping training participants in Botswana

At the end of the training, the trainees were able to share GIS maps, data, and work flows by creating, building publishing and sharing high-performing GIS

services that could be accessed from desktop computers, web browsers, and mobile devices.

Frost Mapping and Monitoring Workshop using MODIS

RCMRD hosted a two-day workshop in frost mapping and monitoring using the Moderate Resolution Imaging Spectro-radiometer (MODIS) satellite data from the 23- 24th July, 2015. Frost is a major problem that reduces agriculture production in high altitude areas in Africa.

The workshop was officially opened by Dr. Hussein Farah, the Director General, and attracted 29 stakeholders from different organizations including the Kenya Meteorological Service (KMS), and the Tea Research



James Wanjohi taking the participants through a training session

Foundation of Kenya (TRFK), among others. This was the first workshop organized to share what has already been achieved with regards to frost mapping

and forecasting. There will be a second workshop to engage regional partners interested in various thematic areas handled within the related project. Read *more*

Workshop on Applications of GIS for Spatial Planning

RCMRD hosted a Spatial Planning & Applications of GIS & Remote Sensing for Drought Disaster Resilience & Sustainability Initiative (IDDRSI) Workshop.

The Workshop for Training was attended by participants from the Intergovernmental Authority for Development (IGAD) region. IGAD is made up of eight countries namely Djibouti, Eritrea, Ethiopia, Kenya, Somalia, Sudan, South Sudan and Uganda. The objective of the test workshop was to enable participants use Geographic Information

System (GIS) and Remote Sensing (RS) and related products (information in data banks, various data analysis, remote sensing products, aerial photos, and maps) for spatial planning.

RCMRD's Land Cover Mapping group to support Kenya

Based on RCMRD's experience and reputation, the Clinton Foundation selected RCMRD in July 2015 as a partner to provide technical expertise to the System for Land Based Emissions Estimation in Kenya (SLEEK) program. Administered through the Clinton Foundation and funded by the Australian government, SLEEK is developing a system to estimate land based emissions in Kenya.

The Government of Kenya and SLEEK tasked the Directorate of Resource Surveys and Remote Sensing (DRSRS) to develop land cover maps for Kenya for the years 2000, 2010, 2012 and 2014. Consequently, DRSRS will be working with RCMRD, the Kenya Forest Service, and the Survey of Kenya to develop the land cover maps.



Michael Osunga, Penina Njogu and Phoebe Oduor during a SLEEK team discussion

SLEEK operates in six Element Working Groups (EWGs): Land Cover Change, Forest Biomass, Soil Biomass, Crop Biomass, Climate and Land Use Management. All SLEEK activities are implemented through government institutions and universities, with

technical support provided through other national and international institutions. The land cover categories considered for SLEEK will be annual and perennial Cropland, as well as Agroforestry, and wooded and open Grassland.

AFREF and GNSS Data Processing Training

RCMRD held a five-day African Geodetic Reference Frame (AFREF) and Global Navigation Satellite System (GNSS) Data Processing training from 6-10th July, 2015. The training was officially opened by Mr. Cesare. M. Mbaria, Director of Surveys, Survey of Kenya.

The major objective of the training was to build the required technical capacity to implement modern Geodetic Reference Frame in RCMRD member States. The training was designed to provide practical skills in setting up continuous operating Global Navigation Satellite System (GNSS) Reference Stations, processing of GNSS data and operationalization of AFREF project.

Botswana, Burundi, Ethiopia, Lesotho, Malawi, Namibia, Rwanda, South Sudan, South

Africa, Swaziland, Tanzania, Uganda, Zambia, and Zimbabwe.



GNSS Data Processing training participants during fieldwork

26 participants were drawn from 15 different countries including Kenya,

RCMRD conducts Flood Forecasting training in Uganda

The Ministry of Water and Environment, Directorate of Water Resource Management, Uganda, and other stakeholders partnered with RCMRD with support from the SERVIR program to develop and implement Coupled Routing and Excess Storage (CREST) in different catchments in Uganda. The two key catchments identified for the CREST model implementation included Manafwa and Malaba.

The training workshop attracted stakeholders from Uganda's Albert, Victoria, Kyoga and Upper Nile Water management zones and aimed to collect data necessary for the validation of the CREST model near real time system and follow up on training and implementation gaps that needed re-addressing to efficiently empower the key stakeholders.

Also, the workshop presented approaches used to implement the CREST model, presented products/results of CREST to stakeholders, obtained feedback from the national stakeholders based on their experience and expertise,

validated CREST products against local knowledge and data, and demonstrated to the stakeholders how to interpret the products as well as introduced them to the Web version of the GIS Flood Tool (GFT).



The flood forecasting training participants at the Ministry of Water and Environment, Uganda.

Regional workshop on Coastal and Marine Ecosystems Management

RCMRD held a four-day regional training on Remote Sensing (RS) and Geographic Information System (GIS) in coastal and marine ecosystems management workshop from 27th-30th July, 2015.

The workshop was opened by the Ag. Director, RS/GIS and Mapping Department, Vincent Mtaroni and included sixteen participants

from Kenya, Tanzania, Mozambique And Madagascar.

The training workshop was organized to expose participants to satellite image processing and GIS skills to enable them identify coastal vegetation (mangroves and seagrass/sub-merged vegetation) types along Kenya, Tanzania, Mozambique and Madagascar coastlines. Satellite imagery can be a great source of current or past information because satellites provide

information on a daily basis.



Training participants during the opening ceremony

Training on Innovative Concepts, Tools and Practices in Land Administration

RCMRD held a two-week training on innovative concepts, tools and practices in land administration at its premises in Nairobi.

The training attracted land officials and technical persons from 15 RCMRD member states, and experts from different fields.

RCMRD and the Global Land Tool Network (GLTN/UN-Habitat) have been in partnership towards implementing capacity development with the aim of strengthenin

g the abilities of the major land actors to develop and implement land policy for secure land rights, poverty reduction, increased productivity and economic growth in Africa according to the framework and guidelines.

The overall aim of the training was to inform up-stream change agents about land administration and develop capacity.



A participant presents at the training on innovative concepts, tools and practices in land administration

RCMRD holds its first ICDL student graduation

RCMRD held its first International Computer Driving License (ICDL) student graduation on 28th August, 2015 at its premises in Nairobi, Kenya. A total of 24 students graduated with the ICDL certificate. The graduates qualified in the seven modules offered this year.

The graduation was graced by Dr. Hussein Farah, the Director General, and Muya Kamamia, the Ag. Director of Land Survey and Management, who gave key note addresses. Dr. Farah emphasized the importance of getting Information Technology training from an internationally recognized institution. He said, "We partnered with ICDL to provide our students with learning and training programs that are recognized internationally so that they can have an edge over their competitors".

Mrs. Regina Wanderi, the guest speaker and renowned life counselor, gave the students a motivational talk on life and parenting. Additionally, ICDL was represented by Ms. Faith Ajema and Mr. Teddy Njoroge who explained the high standards of ICDL curriculum and examination system.

The ICDL training is conducted in the Information Technology Training Centre (ITTC) section of RCMRD, and is vigorous and hands on with the aim of equipping students with up-to-date skills and expertise to handle existing technological challenges. The ceremony ended with students being issued certificates and the best performers given awards for their efforts.



ICDL graduates after the presentation of certificates

RCMRD attends SERVIR Annual Global Exchange in Bangkok, Thailand

RCMRD attended the SERVIR Project Annual Global Exchange in Bangkok, Thailand from 1-4th September, 2015. The event attracted SERVIR team members from all over the world and was held after the launch of SERVIR-Mekong, the latest addition to the SERVIR global network. The meeting was opened by NASA CEO, Mr. Charles Bolden. The SERVIR Annual Global Exchange drew over ninety participants from different SERVIR hubs including Nairobi, Kenya; Kathmandu, Nepal; and Bangkok, Thailand; the SERVIR Coordination Office in the United States; the National Aeronautics and Space Administration (NASA) Headquarters and the United States Agency for International Development (USAID) Headquarters in Washington, D.C.; Development Alternatives Incorporated (DAI) and SERVIR Applied Sciences Team members from around the United States of America.

During the event, the participants shared best practices, attended sessions on capacity building, technology, food security, water, disasters, land use, among other issues, and discussed long term strategic plans for SERVIR's Program

growth. SERVIR's efforts complement RCMRD's core mission and provide a springboard for the development of geoinformation applications customized for Member States.



RCMRD's delegates at the SERVIR Global Exchange meeting with NASA CEO Charles Bolden

Final Workshop on Grants Programme Held

RCMRD provided 14 research grants to partner institutions in Botswana, Ethiopia, Kenya, Namibia, Rwanda, Seychelles, Tanzania and Uganda. Among the 14 projects, 9 were funded by the United States Agency for International Development (USAID) and 5 were funded by the National Aeronautics and Space Administration (NASA).

The overall objective of the Grants programme is to improve environmental decision-making by using earth observation data, products, and tools to empower governmental and government-associated institutions to make better-informed decisions in the Eastern and Southern Africa region.

RCMRD organized a final workshop from 16-17th September, 2015 in Arusha, Tanzania to give an opportunity to all the grantees to present the outcome of their research and implementation to benefit society.

The workshop included presentations of the outputs and outcomes of the projects, exchange of knowledge gained by the implementing partners during the whole project, discussions on both immediate and potential future way forward for each of the

projects, and discussions to continue strengthening the networking forum of partner institutions and product users for knowledge sharing.



Participants who attended the Grants programme final workshop

DG RCMRD meets Ministers in Ethiopia and Malawi

His Excellency, Desalegn Ambow, State Minister of Urban Development and Construction of the Federal Democratic Republic of Ethiopia met with Dr. Hussein Farah, the Director General of the Regional Centre for Mapping of Resources for Development (RCMRD) to discuss the launch of Phase 2 of an ambitious training and assessment programme in land and land related fields for his Ministry's staff and local governments.

Close to 2,000 staff are to be trained and assessed in Cadastral Surveys, Land Registration, Urban planning, Land and property valuation and Land information systems. The programme's aim is to improve land management and administration and service delivery in the land sector.

The programme will take 3 months and will be conducted in three centers located in Addis Ababa, Bahar Dar and Hawassa. RCMRD has partnered with 3 organizations to implement the programme.

Malawi

The Director General also had a meeting with the Minister of Lands, Housing and Urban Development, Malawi, Hon. Paul Chibungu in Lilongwe, Malawi, on Monday 17th August, 2015.

During the meeting, Dr. Farah and Hon. Paul Chibungu discussed the cooperation between Malawi institutions and RCMRD. The cooperation involves training and project implementation in Land Cover Mapping, Hazards Mapping, Land Information Management and Spatial Data Infrastructure.

The Minister commended RCMRD for the support it is providing to Malawi and in particular the production of Land Cover and Hazard Maps for the country.

Also present during the meeting were the Principal Secretary of the Ministry, Mrs. Ivy Luhanga and the Surveyor General of Malawi, Mr. Felix Mangani.



H.E. Desalegn Ambow and Dr. Hussein Farah during their meeting in Ethiopia



Malawi Minister of Lands, Housing and Urban Development Hon. Paul Chibungu meeting with Dr. Farah

RCMRD and PREPARED hold Vulnerability Mapping Workshop in Uganda

RCMRD and the Planning for Resilience in East Africa through Policy, Adaptation, Research and Economic Development (PREPARED) Project held a one-week vulnerability mapping workshop in Entebbe, Uganda from 10-14th August, 2015.

The workshop drew participants from the East African Community member States namely Kenya, Uganda, Tanzania, Burundi and Rwanda.

PREPARED and RCMRD are currently working with the East African Community Climate Change Technical Working Group to develop, demonstrate and support an approach for conducting a regional vulnerability, impacts and

adaptation assessment (VIA). This was the third workshop on vulnerability mapping aiming at empowering professionals from the five countries.

RCMRD is an implementing partner of the PREPARED Project. Read [more](#)

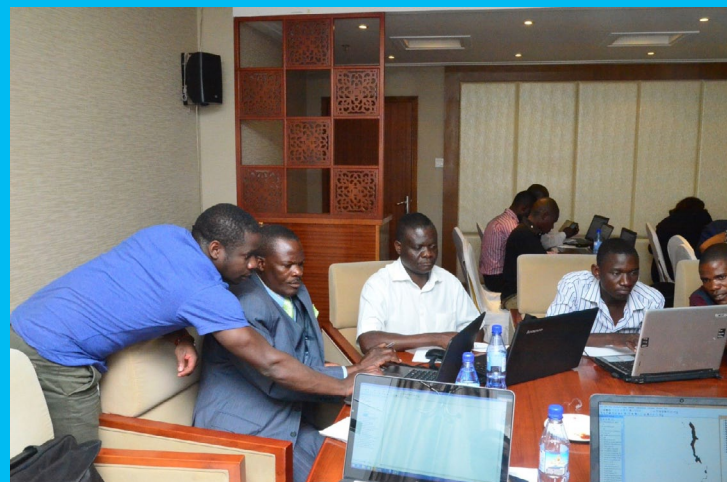


Participants at the vulnerability mapping workshop

Pictorial



A participant receives her certificate after completing a two-week training on innovative concepts, tools and practices in land administration at RCMRD



RCMRD staff working with trainees at the Hazard Mapping workshop in Lilongwe, Malawi.



RCMRD meets the Kenya Census for Agriculture technical team to discuss provision of technical services and capacity building



Stakeholders from various Namibian government ministries, agencies and local authorities visit RCMRD

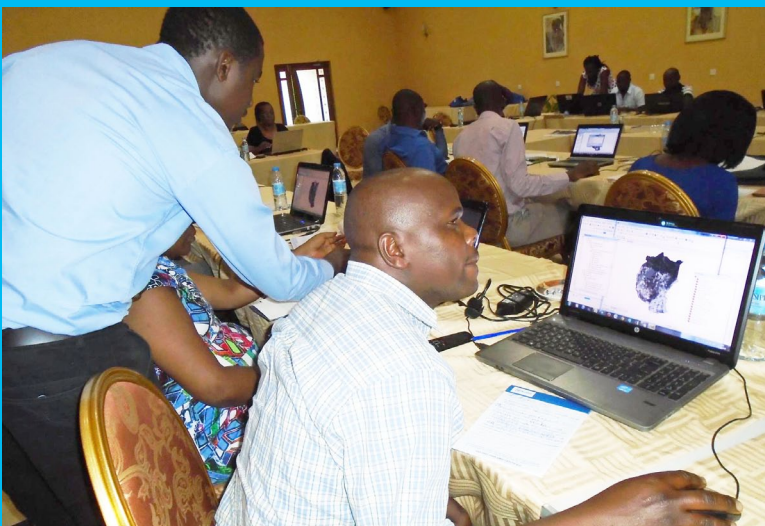
Pictorial



RCMRD staff making a presentation during a one-day products and applications workshop at the centre



Massimo Amorosi from Africa Union's Monitoring for Environment and Security in Africa (MESA) coordinating office visit to RCMRD



RCMRD staff guide participants in developing vulnerability maps during a vulnerability mapping workshop in Uganda



Training participants at the three-day National Geoportal technical training workshop in South Sudan



Dr. Mohamed Moussa Mohamed, Director of Agriculture and Environment at the Intergovernmental Authority for Development (IGAD) meets RCMRD's Director General, Dr. Hussein Farah