



SDI-Africa Newsletter

The Spatial Data Infrastructure - Africa (SDI-Africa) is a free, electronic newsletter for people interested in Geographic Information System (GIS), remote sensing and data management in Africa. Published monthly since May 2002, it raises awareness and provide useful information to strengthen SDI efforts and support synchronization of regional activities.

The Newsletter is prepared for the [GSDI Association](#) by the [Regional Centre for Mapping of Resources for Development \(RCMRD\)](#) in Nairobi, Kenya.



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The [Regional Centre for Mapping of Resources for Development \(RCMRD\)](#) implements projects on behalf of its member States and development partners.

The centre builds capacity in surveying and mapping, remote sensing, geographic information systems, and natural resources assessment and management. It has been active in SDI in Africa through contributions to the [African Geodetic Reference Frame \(AFREF\)](#) and [SERVIR-Africa](#), a regional visualization and monitoring system initiative. Other regional groups promoting SDI in Africa are [ECA/CODIST-Geo](#), [RCMRD/SERVIR](#), [RECTAS](#), [AARSE](#), [EIS-AFRICA](#), [SDI-EA](#) and [MadMappers](#)



Announce your news or information

Feel free to submit to us any news or information related to GIS, remote sensing, and spatial data infrastructure that you would like to highlight. Please send us websites, workshop/conference summary, events, research article or practical GIS/remote sensing application and implementation materials in your area, profession, organization or country. Kindly send them by the 25th of each month to the Editor, Gordon Ojwang' - gojwang@rcmr.org or sdiafrica@rcmr.org. We would be happy to include your news in the newsletter.

This would be interesting to a colleague

PLEASE share this newsletter with anyone who may find the information useful and suggest they subscribe themselves. You can visit the [GSDI](#) website: Newsletter back issues - <http://www.gsdi.org/newsletters.php>. You can join the GSDI Association at <http://www.gsdi.org/joinGSDI>.

Enjoy Reading - the SDI-Africa team



Support and Contributions to this Issue

Thanks to the [Global Spatial Data Infrastructure \(GSDI\)](#) Association; Hussein Farah, RCMRD (Kenya); Kate Lance, GSDI listserv moderator (USA); Karen Levoleger, kadaster (Netherlands); Muki Haklay, University College London (UK) and Steven Bland, ICLEI (South Africa) for their contribution to this issue of the newsletter. We acknowledge the various websites and links referred to here as sources of information.

SDI News, Links, Papers, Presentations

[GSDI 14 World Conference and AfricaGIS 2013 - November 4-8, 2013](#)



[EIS-Africa](#), the [GSDI Association](#), the [International Geospatial Society](#), and the [United Nations Economic Commission for Africa \(UNECA\)](#) are pleased to announce a close partnership in offering the joint AfricaGIS

The GSDI 14 World and AfricaGIS 2013 is a combined conference that will take place at the UNECA Conference Center in Addis Abbaba, Ethiopia from November 4-8, 2013. AfricaGIS is the largest regularly occurring GIS conference in Africa with participants from the entire continent. The GSDI World Conference has built a reputation for excellence in content and moves across the globe to offer geospatial specialists in all parts of the world opportunities to better exchange ideas and learn from global peers in building spatial data infrastructure. Theme of the conference: "Spatially Enablement in Support of Economic Development and Poverty Reduction".



Conference Website: <http://www.gsdi.org/gsdi14>; Past GSDI World Conference Proceedings: <http://www.gsdi.org/gsdiConferences>; Past open access Books affiliated with the conference: <http://www.gsdi.org/openaccessbooks>; Other: <http://www.gsdi.org/gsdiconf/gsdi14/dates.html>

Esri, Inc. is the conference Titanium Sponsor while Intergraph Corporation and Google, Inc. are the Platinum Sponsors. Other hosts, sponsors, supporters and collaborators include EIS-Africa, Global Spatial Data Infrastructure Association (GSDI), International Geospatial Society (IGS), UN Economic Commission for Africa (UNECA), EiABC Addis Ababa University, African Association of Remote Sensing of the Environment (AARSE), Ethiopian Mapping Authority (EMA), GIS Society of Ethiopia (GISSE), Regional Centre for Mapping of Resources for Development (RCMRD), Group on Earth Observations (GEO/GEOSS), Open Geospatial Consortium (OGC) and International Cartographic Association (ICA). Media sponsors include Asian Surveying and Mapping, CitiesToday, Coordinates, Directions Magazine, EarthZine, Geoconnexion, GEOInformatic, Geo-matching, Geomatica, Geospatial World, MundoGEO, PositionIT, and Sensors and Systems.

[Register for Extra-Early Rate for the Global Geospatial Conference 2013 in Addis Ababa](#)

The "Extra Early Rate" for full registration at Global Geospatial Conference, which runs from November 4-8, 2013 ends on September 1 and the regular "Early Rate" ends on September 15. This is the joint and fully integrated conference for GSDI 14 and AfricaGIS 2013 held at the UN Conference Center in Addis Ababa, Ethiopia. Check the free workshop schedule in the event you want to arrive early and register at <http://www.gsdi.org/gsdiconf/gsdi14/register.html>, and get your payment in to save.

Over 250 presentation proposals from across the globe were accepted for the conference, several free workshops and sponsored sessions are offered throughout the week, we will witness the launch of AfriGEOSS, the exhibition hall is filling, the impressive featured plenary speaker list is growing and a special presentation will be made by the Global Citizen Award recipient. For details, check the links at <http://gsdi.org/gsdi14> and previous news release at <http://www.gsdi.org/node/630>.

- If you reside in a developing nation and are a current member of either EIS-Africa or the International Geospatial Society (IGS), you qualify for an extra-low conference registration rate as shown at <http://www.gsdi.org/gsdiconf/gsdi14/fees.html>. If you are not currently a member of EIS-Africa or IGS, you may join by following Option A or Option B as follows: OPTION A - on the registration page at <http://www.gsdi.org/exec/eventreg/>, create an account, and register under Individual Registration. In the registration process add \$US 50 as a dues payment to EIS-Africa or the International Geospatial Society (IGS). The system will automatically invoice you at the reduced registration rate. OPTION B - join the International Geospatial Society free of charge if you are a geospatial specialist from a developing nation. Register as individual in the Geographic Information Knowledge Network at <http://giknet.org> and view your profile at <http://www.giknet.org/registry/individual.php>.

Either Option A or B will allow you to acquire the much reduced conference registration rate for participants from developing nations. If a friend or colleague would like to sign up for the GSDI News List, direct them to <http://www.gsdi.org/>. For further information, contact: c/o Onsrud, 5711 Boardman Hall, Univ. of Maine, Orono, Maine 04473, USA.

[NOAA: GOES-12 satellite retired after 10 successful years](#)



After a successful service of 10 years, NOAA's Geostationary Operational Environmental Satellite (GOES)-12 spacecraft is being retired. Since GOES-12 became operational in 2003, it has supported forecasters and scientists in NOAA's National Weather Service until 2010, when the satellite was shifted to a new position from which it provided coverage of weather conditions affecting South America that included volcanic ash clouds, wildfires, and drought.

Though GOES-12 satellite was launched on 23 July 2001 with an operational design life of two years for on-orbit storage and five years of actual operations supporting forecasters and scientists, it lasted well beyond these expectations. For more than 10 years of stellar service, GOES-12 has witnessed from Hurricane Katrina that hit the Gulf Coast in 2005, to the Christmas blizzard that crippled the Central United States in 2009.

"GOES-12 gave the Western Hemisphere many years of reliable data as the operational eastern GOES for accurate forecasts, from small storms to those of historic proportions," said Mary Kicza, assistant administrator for NOAA's Satellite and Information Service. Read more..



Crowd-sourced maps help disaster management



Open Street Map is a crowd-sourced, free, online map of the world inspired by Wikipedia. Search and rescue teams used it during the 2010 earthquake in Haiti. Over a million people are now contributing to it and it has potential to grow. A free online map of the world created by users is helping developing nations become more resilient to disasters, the Open Source Convention in Portland, United States, heard on 22-26 July).

Inspired by the crowd-sourcing success of Wikipedia in the 2010 earthquake in Haiti, Open Street Map (OSM) set up in 2004 in response to the limited online map data for many parts of the

world has over a million people are now signed up and contributing to OSM's world map. "The earthquake happened and the OSM community started spontaneously mapping. And soon it became the most accurate road map of the capital, Port-au-Prince." Search and rescue teams, as well as the UN and World Bank used the maps, which included locations of people displaced, health facilities, and basic infrastructure was used.

Users can trace new routes for the map, using portable GPS (Global Positioning System) devices that can upload the data to OSM. More recently, users have been doing mapping work from their homes by looking at satellite imagery of particular areas to use as a template for updating the routes in OSM from their computers.

Kate Chapman, director of the Humanitarian OpenStreetMap Team, an initiative that applies the principles of open source to humanitarian response and economic development, told the convention that her organization's work using OSM had helped Indonesians prepare for the floods that hit Jakarta earlier this year by pinpointing the location of floods and information centres. "The one thing you know about Jakarta, is it's full of people," she said. "The other thing it has a lot of is flooding... We brought urban village leaders together with university students, and sat down with them and asked them 'where is the important infrastructure in your village?' And we started mapping."

Harry Wood, from the Open Street Map Foundation, a not-for-profit organisation that supports the OSM project, says OSM is a useful tool for aid agencies during disasters, for a number of reasons. "They can go to OSM as an easy-to-access data source, which can be updated minute by minute", "It's high-level detail, capturing road networks in particular, so it gets used as a base map by these organisations. They then lay markers on top of OSM for temporary situational updates, for example if there's a relief centre which has been set up, or death toll statistics for the area." More recently, OSM mappers have been responding to June's floods in Uttarakhand, northern India, where 5,700 people presumed dead. Many are working remotely using satellite data to update OSM on roads and villages in those areas, which can show whether they are still accessible for trucks delivering aid. However, Chapman says OSM needs to become more user-friendly to fulfill its potential. "It started out being very technical, so you had to really want to get involved". There are also language barriers in the documentation and software. However, the situation is improving, and over time it will be possible for more and more people to get involved." [Link to Open Street Map.](#)

Big bang and bright idea as satellite coverage strengthens over Africa

The map of the world overlays a honeycomb pattern across a vast screen at the Inmarsat's headquarters in London. Each segment represents a sector, small at the equator and elongating as the earth's curvature that extends north and south, and directly beneath a satellite. This new satellite - Alphasat will cover the whole of Africa with the oceans on each side and most of southern Europe, the Middle East, and West Asia. However, a close view at the back-lit digital wall map, it is clear that the usage is very high while in Afghanistan, Iraq and other stressed places, but almost no calls or communications in the vast swathes of Africa. Moreover, these areas have low economies for mobile phone companies to build transmitters despite the explosion of satellite communications across the continent in the last decade.

This, says Rupert Pearce, CEO of Inmarsat, could change soon, as the price of sat-phones and satellite communication is about to fall dramatically. "The cost per bit is coming down enormously as we become more efficient and more effective with investment in new technology. Sat-phones that once cost \$2000 dollars now retail at \$500." The huge capacity and efficiency of Alphasat means that in the predictable quiet periods, the big corporate users could sell airtime at a discount or subsidized for universities, schools, and hospitals. Massive Online Open Content Courses will be available to remote villages and schools in Africa. Telemedicine by satellite - already widely used by the shipping and aviation industries - will easily be available to far-flung hospitals and clinics - or even by individuals through mobile phones linked to a "wifi hotspot".



Africa has the world's fastest growing numbers of mobile phones per capita. The bank on your phone and other major innovations in mobile telephony also started in Africa. With a relative lack of infrastructure and very few landlines, Africa has been able to jump a generation faster than most developed countries. Could this new satellite provide even cheaper telephone calls and especially broadband for all in Africa, even in the remotest places? Read more on the link above. The author of this article, Richard Dowden is Director of the Royal African Society and author of *Africa: Altered States, Ordinary Miracles* published by Portobello Books.

[SERVIR-Africa supports Africa-wide land cover mapping symposium in Kenya](#)



SERVIR integrates satellite observations and predictive models with other geographic information (sensor and field-based) to monitor and forecast ecological changes and respond to natural disasters. In 2008, NASA and CATHALAC collaborated with the Regional Center for Mapping of Resources for Development ([RCMRD](#)) based in Nairobi, Kenya, and together began setting up the SERVIR's Africa hub. The SERVIR-Africa project builds upon RCMRD's existing strengths and augments data management and training capability. The efforts complement RCMRD's core mission and provide a springboard for the development of applications customized for its member states - Botswana, Burundi, Comoros, Ethiopia, Kenya,

Lesotho, Malawi, Mauritius, Namibia, Rwanda, Seychelles, Somalia, South Africa, Sudan, Swaziland, Tanzania, Uganda, and Zambia.

The International Symposium on Land Cover Mapping for the African Continent took place in Nairobi, Kenya, 25-27 June 2013. Hosted by the United Nations Environment Programme (UNEP) and the Regional Centre for Mapping of Resources for Development (RCMRD) /SERVIR-Africa and held at UNEP headquarters, the conference brought together over 80 participants from four continents (Africa, America, Europe, and Asia). Attendees included governmental decision-makers, policy advisors, academia, and NGO representatives from 19 African countries.

Land cover information including data on change trends is critical for supporting policy and decision making at local, regional, continental, and global levels. Land cover maps indicating the extent and changes in forests, grasslands, urban areas, and agricultural lands are vital inputs for environmental applications and important in land use planning, biodiversity monitoring, climate change studies, agricultural sustainability planning, natural resources management, etc.

The three-day land cover mapping event served as a discussion forum on land cover data availability, ongoing technical collaborations, and recent successes. It also helped to strengthen networking among the various African stakeholders. RCMRD, Tsinghua University of Beijing, and the US Department of the Interior organized the conference.

[Ninety local governments likely to be affected by floods in Nigeria in 2013 - NEMA](#)



The National Emergency Management Agency (NEMA) has identified 90 local government areas likely affected by floods in 2013. The agency's Press Officer, Manzo Ezekiel, said that NEMA carried out a vulnerability study and identified these areas in states named by the Nigeria Meteorological Agency (NIMET) rainfall prediction for 2013. Mr. Ezekiel noted that the vulnerability study was conducted using NEMA's Geographical Information System.

NEMA in partnership with an NGO on disaster awareness at grassroot had commenced a sensitization exercise on early warnings and prevention in the affected areas. Disaster awareness was also being carried out by the agency's six zonal offices in areas that were likely be affected by the floods. According to the NIMET prediction, some of the states mostly affected are Cross

River, Ogun, Kogi, Oyo, Imo, Plateau, Kaduna, Bayelsa, and Lagos States.

Mr. Ezekiel said that NEMA had organized consultative workshop on the 2013 rainfall prediction attended by state governors and their representatives on measures to avert disasters. The prediction showed that there would be more rainfall in 2013, which might translate to flooding in most of the states. NIMET's Director-General, Anthony Anuforum, recently predicted that the rainfall for 2013 would be above normal as



compared with the volume of rain in 2012. There would be more rains in the northern states of Sokoto, Kebbi, Niger, Kwara, and Zamfara.

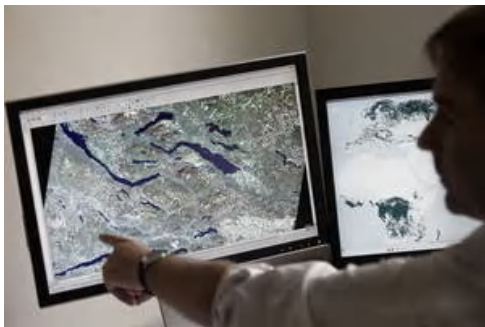
According to Mr. Anuforom, catchment areas of River Niger and parts of the Niger Delta had higher chances of even more rainfall this year than previous years. The likelihood of some communities in Cross River to be permanently dislocated heightened his worries. "We have two major communities that should be relocated and resettled permanently from their ancestral homes for fear of being destroyed. The communities are Eja in Obubra and Agwagune in Biase, who are likely to suffer another major destruction when the next flood comes.

[Nigeria: INEC goes satellite on constituency delineation](#)

The Independent National Electoral Commission (INEC) of Nigeria says it has concluded plans to adopt satellite services in the proposed review of the electoral boundaries and constituencies in the country. Chair of INEC, Prof Attahiru Jega disclosed when he paid a courtesy visit to the National Space Research and Development Agency, NASDRA in Abuja, and expressed satisfaction with the quality of facility and the capacity of personnel. The review of the country's electoral constituencies was long overdue and developed in 1996 based on the 1991 census.

He said that the 1999 constitution empowers INEC to review the division of states into senatorial districts, federal constituencies, state constituencies, and FCT electoral wards, at intervals of not less than 10 years. He stressed the need for the review of the existing electoral constituencies in order to ensure more equity in political representation, warning that if electoral boundaries are not adjusted periodically, it could lead to mal-apportionments. He however, urged NASDRA to collaborate with INEC to actualize the project using satellite services by getting high-resolution imagery covering the entire nation as at 2012 in hard and soft copies. "We will therefore want NASDRA to help us in getting high resolution imagery covering the entire nation as at 2012 in hard and soft copies. We also want imagery showing new settlements in Nigeria by states in hard and soft copies. In addition, we will need imagery of population density in Nigeria in hard and soft copies. "INEC will like to have locality list of Nigeria in hard and soft copies as well as street maps of Nigeria in hard and soft copies."

[FAO mapping technologies help fill gaps in Uganda's forest data](#)



New FAO mapping technologies enable foresters to process satellite images and generate forest maps at low cost in Uganda that will help the country generate better, more useful statistics and land cover maps. Forests and forest products are important to the livelihoods of many communities in Uganda. The new tools and information will help the government monitor national forest resources and make informed decisions regarding long-term forestry and investment policies, as well as avoid unintended forest conversion and the degradation of the productive and protective functions of forests.

In the past, the management of Uganda's forestry sector was often been hampered by a lack of reliable data. While new advances in remote sensing and free access to satellite data can now facilitate the production of forest area data, users like the National Forest Authority of Uganda (NFA) have had limited capacity to benefit from such developments - software licenses alone can cost tens of thousands of dollars. FAO's innovations, on the other hand, do not require any large financial investments to implement.

To update Uganda's land cover map, FAO and NFA worked together to classify recent imagery and produce statistics during a week-long training course in satellite image processing. The NFA team learned to use a suite of open-source image processing tools to undertake the work. "The training solved our biggest problem and gave us momentum that we started land cover mapping for the whole country; something we have wanted to do for some time," said John Diisi, the Coordinator of Geographic Information System/Mapping at the NFA. "The free provision of high-quality satellite data, combined with open-source image processing, geographic information systems, and other statistical tools offers an amazing amount of utility and flexibility," said FAO remote sensing specialist Erik Lindquist. "Now, we can easily introduce advanced image processing techniques and generate results efficiently with no software costs to the organizations we work with. That is important given the resource constraints faced by national forestry agencies around the world."

"This effort shows that finding flexible ways to use limited resources in the right time and place can produce substantial benefits. The initial direct investment was around \$20,000 provided by the Government of Finland, but it unlocked Ugandan potential that is worth many times that amount," noted Kenneth MacDicken,



a Senior Forestry Officer at FAO. The new land cover map and statistics will help Uganda improve its forest monitoring capabilities, and Uganda's newly generated figures will also be included in the upcoming FAO Global Forest Resources Assessment 2015 report.

Kenya's Malindi town hosts a historic space station



A satellite was launched from a sea-borne pad for the first time in the world and in Kenya in May 1967. "It was an improbable event of the space age," wrote Life magazine while capturing the dramatic events of that day.

A 20-tonne Scout rocket, a family of American built launch vehicles made to send small satellites into orbit, powered the 285 Kg satellite. It has hardly been unknown that a satellite launch platform exists in Kenya since the 1960s to send satellites and rockets to the space, except to the remote sensing professionals.

The Luigi Broglio Space Centre comprises an offshore launch site, the San Marco Platform, which is actually a former oil platform, and a ground communication station in Malindi's Ras Ngomeni village. There are two smaller platforms known as Santa Rita (also a former oil platform) and Santa Rita II connected by undersea cables.

A miniature version of the US Kennedy Space Centre, the choice of Malindi was a result of the researcher's fascination of the possibility of building a space station near the Equator. They knew that a sea platform near the Equator would assure them of a favourable climate. Also, the space to the east (the direction to which space satellites are launched) was free and again, the Italians who were financing the project felt that by having their own space station, they would have a primary position in space research.

Luigi Broglio, a civil engineer who had also earned a second degree in Aeronautical Engineering sold the idea of building this station in Malindi to the Italian government. Prof Broglio recalled in a 1967 interview that he floated the idea to some NASA scientists visiting Italy over a lunch date. "They almost choked on their lasagna... They said, 'You certainly are a brave man.' I think it was a polite way of saying, 'You are crazy!'". A man who had been involved in the building of the first Italian jet plane project, Broglio was fascinated by the launch of the Sputnik in 1957 by the Soviets. He wanted Italy to join the race since only USSR and US had been competing for that glory. It was through his efforts that in 1964 Italy launched the San Marco 1 satellite in cooperation with NASA, becoming the third country to enter the space race.

As the President of School of Aeronautical Engineering, Broglio thought of the possibility of creating a space station near the Equator. That is how Malindi, near a good port, Mombasa and near the equator was chosen. The Kenya government gave the Italians some 3.5 hectares to build the station, 35 Kilometres from Malindi town.

A renewable inter-governmental agreement signed on January 1, 1963 gave researchers a chance to control satellites from land. From Malindi station, the famous X-ray astronomy satellite named Uhuru was launched on December 12, 1970, the first to fully survey the entire sky for X-ray sources. Luigi Broglio he helped launch more than 10 satellites from the platform. The satellites were launched on behalf of Italy, US and UK and the facility also used to launch the Italian San Marco D/L satellite. The station was almost abandoned when space research suffered further after man landed on the moon.

NASA reduced its budget for San Marco project, leaving the two bases (one in the Ocean and the other mainland) in the hands of Italy's National Research Centre (where Broglio was the president) until 1967 when they were taken over by the University La Sapienza, Rome. Since 2004, the facility has been run by the Italian Space Agency.

In April 2012, the Kenyan parliament challenged the government to state the status of the project after the agreement expired. The house was informed that the two governments were negotiating to renew the contract. One of the controversies has been about how much Kenya was gaining by hosting the facility after the government said the Italian government had disbursed only KSh 240 million to the community since 1964.

"The station has been used as a ground station for reception, processing and archiving of satellite data. This is a multi-billion dollar business in the world today...why is it that the government has not been able to make money out of that multi-billion dollar business?" asked Dr Wilbur Otichilo, the MP for Emuhaya and former director of the Regional Centre for Mapping of Resources for Development (RCMRD). Some MPs wanted the government to take over the mainland facility since of the 240 Kenyans employed there, only four held managerial positions. See also: [http://www.esa.int/Our_Activities/Operations/Malindi_station/\(print\)](http://www.esa.int/Our_Activities/Operations/Malindi_station/(print)).



[Survey to take stock of Kenya's minerals](#)

Kenya has signed a memorandum of understanding with China on geological survey. Cabinet Secretary for Mining Najib Balala and Jia Xuetian, president of China's Geological Exploration Technology Institute of Jiansu Province, August 14, 2013 presided over a signing ceremony in Nairobi. "This memorandum of understanding will result into nationwide remote sensing, airborne geophysical survey, and upgrading of geological services in Kenya," said Balala.

The project, expected to cost \$70 million, will be financed through a grant from the Chinese government. "The main objective of this activity is to undertake multispectral remote sensing, aeromagnetic, and radiometric survey in combination with satellite imagery studies as well as upgrading of geological services in Kenya with a view to determining the mineral potential of the country," said Balala.

Kenya has in the recent past has discovered a range of mineral resources including oil, gold, and rare earths, but experts say there is much more mineral wealth. Balala said the exploration of minerals in Kenya is hampered by lack of up-to-date and modern data on resource mapping. President Uhuru Kenyatta's government has given mining a major focus. For the first time since independence in 1963, the government formed a standalone Ministry of Mining to drive the efforts of making the sector one of the significant contributors to economic growth. Anne Waiguru, the Cabinet Secretary for Devolution said the sector has been adopted within Kenya's Vision 2030.

[Malawi: Geological Survey department starts providing mineral digital data](#)

Malawi has now started providing digital data on mineral resources to investors according to the Malawi's Geological Survey Department (GSD). The department says this has been possible after establishing a geographic information system (GIS) for mineral resources in Malawi. This initiative, which supported by the Japanese International Cooperation Agency (JICA) is a milestone on mineral resources development in Malawi. The department's Director Jalf Salima explained that the objectives of the project, which started in March 2012 and phased out in July 2013 was to develop management capacity of mineral resource information system based on GIS with an intention of develop and promote the mining sector in Malawi. It was also to transfer technology through on-the-job-training so that Malawians should implement remote sensing data analysis and GIS database creation and management independently and sustainably.

The project accomplished the digitization of all the 40 geological maps in 1:100 000 scales as well as analysis and compilation of satellite images of the country using remote sensing principles. It also created mineral resources GIS database and training of GSD personnel for sustainable management of the database. See also: Malawi mining deals need to be fair - <http://mwnation.com/malawi-mining-deals-need-to-be-fair-japan-2/>.

[Participatory mapping to help local communities manage natural resources in Congo Brazzaville](#)



New mobile software may help local communities in the region of Brazzaville, Republic of Congo, manage their natural resources, and monitor logging activities in the forest. The Extreme Citizen Science team at University College London travelled across the country to test the new software in the field meets people who live in the forest and gather feedback.

The new app, designed for people who are not familiar with complex technology, allows farmers to collect information on their livelihoods, to record negotiations with logging company representatives, and assess potential damage from industrial activity on their territory.

The project still needs to overcome a number of technical challenges - for example the transmission of collected data in an environment where wireless connectivity is very poor. The pilot project has been successful and people welcomed the ExCiteS team with interest, however to implement the idea on a large scale more funding is needed.

[Namibia: Atlas of 2011 population census unveiled](#)

Namibians may now access the 2011 Population Census finding in maps, after the unveiling of an atlas by the Namibia Statistics Agency, NSA (<http://www.nsa.org.na/news/59/Namibia-2011-Census-Atlas-launched/>). The atlas was designed to complement and enrich information on the figures and statistics using GIS, which was not only employed for the demarcation of the country boundary, but also ensure that user needs are addressed. It helps in explaining the geographical location of census information using colours and dotted lines, together with other physical geographical features. The NSA's Statistician-General, Dr John Steytler



said, the 2011 Population and Housing Census was simplified to provide information at the smallest area possible, thereby supporting planning and decision-making processes at lower levels.

Officially launching the atlas in Windhoek, Finance Minister Saara Kuugongelwa-Amadhila said the role of statistics was important in national development to describe the demographic and socio-economic characteristics of the population. She noted that census statistical information keeps track of progress in terms of service delivery and impact of dispensation policies as well as links the application of geographic information technologies to spatial components in maps.

See also - Namibian National Statistics Agency (NSA) launches Census Atlas report: <http://www.thevillager.com.na/articles/4792/NSA-launch-Census-Atlas-report/>; NSA: Spatial Data, Surveys, Cartography, and Regional Affairs: <http://www.nsa.org.na/54/8/Spatial-Data-Surveys-Cartography-and-Regional-Affairs>.

NSA Geo-data and other services are available for public use upon request and completing a formal agreement form specifying your needs and intended use of the data. You can download the form directly - <http://www.nsa.org.na/files/GISRequestFormrevised050320132.pdf>, then: print it out, complete it with your signature, and return it to NSA. You can also return the completed form by email (scanned copy) to omwazi@nsa.org.na or doherein@nsa.org.na.

TIGER Workshop 2013: Achievements review and future planning, 21-22 October 2013, Tunis, Tunisia.

Organizer: TIGER Capacity Building Facility / Faculty of Geo-Information Science and Earth Observation, University of Twente (ITC), Sahara and Sahel Observatory, OSS, Tunis

The TIGER initiative was established to assist African countries to overcome problems faced in the collection, analysis, and use of water related geo-information by exploiting the advantages of Earth Observation (EO) technology. Since its launch in 2002, the TIGER initiative has involved 250 African Researchers and more than 100 stakeholder institutions in various service demonstration or pre-operational projects (more information: <http://www.tiger.esa.int/>).

The main objectives of the workshop are to present the achievements of the different TIGER components namely the TIGER Capacity Building Facility (TCBF), the pre-operational TIGER-Net project and the Alcantara research fellowships. Building on its achievements in the last ten years, the workshop organizers aim to identify the main strengths and weaknesses of the TIGER initiative and prepare the basis for future activities. In this context, the TIGER Steering Committee is inviting interested parties to the upcoming 'TIGER Workshop 2013' in Tunis.

Participants: The workshop is open to all interested stakeholders. The participant list will include, among others:

- The scientists and water experts involved in the TIGER Research projects and the Regional Offices;
- African water authorities, who are already active partners in TIGER or are interest to join;
- Water experts, scientists and decision makers interested in EO technology for water resource management and related research as well as capacity building opportunities
- International organizations and development partners actively involved or collaborating with TIGER

Registration deadline: September 20, 2013. See also: <http://www.itc.nl/Pub/organisation/News-overview/in2013/in2013-August/TIGER-Workshop-2013.html>.

Call for experts: UN-SPIDER Technical Advisory Mission to Ghana



At the invitation of the Government of Ghana (National Disaster Management Organisation, NADMO) the UN-SPIDER Programme will conduct a Technical Advisory Mission (TAM) to Ghana from 25 to 29 November 2013.

UN-SPIDER is currently compiling a list of experts from the space as well as the disaster/disaster-risk management community in order to have the mission team defined by the end of September. UN-SPIDER is looking for professionals from relevant institutions, organizations, companies or universities from the field of space technology and disaster/disaster-risk management who are already collaborating or are willing to collaborate in the future with the authorities or respective institutions in Ghana.

TAMs are part of UN-SPIDER's Technical Advisory Support, one of the core activities of the Programme. TAM experts meet during the mission with key disaster management authorities in the Government, UN agencies, regional and international organizations or initiatives and private entrepreneurs to discuss the topic in depth, make recommendations and develop guidelines to improve the use of space-based information in disaster-risk management and emergency response.



If you are interested in joining the TAM, please send a short background, résumé or CV and a short indication of your current, planned, or possible type of collaboration with Ghana to Mr Coen BUSSINK (coen.bussink@unoosa.org). The deadline for submission is 29 September 2013.

10th ISPRS Student Consortium & WG VI/5 Summer School

The 10th ISPRS Student Consortium & WG VI/5 Summer School will be held on October 29-November 2, 2013 at the UN Economic Commission for Africa (UNECA) Headquarters-Menelik II Ave in Addis Ababa Ethiopia. Holding the main theme “**Geospatial Science for Monitoring of Environment for Sustainable Development**”, offers the festive of science, education, nature, and culture in togetherness. The event brings together researchers, policy makers, and practitioners from developed and developing countries to share insights into the challenges and opportunities of geospatial science & technology and application in solving the world problems. It will show case cutting-edge research from around the world, focusing on themes of equity and risk, learning, capacity building, methodology, and possibly investment approaches in geospatial applications. It will explore practical adaptation policies and approaches, and share strategies for decision making from the international to the local scale. You are invited to make the conference a success. It will further help to promote the application of Remote Sensing, GIS, GPS, and other related digital mapping as well as create a very good networking environment.

The Topics include Change Detection, Food Security, Agriculture Monitoring, Land Cover/Use, and Disasters Monitoring. All courses, except the technical trip and social events, include class lectures and discussions. Some of the courses will also offer practical instrument operations and lab exercises. Detail program and schedules published on the web site. [Download Registration Form](#).

- Registration Closes: 10th September 2013
- Fee Transfer/ Participation Confirmation: 30th September 2013
- Registration at Venue/ Accommodation: 28th October 2013
- Technical Visit: 1st November 2013
- Closure and Checkout: 3rd November 2013

Fee: All Students: 100 US Dollars; ISPRS SC Members: 90 US Dollars; Above 35 years: 120 US Dollars. Limited scholarships for participation at the ISPRS Summer School are available for undergraduate students from Eastern African Universities. For further information: see - <http://www.rcmr.org/index.php/10th-isprs-student-consortium/general-information>.

Practical SDI implementation materials from within and outside of Africa

Smartphones could provide weather data in poor nations



Smartphones can now collect weather data such as air temperatures through Weather Signal, a crowdsourcing app developed by UK start-up OpenSignal. This helps crowdsource real-time weather forecasts and could one day help collect climate data in areas without weather stations, its developers say. Once installed, the app automatically collects data and periodically uploads them to a server.

The app's ability to record air temperature is based upon the discovery that the temperature of a smartphone battery correlate closely to the surrounding air temperature, published in Geophysical Research Letters (13 August). "Lithium ion batteries have temperature sensors to prevent damage caused by attempts to charge them when the battery is too hot," the paper says. But these sensors do not provide a direct air temperature measurement due to heat being emitted by both the smartphone and its user. The researchers used a model that estimates the outside temperature based on smartphone readings. The fact that battery temperature correlates with ambient air temperature was discovered by accident, James Robinson, says one of the authors of the paper and co-founder of OpenSignal. "When data from many phones are joined together, they become even more powerful and will allow us to make weather predictions of unprecedented detail."

The team was researching on energy consumption in relation to poor mobile network signal, a condition that is known to reduce battery performance. "We started playing with the data and decided to look at average battery temperature versus historic weather temperature, and we found a really strong correlation," says Robinson. The data came from eight major cities around the world covering a wide range of climate zones. "Many smartphones have a variety of sensors," "When data from many phones are joined together, they become even more powerful and will allow us to make weather predictions of unprecedented detail. Developing countries often invest fewer resources in collecting weather data. "As smartphones become more



popular in developing countries, WeatherSignal could provide a valuable source of weather data either supplementing existing sources or as the only source for some places," he says.

"We're open to working with as many people as possible," Robinson says. "For instance, we plan on making historic data available to academics and organisations such as the World Meteorological Organization." Enzo Campetella, an Argentina-based meteorologist and WeatherSignal user, says that although the app has potential, "there are still several stages to accomplish" before it is completely reliable for use in meteorology. "In meteorology, it is essential that data are comparable, so it is essential that they are collected following the same rules or standards." And, in countries where weather stations are scarce, "the possibility of comparing data is much lower". The WeatherSignal team admits, "many additional high-quality urban observations [are] needed to refine the air temperature estimates from smartphones and to expand their possibilities". Having more data is also crucial, so they are also working to get as many people as possible using the app. [Link to the full paper in Geophysical Research Letters](#), [Link to WeatherSignal app](#).

[Workshop Report: United Nations/Germany UN-SPIDER Bonn Expert Meeting on the use of space-based information for early warning systems](#), 24-26 June 2013, Bonn

[Download the report \(554 KB\)](#)

Taking into consideration the role of early warning systems in minimizing damages and losses in case of disasters, UN-SPIDER organized the United Nations/Germany expert meeting on the use of space-based information in early warning systems in Bonn, Germany, from 25 to 26 June 2013. The Government of Germany, the German Federal Office of Civil Protection and Disaster Assistance (BBK) and Secure World Foundation supported the meeting. The expert meeting brought together around 50 space technology and disaster management communities representing national, regional and international organizations as well as internationally active private companies to share experiences and lessons learned regarding use of space-based information in early warning systems; to identify needs and to discuss knowledge management strategies to improve existing early warning systems through the incorporation of recent advances in space-based applications ([Download the report \(554 KB\)](#))

The main objectives of the expert meeting were to raise awareness concerning the most recent advances regarding the use of space-based information in early warning systems and disaster preparedness; to identify and systematize areas where space-based information can improve the functionality of existing early warning systems, to identify knowledge management strategies that can facilitate access to and use of space-based information in early warning and preparedness and to bridge the space and the early warning communities.

Outcomes include compilation of experiences and lessons learned from existing early warning systems that already make use of space-based information; The identification of directions and priorities to improve the functionality of existing early warning systems through the incorporation of space-based information; The identification of knowledge management strategies that can enhance the use of space-based information in early warning and disaster preparedness; The identification of strategies or procedures to facilitate or improve the transition between early warning and response efforts; The identification of strategies to enhance synergies between the space community and those members of the disaster-risk management and emergency response communities that are involved in early warning and disaster preparedness; The identification of potential experts for the UN-SPIDER group of mentors.

For further information, contact: Antje Hecheltjen (Ms.) at antje.hecheltjen@unoosa.org. See also: <http://www.un-spider.org/workshop-bonn-2013>.

GIS Tools, Software, Data

[SERVIR regional visualization and monitoring platform](#)



The evolving SERVIR regional visualization and monitoring platform is established in Africa to improve scientific knowledge and decision-making in a range of application areas (e.g., biodiversity conservation, disaster management, agricultural development, climate change adaptation, etc.).

The development started with the core ecosystems data, but quickly expanded to include additional agricultural and infrastructure data such as [Google Map Maker Roads](#) and [Open Street Map](#) roads for sub-Saharan Africa. SERVIR ended up with over thirty gigabytes of spatial data (both raster and vector) stored across multiple file and [SDE](#) geodatabases.



The site uses a combination of custom python scripts in conjunction with the ESRI ArcGIS Server 9.3.1 javascript API. Downloading data is as simple as selecting one or multiple layers, entering an e-mail address, and defining an area on the map. Because of the large file sizes, the defined areas are limited to about the size of Mali. The system sends the user an e-mail with a download link to the server at RCMRD (Regional Center for Mapping Resources for Development) in Kenya.

The download include an ArcGIS MXD, the basic metadata and in some cases licenses. In the near future, additional non-ESRI download formats could be supported as well as increased number of data sources from RCMRD's catalog for the African spatial data. [View the prototype for the Ecosystems Clip, Zip, & Ship here](#), which is currently limited by size of the exported file. See also: <https://www.servirglobal.net/Global/Articles/tabid/86/Article/603/Default.aspx>.

Open Source GIS and freeware GIS applications

An open source application is software that you can freely access and modify the source code. Open source projects typically are worked on by a community of volunteer programmers. Open source GIS programs are based on different base programming languages. Three main groups of open source GIS (outside of web GIS) in terms of programming languages are: "C" languages, Java, and .NET.

The first group would be the group that uses "C" language for its implementation. This is the more mature of the groups of open source GIS, probably for the simple reason that is the group that has been working on GIS software applications the longest and has a long history of reuse of code. The second group of Open Source GIS would be the ones that use JAVA as the implementation language, and the third most influential group of Open Source GIS would be the one that integrates applications that use ".NET" as the implementation language. SharpMap and WorldWind are the most popular applications. To learn GIS using open source software, read Sid Feygin's article "[How to Go from GIS Novice to Pro without Spending a Dime](#)", which provides tips and resources. Available open source GIS based applications you can download written for a variety of platforms and in various languages include [FlowMap](#), [GMT](#), [GRASS](#), [gvSIG](#), [MapWindow GIS](#), [OpenJUMP GIS](#), [GeoMajas](#), [GeoServer](#), [MapGuide Open Source](#), [MapFish](#), [MapServer](#), [OpenLayers](#), [OpenStreetMap](#), [EDBS Reader](#), [fmaps](#), [GeoTools](#), [MITAB](#), [OpenEV](#), [OpenMap](#), [Tkgeomap](#), [Topology Framework .NET \(TF.NET\)](#), [Vhclmaps](#). Read more..

RCMRD Data Dissemination

The Regional Centre for Mapping of Resources for Development (RCMRD) has a large landsat data archive, dating back to 1972 for all African countries. It is also a reseller agent in Africa for the Digital Globe - QuickBird and WorldView 1/2 high-resolution satellite imagery, and supplies data from GeoEye (GeoEye 1/2, IKONOS & Orbview imagery), SPOT image (SPOT 2.5m, SPOT 5m & SPOT 10m), USGS (Landsat MSS, Landsat TM & Landsat ETM+) amongst other active and passive satellite image products and datasets for Africa. These datasets are available at subsidized rates. Other low-resolution imagery datasets available include 90m SRTM, NOAA, MERIS, MODIS, scanned maps, and vector data for Africa.

The center in collaboration with European Space Agency (ESA) and EUMESAT has established a facility for direct satellite reception for MERIS, MODIS, NOAA, and EUMESAT Meteosat Second Generation (MSG) data. These datasets amongst other services can be accessed online via: <http://www.rcmr.org/geonetwork> or via email to remotesensing@rcmr.org. Further information, please visit website: www.rcmr.org.

Training Opportunities

Have you signed up to receive [SDI-Africa Newsletter](#) notices? It only takes a minute, and then the GSDI Association can notify you when a new issue of the SDI-Africa newsletter is available, plus alert you to particular GSDI announcements (like a call for GSDI grants, or a call for papers for a GSDI conference). The GSDI Association also hosts an [SDI-Africa E-mail Discussion List](#) with intermittent news and announcements of opportunities (this discussion list is separate from the SDI-Africa Newsletter list).

- The [SDI-Africa E-mail Discussion List](#) is open and available to anyone to read on the web. To submit messages or to receive submitted comments or notices by e-mail, one first must register.
- To see the collection of prior postings to the list, visit the [SDI-Africa E-mail Discussion List Archives](#).
- To post a message to the list, send an email to sdi-africa@lists.gsdi.org.

2013 GIS short courses through continued education at University of Pretoria

- Introduction to Quantum GIS (on request)
- Remote Sensing (on request)
- The Basics of GIS (on request)



See www.up.ac.za/cgis/http://web.up.ac.za/default.asp?ipkCategoryID=16147&subid=16147&ipklookid=11

ESRI Technical Certification

ESRI has set the industry standard for GIS technology and is now establishing benchmark standards for individuals who use Esri software with the recently launched Esri Technical Certification Program. The ESRI Technical Certification Program recognizes qualified individuals who are proficient in best practices for using Esri software certification is awarded in different areas of expertise at both Associate and Professional level. The program is open to ESRI users worldwide and consists of 13 certifications recognizing expertise in desktop, developer, or enterprise use of ArcGIS. Users achieve certification by successfully completing computer-based examinations offered in more than 5,000 testing locations in 165 countries. Users are able to test for five certifications. Establishing an industry recognized benchmark of expertise in using ESRI software will:

- Improve success with GIS by creating a community of professionals proficient in using ESRI software.
 - Help organizations maximize their investment in ESRI products by employing a workforce certified in using best practices.
 - Create professional development opportunities.
 - Provide an opportunity for individuals, partners, consultants, and other organizations to distinguish themselves among their peers.
 - Assist hiring organizations in assessing candidate skills and abilities.
 - Workplace experience, combined with GIS education and ESRI training courses, is the best preparation.
- ESRI Technical Certification web site lists specific skills assessed in each exam, as well as training courses that aid in acquiring and improving these skills. [Read more](#).

ESRI South Africa full spectrum of GIS courses: September and October, 2013



The course covers GIS theory and functionality: The desktop products (ArcView, ArcEditor, and ArcInfo; Server products (ArcGIS server and ArcSDE); Programming to enable customization of the product, ArcGIS extensions, as well as Introductory and advanced courses in ERDAS Imagine Remote Sensing Software'. Various training venues are available at Esri South Africa, for further information contact: 011 238 6300 or [Email the training team](#)

ESRI Eastern Africa GIS and remote sensing courses

ESRI Eastern Africa is now offering update courses to conform to improvements in ArcGIS 10 and ENVI 4.8, conducted with skilled and experienced instructors together with conducive and state-of-the-art training facilities. Courses offered in the following tracks: fundamentals of ArcGIS desktop; data and map production; geoprocessing and analysis; enterprise GIS; multi-user geodatabases; and remote sensing. Request for training arrangement for clients on site for 12-16 students. [Download](#) the course catalogue and current class schedule. To register visit: <http://esrietraining.cloudapp.net/>. For more information, contact: training@esria.co.ke, Phone: +254 20 2713630/1/2 or visit the offices on 3rd floor, KUSCCO Centre, Kilimanjaro Avenue, Upper Hill, Nairobi, Kenya.

University of Twente - Faculty of Geo-Information and Earth Observation (ITC): 2013-14 courses



Apply online for courses starting in the academic year 2012-2013. Browse by programme (degree, diploma, and certificate), course domain (disaster management, earth sciences, geoinformatics, governance, land administration, natural resources, urban planning, and water resources or location in the course finder at www.itc.nl/CourseFinder. For printed copy of the study brochure, email: (alumni@itc.nl).

ITC Refresher Courses

In addition to the wide range of standard courses offered, ITC frequently provides training courses specifically designed to meet customers' capacity building requirements. These courses are conducted in the Netherlands or in recipient's country or region. For more information about short tailor-made training courses, see [Project Services, Contract training](#).

Sensors, Empowerment and Accountability

Certificate of attendance Tanzania 21 Oct 2013 2 weeks

Modernisation of Land Administration Systems in Sub Saharan Africa (MODALS)

Methods and approaches to promote gender equality and incorporate poverty alleviation and good governance Certificate of attendance Ethiopia 21 Oct 2013 2 weeks

The use of social media, crowdsourcing and webmapping to enable spatial web presence for the private sector in Southern Africa



Certificate of attendance Namibia 28 Oct 2013 2 weeks

[MSc degree course in GIS and Natural Resource Management with KNUST](#), Kumasi, Ghana. Starting date: 2 September 2013; Duration - 18.5 months. For more information: [Louis Addae-Wireko, MSc](#) - KNUST and [ir Louise van Leeuwen](#) – ITC

Short-courses offered by RECTAS, Ile-Ife, Nigeria



The [Regional Centre for Training in Aerospace Surveys \(RECTAS\)](#) is offering a number of three-week courses. Note that RECTAS is able to package and deliver customised training for interested organisations. These could be either advanced or other certificate programs. Please contact: info@rectas.org or thontteh@rectas.org.

Regional Centre for Mapping of Resources for Development (RCMRD) Training Programme



Geo-informational Courses (the courses last between one week to three months, and offered throughout the year):

- Introduction to Remote Sensing & Image Processing
- Introduction to Geographic Information Systems (GIS)
- Introduction to Global Positioning Systems (GPS)
- Application of Remote Sensing & GIS in natural resources management
- Application of Remote Sensing & GIS in Early Warning Systems for Food Security
- Application of RS & GIS in Disaster Risk Management
- Geospatial database development and management for use in planning process and decision making
- Principles of Digital Cartography
- Application of GPS technology in resource surveys and mapping
- Integrated Water Management
- Application of GIS in poverty mapping, health care & good governance
- Land Information Management Systems
- Service and Repair of Survey equipment

Information Technology Courses (targeted at school leavers, corporate organizations, and public).

Academic Programs

- Bridging Certificate in Mathematics
- Certificate and Diploma in Information Technology

Short Programs

- Foundation Course Graphics Application & Web Design
- Database Management
- Software Application Development
- Networking & Infrastructure Development
- PC Maintenance

Corporate Courses

- Information Systems for Management
- Computer Aided Financial Management
- Computerized Registry Management
- Management Information Systems for Monitoring and Evaluation
- Integrated Computer Training for Managers
- Database Design and Management
- Computer Based Auditing
- Computerized Records Management for Lawyers
- Analysis and Design of Information Systems
- Advanced Computer Applications for Executive Secretaries
- Basic Programming Skills

The center also offers tailor-made courses to suit specific needs of corporate clients. Courses also conducted at location of the client's convenience.

Funding Opportunities, Awards, Support

ESRI grant for GIS (Geographic Information Systems) products

Any non-profit or non-government organization working for social justice, environment, indigenous rights or public benefit in any nation, or any individual volunteering for these types of groups, may apply for a grant. There are no grant cycles or deadlines, you can apply any time. A "basic" request is limited to Single-user



versions of Arcview software (up to 3 copies), Extensions, online and live training, books, GIS Data and ESRI conference passes.

[Islamic Development Bank - Prize for Women's Contribution to Food Security](#)

The IDB Prize for Women's Contribution to Development draws international attention to the vital role women play in developing their communities and the world. The theme for the 1435H/2014G Prize is "Women's Contribution to Food Security". The Prize consists of two cash awards: US\$50 thousand for a woman or a group of women; and US\$100 thousand for an organization. Applications can be submitted in Arabic, English, or French. The deadline is 30 September 2013.

[United Nations Educational, Scientific and Cultural Organization \(UNESCO\) - Sultan Qaboos Prize for Environmental Preservation](#)

The UNESCO Sultan Qaboos Prize for Environment Preservation is awarded every two years to recognize outstanding contributions by individuals, groups of individuals, institutes, or organizations in the management or preservation of the environment. The next deadline for nominations (English, French) is 10 September 2013.

[Whitley Fund for Nature - Whitley Awards 2014](#)

The Whitley Fund for Nature (WFN) is a UK-registered charity that offers "Whitley Awards" to outstanding biodiversity conservation leaders around the world. The awards are both an international prize and a form of project funding (currently £35 thousand over one year). Whitley Awards are open to biodiversity conservation leaders working in countries or regions of which they are nationals, and that are not defined as high-income economies by the World Bank (with exceptions). The application deadline is 31 October 2013.

[United Nations Economic Commission for Africa and the African Innovation Foundation - Innovation Prize for Africa 2014](#)

The Innovation Prize for Africa encourages innovations that contribute towards developing new products, increasing efficiency, and saving costs in Africa. Priority thematic areas for the innovations include agriculture and agribusiness; environment, energy, and water; and others. The contest offers US\$150 thousand in prizes. The closing date for submissions is 31 October 2013.

[Netherlands Organization for Cooperation in Higher Education \(NUFFIC\) -- Netherlands Fellowship Programs](#)

The Netherlands Fellowship Programs (NFP) offer opportunities for professionals in 50 developing countries to pursue masters degrees, PhD studies, and short courses in the Netherlands. Individuals applying for fellowships must be admitted to the relevant academic programs in order to be eligible for funding. The deadline to apply for financial support is 01 October 2013 (the deadlines for admission to the academic programs and courses are earlier, with many in September).

[Cleveland Metroparks Zoo - Africa Seed Grants and Asia Seed Grants 2014](#)

Both programs make grants for wildlife conservation and research in their respective regions. The priority is for projects focusing on wildlife and habitat protection, human-wildlife conflict, sustainable environmental practices, capacity building, and conservation biology. There are no application restrictions by nationality. In both programs, the seed grants range from US\$1,000 to US\$3,500. The deadline for pre-proposals (both programs) is 04 November 2013.

[World Wide Fund For Nature \(WWF\) - Prince Bernhard Scholarships for Nature Conservation 2014](#)

WWF supports professional training and formal studies of individuals working in disciplines directly relevant to nature conservation. Eligibility extends to mid-career nationals from Africa; Asia and Pacific; Latin America and Caribbean; Eastern Europe; and the Middle East - including WWF staff, or candidates working as partners with WWF. The maximum grant is CHF 10 thousand for studies or training lasting one year or less. The application deadline is 11 January 2014.

[European Commission \(EC\) - Environmental Governance in Sierra Leone](#)

The EC announces funding to support Sierra Leone in environmental awareness and education, and pilot projects concerning climate change. The program is open to nonprofit organizations established in Sierra Leone and to international organizations. Grants are a maximum of €600 thousand for environmental



awareness, and €800 thousand for climate change, subject to cost shares. Reference: EuropeAid/135003/M/ACT/SL. The deadline for concept notes is 07 October 2013.

[Social Science Research Council - Next Generation Social Sciences in Africa](#)

The Social Science Research Council offers fellowships to support the advancement of social science faculty in Sub-Saharan Africa toward completion of doctoral degrees in topics of peace, security, and development. Past topics have included some related to climate change and land issues. The fellowship supports 9-12 months of PhD dissertation research with grants up to US\$15 thousand. Applicants must be citizens of and reside in a Sub-Saharan African country while holding a current faculty position at an accredited college or university in Ghana, Nigeria, South Africa, Tanzania, or Uganda. The application deadline is 01 December 2013.

[International Development and Research Center \(IDRC\) - Research for Food Security in Africa](#)

In partnership with the Australian Center for International Agricultural Research, Canada's IDRC announces the inaugural call for concept notes in "Cultivate Africa's Future" (CultiAF). The current call will support applied research towards achieving food security in 10 countries of eastern and southern Africa. The focus is post-harvest systems, agriculture-nutrition relationships, and sustainable water use. The deadline for concept notes is 20 September 2013.

Employment Opportunities

[National Project Coordinator in ICARDA](#), Debre Berhan, Ethiopia

International Center for Agricultural Research in the Dry Areas (ICARDA) seeks to hire a National Project Coordinator who is expected to coordinate the ADA funded project to be implemented in Amhara region based in Debre Berhan Agricultural Research Centre and who will be a member of ICARDA.

Main Duties: Over all coordination of ADA funded project to be implemented in Amhara region based in Debre Berhan Agricultural Research Center, Annual project planning and implementing research activities, Report writing, Training of farmers, researchers and extension personnel, Organizing field days and workshops related to the project, Publication of flyers, scientific articles in peer reviewed journals and manuals, Provide back stopping to National Agriculture Research System (NARS),

Education and experience:

- The jobholder requires a relevant PHD and above, at least 5 years of relevant work experience, On-farm and on station research on technology validations; data collections, analyses, interpretations and publications; Statistical software applications and skills in computer applications (MS word, Excel, Power point); training of farmers, researchers and extension personnel

Training: Crop Protection, Entomology, Cropping system, Plant Pathology or related fields

Applications: Applicants should send a cover letter, resume, writing sample, relevant documents and testimonials, and the names and addresses (including telephone, fax and email) of three referees to the Human Resources Office, ILRI, P.O. Box 5689, Addis Ababa, Ethiopia; Telephone: (251-11)-617-20-00; Fax: (251-11)-617-20-01. Closing date: September 16, 2013. Qualified women are encouraged to apply.

Other

[Africa told to improve land governance](#)

Africa has the highest poverty rate in the world with 47.5 percent of the population living below US\$1.25 a day. "Despite abundant land and mineral wealth, Africa remains poor. Improving land governance is vital for achieving rapid economic growth and translating it into significantly less poverty and more opportunity for Africans, including women who make up 70 percent of Africa's farmers yet locked out of land ownership due to customary laws. The status quo is unacceptable and must change so that all Africans can benefit from their land," said Makhtar Diop, World Bank Vice President for Africa.

The report notes that more than 90 percent of Africa's rural land is undocumented, making it highly vulnerable to land grabbing and expropriation with poor compensation. However, based on encouraging evidence from country pilots in Ghana, Malawi, Mozambique, Tanzania, and Uganda, "Securing Africa's Land for Shared Prosperity" suggests an action plan that could help revolutionize agricultural production and eradicate poverty in Africa. The report suggests that Africa could finally realize the vast development promise of its land over the course of the next decade by: Championing reforms and investments to document all communal lands and prime lands that are individually owned; Regularizing tenure rights of squatters on



public land in urban slums that are home to 60 percent of urban dwellers; Tackling the weak governance and corruption endemic to the land governance system, which often favour the status quo and harm the interests of poor people; and Generating the political will of African governments to mobilize behind land reforms and attract political and financial buy-in of the international development community.

The new report says it would cost African countries and their development partners, including the private sector, US\$4.5 billion spread over 10 years to scale up these policy reforms and investments. "Improving the performance and productivity of Africa's agricultural sector is vital for broad-based growth, more jobs, investment, and substantially less poverty," said Jamal Saghir, World Bank Director for Sustainable Development in Africa. "Land governance is a proven pathway to achieving transformational change and impact that will help secure Africa's future for the benefit of all its families."

Surging food commodity prices and foreign direct investment have increased the potential return on investing in effective land administration through higher agricultural yields and better market access and prices. Most African countries already have the basic land laws in place that recognise customary land rights and gender equality which are essential to reinforce needed reforms.

In addition, new satellite and information technologies can greatly reduce the cost of land administration. A growing number of African countries are now using these technologies to reduce the costs of surveying and mapping land and computerizing their land registries to improve efficiency and reduce corruption. Some 26 African countries have established at least one continuously operating reference station and about 50 CORS are contributing data to the African geodetic reference system, which, once completed, will provide a uniform coordinate reference system across the continent.

With only 10 percent of Africa's rural land registered, inefficient land administration means that it takes twice as long and costs twice as much to transfer land compared to industrialised countries, and weak governance is the leading cause for corruption in the land sector. The report notes successful examples of how African governments have undertaken tough reforms, enacted laws and implemented progressive land policies that have benefited poor communities.

Highlighting the need for greater capacity, the report finds that Ghana, Kenya, and Uganda each have fewer than 10 professional land surveyors per one million people, compared to 197 in Malaysia and 150 in Sri Lanka. Of Kenya's 206 registered land surveyors, only 85 were practicing. The report points to the futility of building capacity without making complementary investments in land administration. As of 2002, at least 20 countries in Sub-Saharan Africa had recognized customary land rights and gender equality, a number that has nearly doubled. The African Union Commission has developed a land policy framework backed by a five-year strategic plan for implementation to 2016.

The World Bank Group supports and endorses the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries, and Forests in the Context of National Food Security. These guidelines are a major international instrument to inform specific policy reforms, including our own procedures and guidance to clients. The World Bank Group is already working with countries to implement the VGs, with a special focus on Africa. The World Bank Group and its partners have also developed the Land Governance Assessment Framework as a diagnostic tool to assess the status of land governance at the country level. LGAF assessments carried out or underway are in 18 countries, 10 of them in Africa. The World Bank Group now support 24 projects on land administration amounting to US \$928 million - likely the largest number of interventions on the governance of land tenure of any international development agency.

[Vacant TV spectrum targeted for affordable rural Wi-Fi](#)



Parts of the wireless spectrum that have been abandoned or left unused by television (TV) broadcasters as they increasingly migrate to digital transmission may provide a faster and cheaper way to beam the internet to remote rural areas and roll out a new generation of 'super Wi-Fi' in cities. Technology giants such as Microsoft and Google are pushing for governments around the world to open up this 'white space', hoping that it will boost innovation in Internet delivery, according to William Webb, the chief technology officer at one such start-up offering the necessary technology, Neul, in Cambridge, United Kingdom.

A recent example is a pilot initiative in Kenya that aims to boost Internet access in rural areas. The Mawingu project - named after the Swahili word for cloud is part of an initiative by Microsoft and a global telecommunications provider, Indigo Telecom, designed to provide affordable, high-speed wireless Internet access using former TV frequencies, old-fashioned antennas, and solar-powered base stations.

Peter Henderson, Indigo Telecom's chairperson says that Kenya will be the first African country to benefit from the Wi-Fi initiative, which aims to deliver affordable coverage to its 30 million rural inhabitants. "For



example, a person will pay US\$1.20 a week to access the Internet, thus allowing rural Kenyans to maximize their collective learning potential in a sustainable, socially responsible manner".

As part of the project, Microsoft will also donate smart phones and computers with Microsoft programmes and non-governmental to schools, hospitals and other social centers and Indigo Telecom will train and equip field personnel and organize workshops to help roll it out to the communities. Shem Ochuodho, a Kenyan information and communications technology expert who is currently advising the South Sudanese government, says "Reusing released frequencies as a national resource where justified is a commendable feat". However, the Kenyan government and regulatory authority the Communications Commission of Kenya need to come up with a comprehensive plan to reassign unused frequencies. If successful, Ochuodho explains, the project will benefit smartphone users including tourists who may want to access broadband in areas still not yet served by mobile broadband.

Webb says the key advantage is that the TV spectrum tends to be at lower frequencies than other existing available frequencies, and these travel further than used for conventional Wi-Fi or cellular mobile phone networks, which means it needs fewer base stations. "That just helps with the economics". To provide Wi-Fi to rural areas require a base station to send out signals and some kind of radio device in each home. "Using TV white space is not a paradigm shift; it just improves the economics a bit compared with other systems, [but] maybe that improvement is enough to tip the balance in a number of different areas," Webb says.

Instead of the frequencies between 400 and 800 megahertz reserved for TV broadcasters that pay a lot of money for exclusive use, companies are pushing them to be unlicensed, he says. Examples of unlicensed frequencies are the WiFi and Bluetooth; they are free but you have to share them with other users. TV white space is "the biggest game in town at the moment in the unlicensed area", and some companies believe this is where a lot of innovation could be unleashed.

Some governments, such as the United States, have already opened up their white space, with others, such as Canada, Singapore, and the United Kingdom, considering doing so. "There's a lot of interest in the Asia-Pacific region - Indonesia, Malaysia, and Thailand have agreed to trials," Webb says. Access to white space may follow what happened with mobile phone frequencies, which started in a few European countries and rapidly spread around the world. The vast majority of countries will allow some form of access to white space frequencies to Internet providers by 2016, Webb estimates. White space may also benefit urban Internet users by offering an alternative to 3G and 4G mobile broadband networks. "If you can find a Wi-Fi signal in a coffee shop, you'll tend to use that rather than 3G or 4G". White space may enable that Wi-Fi be expanded to cover entire cities. The main barrier to opening up white space is concern about interference with TV signals and, given that there is no immediate benefit to broadcasters, they are "naturally going to be very cautious and inclined to oppose".

Conferences, Events

Items newly added to this listing of events since the last SDI-Africa issue are marked ***NEW***

Date	Location	Event
September 2013		
10-12 September 2013	University of Fort Hare, South Africa.	2nd SA-GEO Symposium Contact: Biffy van Rooyen, CSIR, Tel: +27 12 841 3887, Cell: +27 82 668 6103, Skype: biffy.van.rooyen
16-27 September 2013 *NEW*	Kampala Uganda	<u>Community-Based Risk Assessment and Strategy Development</u>
16-27 September 2013 *NEW*	Windhoek, Namibia	<u>United Nations Convention to Combat Desertification - Conference of the Parties (COP11)</u>
17-18 September 2013	Kenyatta University, Kenya	<u>ESRI East Africa Education User Conference</u>
17-22 September 2013	Nottingham, U.K	<u>FOSS4G 2013 Conference</u>



23-25 September 2013	Technical University of Lodz, Poland	2nd International Conference on Informatics & Applications (ICIA2013) Abstract deadline: 5 August 2013. Email: icia@sdiwc.net
24-26 September 2014	Rotterdam, Netherlands	Deltas in Times of Climate Change II Read more , Conference flyer
29 September-2 October 2013	Noordwijkerhout, Netherlands	First International Conference on Global Food Security
October 2013		
15-18 October 2013	Arusha, Tanzania	Africa Climate Conference 2013 (ACC-2013)
16-18 October 2013	Jinja Nile Resort, Uganda	8th Esri Eastern Africa User Conference
21-22 October 2013 * NEW *	Tunis, Tunisia	TIGER Workshop 2013: Achievements Review and Future Planning . Organizer: TIGER Capacity Building Facility / Faculty of Geo-Information Science and Earth Observation, University of Twente (ITC), Sahara and Sahel Observatory, OSS, Tunis Registration deadline: September 20, 2013 . See also: http://www.itc.nl/Pub/organisation/News-overview/in2013/in2013-August/TIGER-Workshop-2013.html .
23-25 October 2013	Munich, Germany	Esri Europe, Middle East, and Africa User Conference (EMEAUC)
23-25 October 2013	Beijing, China	United Nations International Conference on Space-based Technologies for Disaster Management . Contact Mr. Shirish Ravan at shirish.ravan@unoosa.org , Phone: (+86) (10) 6353 3527
23-25 October 2013	Rio de Janeiro, Brazil	Sixth International Conference on Agricultural Statistics- ICAS-VI . Abstract deadline: 15 December 2012 website: www.fao.org/economic/ess/ess-events/ess-icas/en/
25 October-2 November 2013 * NEW *	Addis Ababa, Ethiopia	ISPRS/RCMRD Summer School Consortium
29 October-2 November 2013 * NEW *	UNECA, Addis Ababa, Ethiopia	10th ISPRS Student Consortium & WG VI/5 Summer School Further information: http://www.rcmr.org/index.php/10th-isprs-student-consortium/general-information
30 October-01 November 2013 * NEW *	Dar es Salaam, Tanzania	Local Climate Solutions for Africa Conference (LOCS) Contact: locs4africa@iclei.org
November 2013		
04-08 November 2013	Adis-Ababa, Ethiopia	GSDI 14 World Conference and AfricaGIS 2013 Conference
06-08 November 2013 * NEW *	Butare, Rwanda	6th National University of Rwanda (NUR) International Scientific Research Conference 2013 Contact: nurconference2013@nur.ac.rw
10-16 November 2013 * NEW *	RCMRD, Nairobi, Kenya	RCMRD Governing Council
18 November 2013	Africa	African Statistics Day - Organized by UN Commission for Africa and African Centre for Statistics.
19-22 November 2013 * NEW *	Nairobi, Kenya	Fifth Annual International Conference of Crisis Mappers (ICCM 2013 Nairobi)
December 2013		
28-31 December 2013	CRRAO AIMSCS, Hyderabad	Statistics 2013: Socio-Economic and Sustainable Challenges and Solutions
2014		



10-14 February 2014	Delhi, India	<u>World Congress on Agroforestry 2014 (WCA2014)</u> Deadline for abstract submission: 30 September 2013
8-14 June 2014	Jeju ICC, Korea	<u>20th World Congress of Soil Science (WCSS)</u>
15-21 June 2014 * NEW *	Riviera, Bulgaria	<u>5th Jubilee International Conference on Cartography & GIS & Seminar with EU cooperation on Early Warning and Disaster/Crisis Management</u> Contact: Prof. Dr. Temenoujka Bandrova at <u>www.uacg.bg</u> . Deadline for report publishing by Springer: 10 January 2014
2015	Durban, South Africa	<u>14th World Forestry Congress for South Africa</u>
1-31 August 2016	Cape Town, South Africa	<u>35th International Geological Congress</u>

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