



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.



To subscribe/unsubscribe to SDI-Africa or change your email address, please do so online at:

<http://www.gsdi.org/newslist/gsdisubscribe>



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

Thank you to the [Global Spatial Data Infrastructure \(GSDI\)](#) Association; Hussein Farah, RCMRD (Kenya); Harlan Onsrud, University of maine (USA); Roger Longhorn, GSDI Association (USA); Kate Lance, GSDI listserv moderator (USA); Karen Levoleger, kadaster (Netherlands) and Alexandra Cloney, DMC International Imaging (UK) for their contributions to this issue of the newsletter. We also acknowledge the various websites and links referred as source 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 2013 Conference and the GSDI 14 World Conference. This combined conference 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 entirety of the 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.

The theme of the conference is "Spatially Enablement in Support of Economic Development and Poverty Reduction".



Paper Call Reminder: GSDI & AfricaGIS Conference

We are now two weeks away from the deadline for abstracts and/or papers for the GSDI World Conference (GSDI 14) and AfricaGIS 2013. This combined conference will be held at the UN Economic Commission for Africa Conference Center in Addis Ababa from November 4-8, 2013.

AfricaGIS is the largest regularly occurring GIS conference in Africa with participants from the entirety of the 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.

This combined and fully integrated conference offers numerous opportunities for oral presentations and refereed and non-refereed publication outlets. We invite presentations covering the full range of practice, development, and research experiences that advance the practice and theory of spatially enabling citizens, government, and industry. The conference theme is Spatial Enablement in Support of Economic Development and Poverty Reduction.

This call supports two primary forms of publication: (1) a conference proceedings containing abstracts for all accepted submissions with designation of both refereed and non-refereed full papers in the proceedings, and (2) a pre-conference published book containing fully refereed articles.

Important Dates:

- Deadline for Submission of Abstracts: 15 May 2013
- Deadline for Submission of Full Papers for Refereed Outlets: 15 May 2013
- Deadline for Submission of Full Papers for Non-refereed Outlet: 1 Sept 2013
- Deadline for Full Conference Registration Payment for All Presenters: 15 Sept 2013
- Conference Dates: 4-8 Nov 2013

Important Links

- Joint Conference Call for Abstracts and Papers: <http://www.gsdi.org/gsdiconf/gsd14/papercall.html>
- Conference Website: <http://www.gsdi.org/gsd14>
- Past GSDI World Conference Proceedings: <http://www.gsdi.org/gsdiconferences>
- Past open access Books affiliated with the conference: <http://www.gsdi.org/openaccessbooks>
- Other Important Dates: <http://www.gsdi.org/gsdiconf/gsd14/dates.html>

We look forward to seeing you in Addis Ababa in November 2013. Primary organizers and hosts of this conference include the GSDI Association, EIS-Africa, the UN Economic Commission for Africa, EiABC - Addis Ababa University, and the International Geospatial Society.

GEO Challenge Grant

The Group on Earth Observations (GEO) has contributed \$5,000 to help defray expenses of worthy applicants from economically disadvantaged nations in Africa to attend the combined AfricaGIS 2013 and GSDI 14 conference and training workshops before and after the conference. GEO would like to invite, encourage and challenge additional geospatial organizations and agencies from across the globe to make additional contributions.

To qualify to receive partial travel support, an applicant must have an abstract or paper accepted for the conference and be a resident in and citizen of any nation in Africa. Abstract submissions are due on or before 15 May 2013. Representatives from contributing organizations will serve on the selection panel for participants to receive the travel support.

The Global Geospatial Conference 2013 will be held at the United Nations Economic Commission for Africa (UNECA) Conference Center in Addis Abbaba Ethiopia on 4-8 November 2013. Training workshops are scheduled to be held all day on Sunday November 3 and Friday November 8.

If your organization can make a contribution to help support deserving peer professionals from across the African continent, please contact Sives Govender, Director, EIS-Africa, email: SGovender@eis-africa.org, phone: +27-12-3491068. If you are willing to fund and host a workshop, let him know that as well.

Networking to protect species - "Eye on Earth" and "GEOBON"



Policy makers and scientists discussed how two biodiversity networks could together better protect endangered species at the Eye on Earth User Conference in Dublin in March 2013. To identify where biodiversity is under threat we need data in a standard format, but biodiversity data does not in itself protect biodiversity – action is needed to address the threats. Effective action requires a network. Two global biodiversity information networks are the Eye on Earth (EonE) and Global Earth Observation System of Systems (GEOSS).



An “Eye on Earth Alliance” was formed during the recent Eye on Earth Conference with its aim to:

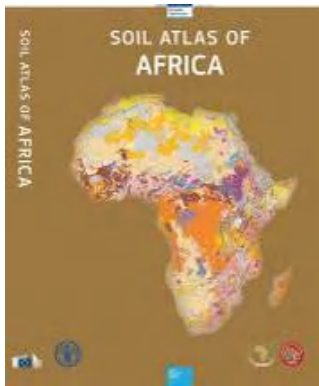
- Converge on the areas of mutual importance,
- Collaborate with initiatives, and
- Convene the worldwide community at the Eye on Earth Summit in Abu Dhabi.

The Eye on Earth Alliance has eight special initiatives (SI) being the biodiversity SI as well as the education and development SI. The European Environment Agency is developing a ‘global public information network’ for creating and sharing information. During the conference, citizen science as implemented by the EEA was an especially interesting highlight. There are huge amounts of biodiversity data globally but these data are difficult to access because of incompatible formats. Data needs to be structured and tools developed to make it easy for researchers to discover data and publish results. The Eye on Earth Alliance is placing itself at the ‘downstream’ end of the biodiversity data flow with a focus on convening a broad community and disseminating information.

This is where the Global Earth Observation System of Systems (GEOSS) input is relevant to the Eye on Earth Alliance. GEOSS provides the ‘upstream’ biodiversity data and tools <http://www.earthobservations.org/geoss.shtml>. Within GEOSS, GEOBON is a substantial network of biodiversity experts working on developing tools and organizing data for biodiversity reporting. The Eye on Earth Alliance is an opportunity for these two important biodiversity networks to harmonize and align their activities. For more information, contact Professor [Andrew Skidmore](#).

Soil Atlas of Africa

The European Commission has presented the first Soil Atlas of Africa, highlighting a vital natural resource, which provides food, fodder, fuel wood, reduces flood risk, and protects water supplies. With full colour maps and illustrations, the atlas explains in a simple and clear manner the diversity of soil across the African continent and emphasizes the importance of this non-renewable resource. Presenting the Soil Atlas of Africa at College-to-College meeting of the European Commission and the African Union Commission in Addis Ababa, European Commissioner for Climate Action, Connie Hedegaard, said: “The soils of Africa have a crucial role in climate change adaptation and mitigation policies and they are the basis for sustainable development and food security. Land productivity is fundamental to reaching many of the Millennium Development Goals.”



Commissioner Máire Geoghegan-Quinn, responsible for Research, Innovation and Science, added: “By providing a comprehensive assessment of this limited natural resource we hope to raise awareness of the need for improved

protection and sustainable management of African soil.” Deserts and drylands comprise 60% of the land surface of the African continent, populated by over one billion people. Much of the remaining land shows old, highly weathered soils which require special attention to be of use for agriculture. Population growth and urbanisation, coupled with conflicting economic challenges (cultivation of cash crops for export, biofuel production, biodiversity conservation, mineral extraction, carbon sequestration), increase the already heavy pressure on the land. Fertile and productive soils are key to tackling hunger and are a particular challenge in Africa, where, in many parts, soils are losing nutrients faster than fertilisers can be added.

Informed decision-making is currently limited by the scarcity of up to date data on the soil resources of Africa. The JRC, in collaboration with the FAO and African soil scientists, will launch a pan-African assessment on the state of soil resources at the forthcoming conference of the African Soil Science Society in Kenya (October 2013).

The Atlas explains the origin and functions of soil, describes the different soil types and their relevance to both local and global issues. It also discusses the principal threats to soil and the steps being taken to protect soil resources.

Some key facts from the atlas:

- 98% of all calories consumed in Africa originate from the soil resources of Africa.
- Organic matter in the soil can store more than ten times its weight of water, which reduces risk of floods and protects underground water supplies.
- Africa’s soils store about 200 gigatonnes of organic carbon – 2.5 times more than contained in the continent’s plants.
- Tropical rainforest soils are not naturally fertile but need a constant supply of organic matter from natural vegetation. Deforestation breaks this cycle.
- Over half of Africa’s land surface is characterised by sandy soils (22%), shallow stony soils (17%) and young, weakly developed soils (11%).



Many of the soils of Africa are severely degraded by erosion and excessive nutrient depletion. This explains the low productivity of African soils, mainly due to lack of plant nutrients, not adequately replenished by artificial fertilizers. On average, African farmers, due to rural poverty, are able to apply only 10% of the nutrients that farmers in the rest of the world return to the soil.

Satellite imagery helps fight locust plagues in North Africa



DMC International Imaging (DMCii) is helping The Algerian Space Agency (ASAL) to predict the spread of locust plagues across North Africa as part of a pro-active approach to tackle the destructive phenomenon using satellite imagery. Every year, North Africa is subjected to locust plagues that threaten to decimate crops and endanger countries' food security. The satellite imagery is used to assess vegetation conditions, which helps to predict the locations of locust breeding grounds. The imagery, from the UK-DMC2 satellite, is used in conjunction with weather data to help create locust

forecasts and focus the application of pesticides to prevent the spread of swarms.

Last year, in a six-month summer campaign to fight the spread of locusts, DMCii acquired monthly images of regions in Southern Algeria, Northern Mali and Northern Niger for ASAL. Now, imagery is being acquired before the summer season starts, to predict as well as monitor the threat of locusts.

Mr Karim Houari, International Cooperation Director of the Algerian Space Agency commented: "The use of satellite imagery has helped us in the past, during the invasion period, to identify and control areas at risk of locust swarms. This year, in terms of locust risk prediction in remission period, we used DMCii data for the ecological assessment of locust breeding areas (biotopes). It is an important contribution for the rationalisation of local response and to reduce damage of this destructive phenomenon."

Paul Stephens said: "The ability to get timely imagery of large areas is vital because locust swarms can develop quickly and travel about 100km a day. DMCii 650km wide images allow large areas of land, spanning multiple countries, to be rapidly monitored, helping the local authorities combat locust swarms before they can migrate across the continent." In partnership with the UK Space Agency and the other DMC member nations (Algeria, China, Nigeria, Turkey and Spain), DMCii works with the International Charter 'Space and Major Disasters' to provide free satellite imagery for humanitarian use in the event of major international disasters such as tsunamis, hurricanes, fires and flooding. Download this press release at <http://tinyurl.com/dmciipr>.

Ghana: Lack of cash slows down street naming project

Kumasi - "significant as it is, the Street naming project, by all standards, is long overdue. In fact, it has delayed for 113 years", Mr. Kofi Owusu Bempah, project contractor has said. Mr. Owusu Bempah, the Managing Director of ASI Zipcode Systems Limited, the project contractors, says the street naming should have started as far back as 1900. He told The Chronicle in an interview that the only way out for the effective implementation of the project is availability of adequate funds.

In March, this year, President Mahama directed the Minister for Local Government and Rural Development at the launch of the National Urban Policy Framework and Action Plan to implement the street naming within 18 months. President Mahama, then Vice President, in August 2012, launched the National Policy document and operational guidelines on street naming and property addressing system for Ghana in Kumasi. But the consultant has indicated that the solution for the execution of the project in 18 months by MMDCEs as directed by the President is adequate funding.

Mr. Owusu Bempah said the 18 months time given the assemblies to complete the projects is feasible, provided funds would be made available. According to him, the government would have to raise as much as US\$ 408 million to enable MMDCEs to complete the project nationwide as directed, using \$100 per house or 408 million houses as the basis for raising funds for the project.

He said \$17.00 per each of the 24 million Ghanaians would also provide a basis for funding as was the case when the World Bank in 1993 funded a similar project in Dakar, Senegal, then with a population of 940,046 which cost \$15 million.

Citing the Kumasi project to buttress the point that the project is capital intensive, Mr. Owusu Bempah said it would cost the KMA GH¢10 million for the completion of the entire project and that as at March 31, this year, a total of GH¢ 2,200,000.00 had been expended. About GH¢ 8,209,994.75 more (being the difference of the project cost) would be required to meet the total cost of the project.



Nigeria: Forestry Geographic Information System Lab commissioned



The Minister of Environment, Hajija Hadiza Ibrahim Maillafia has commissioned the Forestry Geographic Information System (FGIS)/Remote Sensing Laboratory as part of effort to ensure proper monitoring of the nations forestry reserve.

Maillafia said that the department of forestry in association with GIS/Remote Sensing has successfully used the techniques to produce the first comprehensive Land Use and Vegetation (LUV)

maps for the country under the Nigeria Radar Project (NIRAD).

The project according to her provided the necessary baseline information that guided not only forestry management practices in the country, but other land-based development sectors. The facility also houses the web-based National Forestry Information System (NFIS), the platform where relevant information from the forestry sub-sector in Nigeria can be accessed freely through online networking.

The minister commended the ecological fund office for providing the resources for setting up the FGIS/Remote Sensing Laboratory, and commended Forestry Association of Nigeria (FAN) for collaborating with the ministry in setting up NFIS, which will enhance inter-sectoral cooperation and contributions of forestry to the socio-economic development of the country.

The Geographic Information System (GIS) is a computer-based system designed to capture, store, manipulate, analyze, manage, and present all types of geographical data, while remote sensing is the acquisition of information about an object or phenomenon without making physical contact with the object, adding that both technologies have revolutionized forest resources assessment worldwide.

Also speaking, Dr. Bukar Hassan, Director, Drought and Desertification Amelioration in the ministry said the laboratory would enable the department of forestry obtain up to date information and data on Nigeria's forest resources for the purpose of planning and sustainable management.

More consultants expected on NAGIS project in Nigeria

GIS for Nasarawa State under Siraj Consulting Engineers, are expecting more consultants as the project reaches the 10th month, with operations at the centre provided at Karu, gateway into Abuja, is about to take off. Roland Klaus, General Manager of GIS Transport, one of the firms handling an aspect of the NAGIS project, told Daily Trust, that Freytac Goetz, a GIS programmer, who is also a programmer for Abuja GIS, called AGIS, is on his way to start up with the NAGIS team to modify the Nasarawa project into a version of AGIS.

He also said the project team is expecting one more pilot from France, as part of the execution of the flying component expected to provide Digital Aerial Mapping (DAM) of the state. Already, Aeroprecisa Limited, the firm handling the flying component has covered more than three-quarters of the state, recording detailed digital images of much of the state from Karu, through Keffi, Nasarawa and Akwanga, while the southern parts of the state, covering Lafia and Doma, is still being flown.

The firm's crew, including the Operations Manager, Brian Glynn Lovett, the Chief Pilot, Fernando Marquez, and the Aerial Survey Operator, Kadir Namaz, recently took the entire project team including the management of the supervising ministry - Ministry of Lands, Survey and Town Planning - through hours of explanation at the Nnamdi Azikiwe International Airport, Abuja. The firm's crew brought the ministry's management, led by the Permanent Secretary, Jibril Giza, face to face with relevant technology in this aspect of the project, including the aircraft itself, and the camera used in the aerial photography. The aircraft is a Diamond DA42 MPP plane with registration number 9H-AEV, and a camera system called Vexcel UltraCamLp.

Both Roland Klaus and Ibrahim Usman Jibril, the Project Manager and Senior Special Adviser to Governor Umaru Tanko Al-Makura as well as Engr. George Elzoghbi, General Manager of Siraj, who later gave a progress report on NAGIS, said at the time that Karu, which flying recorded difficulties because of security approvals, was already being flown.

The pilot expected from France, according to Klaus, will join the crew to complete the flying component. Klaus said the images taken are currently being processed at NAGIS' temporary centre in Abuja, awaiting the take off of the permanent centre at Karu, where the project is expecting to generate revenue from across the state.

NAGIS, described by the ministry's former commissioner, Sonny Agassi, as "a baby of the governor", seeks to regularize and put all of Nasarawa's land use on the computer. It is a habitat initiative which ongoing implementation has so far created a development platform, now providing the road map to recover the fifth generation state from the emergence and growth of slums.



This road map, according to Alhaji Ibrahim Usman Jibrin, is already leading Nasarawa - a gateway state to Abuja - into a new development strategy to sum up to the creation of a liveable city with facilities and layouts, serve as a twin city to the Federal Capital Territory (FCT). The habitat project, he said, will phase out the growing number of slums, particularly at the border with the FCT with good network of roads, water supply, drainage system, health facilities, schools, shopping centres, and general development.

The 24-month project has three components: Digital Area Mapping, carried out by Aeroprecisa Limited; Geographic Information Services, undertaken by GIS Transport; and the planning of cadastral districts, by Pragmatic Solutions Consult Nigeria, Envicons, and National Environmental Design Associates, in what will give a detailed planning and development control to phase out the growth of slums in the state. All contractors are handling the various components under the N2.7 billion contract agreement signed between the state government and Siraj Engineering Consultants.

GIS, the second component of the project - being handled by GIS Transport - is responsible for the regularization and computerization of the property on ground in the state, but the database created will have to be synchronized with digital images of the entire land in use being captured with the use of light aircraft, by Aeroprecisa Limited, which is currently flying to take the photographs.

Klaus said the coming in of the programmer, Freytac Goetz, is to kick-start the process of getting a suitable programme for the centre in Karu.

[Surveyors map out Lamu to Ethiopia transport project](#)



Surveyors have started mapping out Kenya's second transport corridor with an eye on establishing compensation for possession of land which the 2,000 kilometre project will require. Transport Ministry permanent secretary Cyrus Njiru said in Nairobi that although there will be no compulsory acquisition, local authorities in Lamu, Garissa, Moyale, and Isiolo as well as individuals will have to give up land to accommodate the project. "We have started mapping out areas where the transport corridor will pass through from Lamu all the way to Doula. After the exercise, the government will identify those who will be affected and deserve compensation," Dr Njiru said.

The \$1.5 trillion Lamu Port-South Sudan-Ethiopia Transport (Lapsset) corridor is expected to open up northern Kenya for development and trade, linking the region with the coast as well as South Sudan and Ethiopia. Besides the port, the project includes a 1,720 kilometre standard gauge railway line from Lamu to Juba; a two lane highway through Isiolo to Nakodok, a pipeline, an oil refinery, three resort cities, and three airports at Lamu, Isiolo, and Lokichogio.

The project is supported by authorities in Kenya, South Sudan, and Ethiopia whose presidents witnessed the ground-breaking ceremony last month. "Uganda has remained our top bilateral partner in this region. We anticipate that the transport corridor will open up commercial ventures with Ethiopia which has a population of 94 million people and increase our trade volume", Dr Njiru said. The corridor will be among key issues for discussion at an Intergovernmental Authority on Development (IGAD) conference to be held in Nairobi. It has attracted interest from financiers who are waiting to know funding options being considered before committing themselves to specific actions. See also: [LAPSSET Corridor vision 2030 flagship](#).

[Kenyan and Tanzanian conducts cross-border aerial wildlife census in the Amboseli-Kilimanjaro/ Magadi-Natron landscape](#)



The five-day exercise, which started on Monday (April 23, 2013) is a collaboration between the two countries and their agencies: Tanzania Wildlife Research Institute (TAWIRI), Tanzania National Parks (TANAPA), Wildlife Division of Tanzania, and Kenya Wildlife Service (KWS), together with affiliated Non Governmental Organisations such as African Wildlife Foundation (AWF), Amboseli Trust for Elephants, School of Field studies Tanzania, and Honey Guide foundation among others.

Ms. Anne Kahihia, KWS Assistant Director Southern Conservation Area, who spoke at the census opening ceremony, said it was about the only one where there is real integration between the two countries. This integration consisting of common planning, methodology used, joint reports and teams operating from a shared base

The aerial census seeks to establish the status of wildlife within the Amboseli-Kilimanjaro/ Magadi-Natron cross-border landscape, which includes the elephant, wildebeest, zebra, and other large mammal populations following the last total aerial count, conducted in 2010 by the same team.



The 2010 census covered 24,108 km² area, including 8,797 km² of the Amboseli ecosystem and 5,513 km² of the Namanga-Magadi areas in south-western Kenya together with 3,014 km² of the West Kilimanjaro and 7,047 km² of the Natron areas in North Tanzania.

During the last survey, 25 wild mammalian and two avian species were counted. Zebras with a population of approx. 13,740 individuals were the most numerous wild species in the entire survey area followed by Grant's gazelle (8,362), common wildebeest (7,240), Maasai giraffe (4,164), Eland (1,992), Maasai ostrich (1,461), and the African elephant (1,420) among other species.

From the last survey report, the elephant population has been relatively stable, with 1,087 individuals counted in the year 2000; 1,090 in 2002 and 967 in 2007 compared to the year 2010 population of 1,266. There was a dramatic decline in the number of large herbivore species between the years 2007 and 2010: wildebeest declined by about 83% from 18,538 to 3,098; zebra declined by about 71% from 15,328 to 4,432; and buffalo declined by about 61% from 588 to 231 in the Amboseli area.

In 2010, it was established that the then survey underpinned the importance of the Amboseli-Kilimanjaro/Magadi –Natron cross-border landscape as a wildlife conservation and dispersal area. While much of the wildlife species were found in the Amboseli area, high connectivity in terms of wildlife movement is inevitable. According to Dr. Erastus Kanga, the KWS head of ecosystems and landscapes conservation, there has been tremendous developments in the entire Amboseli ecosystem over the last four decades. This is due to fluctuating weather patterns, compounded by anthropogenic activities that have resulted to environmental degradation, and loss and contraction of corridors and dispersal areas, hence causing sporadic changes in wildlife populations.

Dr. Kanga further noted that, in instances of trans-boundary ecosystems, collaboration between national parks authorities and other stakeholders, towards enhanced management of shared natural resources is an important undertaking, in promoting regional information sharing for entire ecosystems and landscapes.

Key recommendations were done then have been forthright in seeing regular total aerial surveys to monitor wildlife populations in the region preferably a dry and wet count once in every three years, to establish seasonal changes in numbers and distribution of wildlife.

The exercise, which has been funded by both KWS and AWF to the tune of US\$ 104,000, seeks to safeguard the vast ecosystem that is threatened by human influence that includes pastoral activities, crop farming, and proliferation of charcoal burning. This affects wildlife dispersal in a huge way and a great concern to the future of the area for wildlife conservation.

Community maps reveal rich resources of land policymakers think is empty



Misperceptions of the drylands as barren and empty are leading to their mismanagement. An IIED mapping project aims to create a clearer picture of their value to pastoralists.

"It's all in the mind," George Harrison once said. When most government planners look at Kenya's Isiolo County, they see barren, dusty land. But pastoralists who live there see something else entirely. How do we know? It is on their map.

"When you look at a traditional map of the area, it's just a vast wilderness with hardly anything on it," says Homme Zwaagstra,

a consultant on the project. "Whereas when you lay the resource maps we've been creating on there, it suddenly becomes a rich, diverse catalogue of resources that are useful". When Kenyan expert in pastoral development Daoud Tari Abkula saw the map he likened its detail to an "A-Z of London".

Ced Hesse, principal researcher in IIED's climate change group, presented the project at the 7th International Conference on Community-Based Adaptation to Climate Change in Bangladesh. He explained that the land "suddenly came to life" in the minds of local government planners who saw the maps and had previously thought the land to be "vast and empty". This is because maps validated the detailed social and economic knowledge that pastoralists have of the lands they live on.

The maps also help communities to articulate their local knowledge in a language that more scientifically-minded government planners understood. "The maps act as a bridge where both sides understand spatial information – in different ways," said Hesse. "By capturing it, there is a progression of information that becomes increasingly intelligible to planners."

Perceptions matter. Under Kenya's new constitution, the central government is devolving power to the county-level. Local government holds land in trust for the communities. But because the government rarely sees the land's true economic value, "if an investor comes in there is a risk it will be given away," said Hesse. Recent developments in neighbouring Tanzania highlight the risks. In March Tanzania's ministry of tourism said it would set aside 1,500 square kilometres bordering the Serengeti national park as a corridor for



wildlife, blocking local Maasai communities from accessing their pasture land but [granting access to a Dubai-based luxury hunting and safari company](#).

If pastoralists from Isiolo County have a map of their area, they have a point of reference to discuss with their local government representatives. "Having a validated map of resources to take to discussions and meetings that involve the dissemination of funds from the county level down will be of massive use to them," said Zwaagstra.

In both Tanzania and Kenya, the legal framework allows local government to pass by-laws over land, forests, and rangelands under their legal jurisdiction. The maps could also be used as the basis for establishing by-laws at local government level. "The maps bring the resources to life and make them tangible," said Hesse. They are a step towards "legally recognising that for pastoralism to work these are resources that need to be protected and managed."

To generate the maps, communities from Isiolo county worked with facilitators to mark what they perceived as their key resources, such as water sources, grazing areas and markets. First, they traced out the map out on the ground with sticks and stones. The researchers then transformed a paper copy into a geo-referenced digital map. [This is what it currently looks like](#) but the map is a 'live' dataset that can be updated over time with improvements and additions.

Unsurprisingly in such a dry area, the map shows water sources. Boreholes, dams, hand pumps, and shallow wells all listed. The map also indicates water availability based on available data. To build the map, the team used a Google Earth map and Quantum, an open source GIS tool, to build the map features. All the software used – apart from Google Earth – is open source so it's available for free from the internet and can be downloaded and used by anyone. Eventually all the information will go onto a central database and will not use Google Earth. The maps demonstrate the diversity and complexity of the rangelands. For example, the community identified over 200 species of grass that react differently to rainfall patterns. The quality of grasses depends on the rainfall.

"Local people are constantly looking at the sky," said Hesse. "Is it going to rain, is it not going to rain? Where is it going to rain? and when?" By collecting data about rainfall local people and planners can monitor the quality of the rangelands and get a sense of what tomorrow might bring. Pastoralists are very in tune with their environmental and climatic knowledge. They use that knowledge to make decisions to leave or stay on their current grazing grounds. Those decisions are not easy ones to make. The mapping project could make them easier and help them advocate for better management of the land they know so intimately.

Watch this above video about Isiolo County community resource mapping. Read: [Responding to climate change in East Africa by strengthening dryland governance and planning](#).

[Online mapping system launched to fight Malaria in Kenya](#)



The first online mapping tool to track insecticide resistance in mosquitoes that cause malaria was launched. The interactive website, called IR Mapper (<http://www.irmapper.com>), identifies locations in more than 50 malaria-endemic countries where mosquitoes have developed resistance to the insecticides used in bed nets and indoor residual sprays.

IR Mapper incorporates the just-released World Health Organization (WHO) revised criteria for reporting insecticide resistance which is designed to detect it earlier. With the most comprehensive and up-to-date information, the IR Mapper helps direct which vector control tools should

be deployed in areas of high resistance.

Malaria is a deadly disease transmitted to people through infected mosquitoes. It kills a child every 60 seconds yet it is preventable and curable. Progress has been made against the disease due largely to wide scale use of insecticide-treated bed nets and indoor residual spraying (IRS).

But the rapid spread of resistance in malaria-carrying mosquitoes to insecticides used in bed nets and sprays threatens current malaria control efforts. Resistance among *Anopheles* malaria vectors has been reported in 64 countries, with parts of Sub-Saharan Africa and India of greatest concern. "Deployment of the most appropriate insecticide based vector control interventions including nets and IRS needs to be informed by up-to-date data on insecticide resistance in the malaria vector species," said Dr. Nabie Bayoh, an entomologist at KEMRI/CDC in Kisumu, Kenya. "Until now, data has been scattered throughout different databases and has come from a variety of sources. This has made prompt decision-making difficult. IR Mapper has helped to address this" he added.

IR Mapper consolidates published data on insecticide susceptibility and resistance mechanisms from 1959 to 2012. It includes reports from the President's Malaria Initiative, National Malaria Control Programmes and other reputable institutes. Resistance is usually measured by putting mosquitoes in a tube lined with



insecticide-treated paper. Mosquitoes land on the paper and absorb the insecticide – some may die and some may survive. A population is considered susceptible if almost all die. Until recently, resistance was confirmed by survival of more than 20 percent in this test.

The new guidelines from WHO reduced this threshold value to 10 percent, meaning that resistance will be reported earlier. This change is an indication of the concern insecticide resistance is causing globally.

IR Mapper data aligned with the new WHO thresholds is presented in a user-friendly format on interactive maps. The mapping function allows filtering and projection of data based on a set of user-directed criteria.

For instance, users can examine the resistance status of single or multiple Anopheles species to one or more insecticides within their region of interest. This can be the basis for a “go” or “no go” decision on a particular insecticide for deployment on nets or in sprays. Data can also be viewed for specified time periods, to identify any existing trends in resistance over time.

Data consolidation for IR Mapper was conducted by Vestergaard Frandsen and KEMRI/CDC. The map interface was developed by ESRI Eastern Africa and is powered by JavaScript.

Kenya can attain UN forest cover quota



The Green Belt Movement says Kenya can meet the United Nations requirement of 10 percent forest cover even before the set deadline of 2030, through concerted efforts from the government, corporate organisations and individuals. Executive director Pauline Kamau said an initiative where the private sector funds tree planting and the movement nurtures them for a period of three years before handing them over to the Kenya Forest Service (KFS) has seen Kenya gradually reverse deforestation in the five water towers of Mt Kenya, the Aberdare Range, the Mau Complex, Mt Elgon and Cherangany Hills.

“Collaboration has seen us achieve an average survival rate of up to 70 percent of trees planted in most areas,” she said during a Postal Corporation of Kenya tree planting initiative in Ngong Forest. PCK chairman Cyrus Maina said the 1,200 trees planted in Ngong Forest were part of a broader commitment to the country’s afforestation that has seen the State corporation plant trees in Nandi Hills, Karura Forest, Kacheliba and at Multimedia University among other areas.

“We believe we have a resourceful partner in the Green Belt Movement owing to the organisation’s achievements in afforestation and environmental conservations,” said Enock Kinara, the Postmaster General. “Though as Posta we unveiled a commemorative stamp in September last year in honour of Nobel Laureate Professor Wangari Maathai, we believe it is our duty to entrench her legacy through substantive actions aimed at preserving our environment for the posterity,” Kinara added.

A KFS representative said besides a punitive minimum fine of Sh50,000 for cutting a tree illegally, KFS has made communities living near forests key stakeholders and beneficiaries. “We use communities living around these forests as labour during weeding and planting trees so that they can own the forest conservation efforts. We are also developing honey clubs and ecotourism where they generate income through the former and act as tour guides for the later,” KFS revealed.

According to the World Rainforest Movement, Kenya’s forests had been rapidly declining due to pressure from increased population, fuel wood, building material and other land uses. A huge section of Kenya is arid and semi-arid. This puts huge a huge strain on the rest of the land since the economy is natural resource based.

FAO’s Forest Resource Assessment of 1990 classifies Kenya among the countries with low forest cover of less than two percent of the total land area. The dwindling forest cover has a severe effect on climate, wildlife, streams and human population – especially forest dwellers.

“However, a recent survey by KFS says Kenya’s forest cover is higher than previously estimated after it conducted a mapping using the latest technology, remote sensing, putting the figure of the forest cover at 6.6 percent and not less than two percent as had been previously estimated,” the statement sent to Newsrooms indicated. “Experts now believe the country is more likely to reach 10 per cent forest cover required by the United Nations by 2030.”

Uganda: Land data is safe and secure

A number of concerned parties gave the impression that the Land registry and specifically the new computerized system in Uganda were nonfunctional. Others lashed out at the ministry of Lands for not implementing a planned transition, which should have provided for the computerized system running side by side with the manual system. The computerized Land Information System (LIS) is functional; The zonal



offices are open and functioning for half day to the public with a gradually increasing pace in processing transactions; No data has been lost and no system has crashed in the registry.

In processing the LIS, numerous cases of faulty title records were found. These include cases of multiple titles issued on the same piece of land, those with double plotting, that is, two titles with the same block and plot number but with the land in different spatial locations; and the many cases of badly torn and damaged title records dating as far back as the beginning of the Land registry in 1908. The development of the LIS started in February 2010 and closed in February 2013, with a one-year period of technical support from IGN Consortium - the company that carried out the computerization of the registry.

It is true that the Lands ministry has faced and still facing challenges beyond its control in effecting the LIS. The staff that were sorting, cleaning, repairing, vetting, and scanning the land records are the same staff that need to be trained on how to use the new system. Yet the training could not start before the digitalization of land records is completed. There was no budget to hire different staff to handle these other activities. Ultimately, this contributed to a late and incomplete training of staff on the system, hence the slowed pace of transacting and the half-day operations of the registry. Challenges being experienced include slow internet service provision, power disruption that interferes with the desired uninterrupted workflow and, at times, blows up equipment.

Some clients have complained that their title transactions do not indicate the history of the title. This only happens when the transaction is new and the client is the first registered owner of the property. In cases where the client is not the first owner, the history is indicated on the title and records digitally stored. Ultimately, as the LIS continues to develop, there will be a point when no paper records will exist and transacting done digitally. To the public, all transactions at the Uganda land registry are now received by a clerk at the front desk, who checks and acknowledges receipt of the submission. The front desk clerk enters the applicant's name and property details into the system and forward them to a scanning clerk who enters the scanned transaction documentation and forwards it to a registrar of titles for processing. All this is done online. On completion of the approval process, the final product is forwarded through the network to a delivery clerk for issuance to the applicant. The applicant upon receipt of the title signs an acknowledgement sheet. *The author is the spokesperson of the ministry of Lands, Housing and Urban Development.*

[Uganda mapping out its municipal presence](#)

Digital mapping services and solutions provider, mapIT has announced the launch of the National Postcode & Addressing System – The Entebbe Pilot Project – which took place in Uganda in 2012. Since joining hands in May 2012 with SatNav East Africa, Uganda's pioneer in Global Positioning System (GPS) technology, the company has been working on the pilot project of the Entebbe SatCodes solution.

This addressing solution allows every property to have a unique "address" and enhance the performance of service providers. "All municipalities who are serious about service delivery should adapt to SatCode Technology," said Etienne Louw, Managing Director of mapIT. Louw adds that this venture will be the future of municipal addressing and enable these institutions to provide customers with a higher level of service delivery.

The project was launched by the Minister of Information and Communications Technology (ICT) of Uganda, the Honourable Doctor Ruhakana Rugunda. The project involved the digitalisation of Entebbe Maps for the implementation of the national postcode and addressing system. This includes the geographical information system (GIS) solution with five layers; the implementation of a National Property Identifier using SatCodes to provide address codes for "turn-by-turn" navigation; the placement of address placards on all houses in Entebbe as well as a marketing campaign to demonstrate and educate service providers on the benefits.

The National Postcode & Addressing System provides detailed and dynamic addressing information to support the operations of a wide range of users such as Posta Uganda, Entebbe Municipal Council, utility companies and other related service providers.

[Nigeria: Federation of surveyors' conference to hold in May](#)

The Nigerian Institution of Surveyors (NIS) is hosting the International Federation of Surveyors (FIG) working week 2013 with the theme "Environment for sustainability" from May 6th -10th in Abuja. Nigeria won the bid to host the working week 3 years ago and President Goodluck Jonathan is expected to declare the conference open while FIG President, Mr. CheeHai will give the keynote address. The President, Nigerian Institution of Surveyors, Bode Adeaga said that the conference will afford the country to showcase its potentials in mappings and surveying profession.

He added that the conference is an opportunity for Nigeria to share experience with participants from over 100 countries, with Nigeria benefiting from advances in technology, procedure and practice of surveying and mapping which is expected to enhance our developmental effort, housing and land use management.



He said, "It is particularly exciting as we move into the final phase of our preparations which started immediately after the Eilat Working week in Isreal in May, 2009. For about four years now, the 2,500 members of the Nigerian institution of surveyors who are in government, academia and the private sector, have all come together to ensure adequate support for the 2013 FIG working week. Nigeria has two other sister members of FIG i.e. The Nigerian Institute of Quantity Surveyors (NIQS) and the Nigerian Institution of Estate Surveyors and Valuers (NIESV). They have been working together with NIS. The level of preparedness is such that I can assure for the first time; that it will be a hitch free and memorable occasion." Adeaga said that in each day of the conference, a plenary session will take place with the following themes: Governance and Approaches, Technologies and Systems, and Systems and Professional Capacity Development.

[The Africa Climate Conference \(ACC-2013\)](#)

We encourage all interested parties to participate in the Africa Climate Conference 2013 (ACC-2013), taking place October 15-18 2013 in Arusha (Tanzania), see: <http://www.climdev-africa.org/acc2013>. Registration is now open online. This is a major initiative of the African Policy Climate Centre (ACPC) and the World Climate Research Programme (WCRP) to bring researchers, practitioners and users in the field of African climate together to share knowledge and accelerate the harnessing of climate science to the service of decision makers and communities in Africa.

- All interested researchers and practitioners working on the African climate are invited to submit an abstract of at least 500 words but no more than 1000 words, presenting their frontier research findings on the relevant Climate Research frontiers identified for this Conference.
- Information on the themed Research Frontiers and abstract submission is online at: <http://www.climdev-africa.org/content/acc2013CallforAbstracts>.
- Registration and abstract submission can be made at: <http://www.climdev-africa.org/acc2013part/register>
- Those selected for oral presentations will be notified by July 1st, 2013, and invited to produce extended abstracts to be included in the conference proceedings.

Efforts are currently underway to secure funding for scientists and researchers to attend the ACC-2013, particularly young Africa-based researchers and female scientists. Preference will be accorded to those whose abstracts have been accepted. Interested participants needing funding assistance to attend the ACC-2013, should specify such need on their abstract submission form.

The deadline for abstract submission to the Africa Climate Conference (ACC-2013) is set to *May 31, 2013*.

Practical SDI implementation materials from within and outside of Africa

[Conservation gets boost from new Landsat satellite](#)



Efforts to monitor the world's forests and other ecosystems got a big boost in February with the launch of Landsat 8, NASA's newest earth observation satellite, which augments the crippled Landsat 7 currently orbiting Earth (technically Landsat 8 is still named the Landsat Data Continuity Mission (LDCM) and will remain so until May when the USGS turns control of the satellite over to NASA).

Last month, Landsat 8/LDCM sent back its first image, showing the meeting of the Great Plains with the Front Ranges of the Rocky Mountains in Wyoming and Colorado. The image

showcases the satellite's nine spectral bands, which include three visible light bands, two near-infrared bands, and two shortwave infrared (SWIR) bands, among others, as well as two thermal sensors. Landsat 8/LDCM is the most advanced Earth observation satellite to date. It is the eighth Landsat since the initial launch in 1972.

Landsat 8/LDCM will circle the Earth every 99 minutes and cover the entire globe every 16 days, beaming 400 high resolution images to ground stations every 24 hours. The images, which are freely distributed, are used for a wide range of applications, including efforts to monitor environmental change, detect fires, and watch crops. Google is one of the biggest commercial users of Landsat images, which feed into Google Earth, but other users include scientists and conservationists involved in tracking deforestation and forest degradation. Accordingly, the new satellite was welcomed by members of the conservation community.

"Landsat 8 is a much anticipated and critically needed satellite for Earth resource mapping, monitoring and analysis," Greg Asner, a senior scientist at the Carnegie Institution for Science's Department of Global



Ecology, told mongabay.com. "Nearly every country serious about deforestation monitoring uses the Landsat series, which are made available for free by the U.S. government.

Asner, who leads a team that developed advanced deforestation monitoring platforms known as Carnegie Landsat Analysis System (CLAS) and CLASlite, says the new system marks a sharp improvement over the recently-failed Landsat 5 and Landsat 7, which suffers from partial data loss due a 2003 sensor failure. "Of course, our Carnegie Landsat Analysis System (CLAS) and CLASlite - the mostly widely disseminated forest change mapping software in the world -- will fully support Landsat 8, just as it has for the previous Landsat instruments," he said. "I am really looking forward to helping the community continue to use Landsat data for conservation and management of tropical forests."

Christopher Potter, a researcher at NASA-Ames Research Center, added that Landsat 8 will provide critical continuity in forest monitoring efforts. "Images from Landsat 8 will provide the ongoing capability to monitor land cover change around the world by extending the 30+ year historical record of Landsat 5 and 7," Potter told mongabay.com. "Continuity of high-quality data make Landsat unique for tracking forest conservation efforts."

Conservationists say they intend to use imagery captured by Landsat to monitor forest cover in near-real time, potentially enabling authorities to take action against illegal deforesters. In the past, Landsat images have provided an important baseline for tracking land use change over time, including the expansion of oil palm plantations in Malaysia and Indonesia, conversion of rainforests for industrial timber production in Sumatra, selective logging of rainforests in Peru, and deforestation for soy farms and cattle ranches in the Brazilian Amazon.

Landsat data can also help forest conservation projects under the proposed Reducing Emissions from Deforestation and Forest Degradation (REDD+) quantify reductions in carbon emissions, potentially generating cash for forest-dependent communities and project developers. "Without question, Landsat 8 is the most important new satellite of this century for monitoring land cover change," said Asner. "No other satellites, other than previous Landsat systems, have proven to be as accurate for tropical deforestation and forest degradation monitoring as Landsat 8 will prove to be in the coming years."

[2013 space dialogue harps on satellite use in Nigeria](#)

As Nigeria increasingly becomes vulnerable to emergencies and disasters such as floods, erosion, draught in recent times, all have not been well to millions of people who depend on government help. The flood disaster of 2012 has brought to the limelight the vulnerability of communities especially those at the river banks and coastal areas. This has shown the need to search for effective, efficient and quick ways to avert recurrence. With this in mind the Nigeria Space Research and Development Agency (NASRDA), the agency in charge of space mission in the country organised a one-day Space Dialogue and Media Conference in Abuja in collaboration with World Bank in order to highlight the role of space technology in disaster management and the need for more collaborative efforts by disaster-control agencies to utilise the abundant satellite images and technologies to ease their work and get quicker results.

The National Space Dialogue and Media Conference held on Thursday, 28th March, 2013, Abuja, Nigeria with the theme "Space Technology and Disaster Management: Setting an Agenda on Partnership for National Development" had in attendance the National Security Adviser, head of security agencies, officials of Nigeria Emergency Management Agency (NEMA), Nigerian Meteorological Agency, Minister of Science and Technology, President of the Nigerian Union of Journalists and academics as well as the technical partners of the NASRDA from the United Kingdom. When disaster strikes, many agencies in their efforts to provide solution, deploy several techniques.

It is a general belief that use of satellite technology and science has changed the ways things have been done from outdated and time consuming to more efficient and effective thereby broadening the scope of research and development that brings quick results. While speaking at the dialogue, the National Security Adviser, retired Col. Sambo Dasuki emphasised the imperative for Nigeria to embrace the use of satellite technology for disaster management. Dasuki in his paper said the use of satellite has become the most effective method of monitoring and managing disasters across the globe. He said the tsunami disaster of 2004 and the one that happened in Japan recently, as well as wide range of floods in 2012 were indications that satellite technology was relevant for disaster management.

[Satellites brightens Nigeria's future](#)

Governor Idris Wada of Kogi State has said the launch of satellites into space by the National Space Research and Development Agency (NASRDA) would brighten the future of the country and boost its revenue base. Wada, who disclosed this when he paid a visit to the space agency in Abuja, said space technology is the way to grow the economy.



The governor said his state would collaborate with NASRDA in the area of Geographic Information System to help in tax collection and land mapping. He urged the agency to help set up space technology courses in the state owned tertiary institutions. Earlier in his presentation, the Director General of NASRDA Dr Seidu Mohammed said satellite would be launched on Nigerian ground in 2030. He said since the launch Nigerian satellite since 2011, the country has been saving N2bn annually hitherto spent on satellite imagery taken for the country by foreign countries.

NASRDA's DG also said the agency recently used the Nigerian satellite Sat-2 to take image of Mali, adding that this has been helping the Nigerian soldiers serving in that country's peace mission.

Burkina Faso finds opportunities in reliable maps and surveys



In Burkina Faso, the U.S. Millennium Challenge Corporation (MCC) is investing in technology that will help the country's land authorities collect geographic information more easily, quickly, accurately, cheaply and consistently. This will deliver economic benefits to farmers and others in business and to the country as a whole, MCC said in a recent press release.

The lack of clear land rights is an obstacle to building a strong economic foundation in Burkina Faso, as it is in many developing countries. Without clarity about land rights and access, farmers and others are less likely to invest in their land. This creates missed opportunities for greater land productivity that can spur growth and reduce poverty.

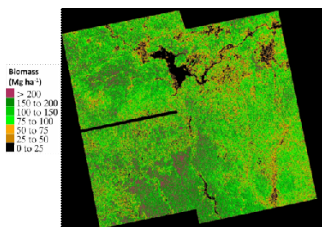
In Burkina Faso, the challenges of producing geographic information to identify boundaries make it hard to clarify land rights. Most developed countries use precise geographic data from a global satellite system to produce reliable maps and surveying information.

MCC's five-year, \$481 million compact with Burkina Faso includes the \$59.9 million Rural Land Governance Project, aimed at improving land management and land-tenure security. As part of the project, MCC is helping create a national geographic positioning network made up of nine Continuously Operating Reference Stations (CORS) that capture positioning data from the global satellite system and enhance its accuracy on the ground.

The nine stations in the CORS network will allow surveyors to move beyond traditional surveying methods to more accurately and efficiently complete survey work and map land parcels. This will enable Burkina Faso's land users to secure more accurate descriptions of both their legal rights and the position of their holdings, as well as reduce boundary disputes resulting from the multiple localized mapping systems Burkina Faso has used in the past. This reduction in conflict will give farmers, land developers, businessmen and others the confidence they need to invest in labor and capital that will lead to higher productivity and more income.

GIS Tools, Software, Data

A step by step guide to making maps of vegetation carbon stocks



Mapping carbon over your area of interest gives you an estimate of the total carbon locked up in the vegetation. This carbon has considerably value to the world: if it is released to the atmosphere it will contribute to climate change. Only by measuring this asset can it be valued. Forests have much more to offer the world than just their carbon stores (ecosystem services including flood protection, rain generation, evaporative cooling, and their store of biodiversity), but their carbon can be easily measured and doing so provides a part of the case for their preservation.

Carbon maps show the areas of high and low biomass within a region. This allows efforts at forest protection to be targeted to the higher carbon areas, or potential can provide a warning sign of areas subject to degradation.

Repeat carbon maps (for example annually, or every five years) allow calculations of net changes in carbon stocks. These net change numbers directly relate to payments under REDD+ or carbon sequestration schemes, and also can be used to set up historical baselines for carbon stock changes. Read the [full article](#).

Tools for data collection and mapping: the ground to the cloud story

As the public demands economic accountability and sustainability, organizations need tools that help scale their work, make their data more accessible, and increase transparency around their work. Discover free,



open source or software grants for tools that allow for managing, analyzing, cartographically styling, sharing and hosting the data in the cloud infrastructure. Learn how maps can change the world

For over 21 years, [Imazon – Amazon Institute of People and the Environment](#) has issued reports on Brazil's deforestation rates, and the contribution of Brazilian deforestation to global carbon emissions, using a satellite-based deforestation detection system called the Deforestation Alert System. Today, Imazon is using Google Earth Engine for forest change detection in satellite imagery to monitor deforestation and forest degradation in the Brazilian Amazon, as well as open-source ODK for validating the results of the remote sensing analysis using Android smartphones.

Organizations such as [Fundação Amazonas Sustentável \(FAS\)](#) are partners of Imazon and the RAISG network who have been using ODK to validate the remote sensing results for the [Bolsa Floresta program](#). FAS collects data to promote Payments for Ecosystem Services (PES) and contributes to the implementation, transparency and efficiency of the Deforestation Alert System. Meanwhile, [Global Canopy Programme \(GCP\)](#) is working with indigenous communities in Guyana to link local monitoring using ODK to national level forest degradation monitoring, reporting and verification.

The [Surui Forest Carbon Project](#), led by the indigenous Surui people, has been using these technologies to enter the carbon credit marketplace in Brazil. [Equipe de Conservacao da Amazonia \(ECAM\)](#) and [IDESAM](#) have put Android devices into the hands of the Surui to measure carbon in their forest. After years of gathering baseline data and creating the most efficient monitoring, reporting and verification methodologies to meet their needs, the Surui people will sell carbon credits. In addition, they are now mapping their ancestral cultural traditions using Google Earth.

In Africa, the [Jane Goodall Institute \(JGI\)](#) has been using ODK on Android smartphones and tablets to empower local communities to better manage and monitor their forests. In western Tanzania, with support from USAID, JGI is developing skills, knowledge, ownership, and ability to manage land use and monitor Village Forest Reserves using ODK and smartphones in 49 villages. In Uganda and Tanzania, JGI is using ODK and tablets to conduct detail inventory and mapping of private forest owners and village forest monitoring to support country's preparedness for REDD. In partnership with [Woods Hole Research Center](#) and support of Norwegian Government, JGI has been applying Google Earth Engine technology to build capacity in Tanzania for monitoring biomass and carbon in dry tropical forests and Miombo woodlands.

Through [Aliança da Terra's](#) voluntary Registry of Social and Environmental Responsibility (CCS), landowners commit to practice sustainable land and farming practices. Aliança da Terra uses Google Maps Engine as part of their system of geographic data collection and management, as well as the publishing of maps on their website.

The [Governor's Climate and Forests Taskforce](#) seeks tools for improved forest governance, more transparency and better public accountability for the REDD activities in its 16 member states and provinces. These states and provinces are focused on the development of rules and capabilities necessary to generate compliance-grade assets from jurisdictional REDD programs. Member states also seek to share geospatial information with each other and with national and international entities, and they are using Google technology to develop a platform to meet their various spatial data analysis and management needs.

[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\(at\)rcmr.org](mailto:remotesensing(at)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.

Call for Applications - GEM Course 2013

Growing population densities are putting increasing pressure on scarce land resources. Adequate solutions to environmental problems such as deforestation, overgrazing, and the depletion and contamination of land and water resources depend on integrated insights and improved management. Planners, managers, policy makers and researchers need to understand the complexity of the factors involved and be able to work together with professionals from a variety of disciplines. Geo - information technology and, in particular, remote sensing, plays a central role in the search for clear analyses and viable policies. Skills in this field will therefore continue to be much in demand in industry, government and NGOs.

Five renowned European institutes offer you a unique Erasmus Mundus joint European Master of Science (MSc) Course in Geo - information Science and Earth Observation for Environmental Modelling and Management (GEM).

The course has duration of 22 months and will be taught by world class faculty in five countries: Iceland, UK, Sweden, Poland and The Netherlands. While studying in at least two of the five universities, as well as studying in a multi - cultural environment, students will gain valuable insight into the academic, social and cultural diversity of northern and central Europe. Graduates gain a multiple MSc degree from the consortium universities.

For the academic year starting in September 2013, we are pleased to announce that there will be EU Erasmus mundus scholarships available for both non-EU and EU students. In addition, for exceptional EU candidates, we will have a limited number of scholarships available that pay full-fees.

Deadline for Self-funded non-EU candidates: 1 July 2013. Deadline for Self-funded EU candidates: 1 August 2013.

Apply now online: <http://www.gem-msc.org/application/Registration/>. More information can be obtained from www.gem-msc.org or send an email to info@gem-msc.org.

2013 GIS short courses through continued education at University of Pretoria

- Introduction to Geoinformation Standards - 15-16 July 2013 in Pretoria
- Spatial databases with PostGIS - 25 - 29 March 2013 in 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 presents a full spectrum of GIS courses: May and June 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](#)

GIS and Remote Sensing courses at Esri Eastern Africa

ESRI Eastern Africa is now offering update courses to conform to improvements in ArcGIS 10 and ENVI 4.8, conducted with skilled and experiences 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. Client site training arrangement on request for 12-16 students. [Download](#) course catalogue and current class schedule. To register, visit <http://esrietraining.cloudapp.net/>. For more information, contact: training@esria.co.ke, telephone: +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 the recipient's country or region. For more information about short tailor-made training courses, see [Project Services](#), [Contract training](#).

One stop e-government for sustainable land administration

Certificate of attendance Vietnam 09 Sep 2013 2 weeks [Register](#)

Community-Based Risk Assessment and Strategy Development

Certificate of attendance Uganda 16 Sep 2013 2 weeks [Register](#)

Community-based planning and monitoring towards a better quality of life for all

Certificate of attendance Colombia 21 Oct 2013 2 weeks [Register](#)

Sensors, Empowerment and Accountability

Certificate of attendance Tanzania 21 Oct 2013 2 weeks [Register](#)

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 [Register](#)

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 [Register](#)

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. 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

[Call for Applications: Research fellowships in NCD prevention policies in Africa](#)

The African Population and Health Research Center (APHRC), in partnership with the International Development Research Centre (IDRC), is pleased to announce the call for applications for the Research Fellowships for the Analysis of NCD (non-communicable disease) Prevention Policies in Africa (ANPPA). The ANPPA Fellowship Program seeks to build capacity and the knowledge base for the utilization of multi-sectoral approaches in policy formulation and implementation for NCD prevention in the region.

The ANPPA Research Fellowship program targets mid-level African scientists based at African institutions with a strong record of research productivity. The long term goal of the ANPPA Fellowship Program is to promote multi-sectoral approaches to policy-making for NCD prevention by providing evidence on the effectiveness of these approaches in the implementation of prevention strategies in sub-Saharan Africa. The main objective is to build a network of high-caliber scientists that will drive the NCD-related research agenda in this poorly researched but critical aspect of NCD prevention. The Program will award 4 (four), three-year fellowships in 2013. These fellowships will be awarded to scientists with at least three years post-doctoral research experience. More details can be found in the attached call for application. Closing Date: 30 May 2013



Contact details: Le Centre Africain de Recherche en Population et Santé, The APHRC Campus Nairobi, Kenya, Email: anppa@aphrc.org. [More information](#).

[ICCR Scholarships for Ethiopia and Djibouti in India, 2013/14](#)

The Indian Council for Cultural Relations (ICCR), Government of India is pleased to offer ICCR Scholarships for Ethiopia and Djibouti.. [\[Read Full Scholarship Detail\]](#)

[Erasmus Mundus EMJD Research Fellowships for PhD Students, 2013](#)

Erasmus Mundus funded Doctoral Research Fellowships **for third-world country**. PhD candidates and EU Students for training and carry out their research activities in at.. [\[Read Full Scholarship Detail\]](#)

[African Network of Scientific and Technical Institutions \(ANSTI\) - ANSTI/DAAD Post-Graduate Fellowships 2013](#)

The German Academic Exchange Service (DAAD) cooperates with ANSTI by offering financial support for Masters and Ph.D degrees at institutions in Sub-Saharan Africa. The fellowships are awarded to nationals in Sub-Saharan Africa for studies outside the applicants' home countries. Participants must be from ANSTI member institutions, and be less than 36 years old at the time of application. The application deadline is 31 May 2013.

[World Food Prize Foundation - Borlaug Field Award 2013](#)

The World Food Prize Foundation invites nominations for the Borlaug Field Award. The Borlaug Field Award (US\$10 thousand) recognizes science-based achievement in international agriculture and food production by an individual under age 40 in the challenge to eliminate global hunger and poverty. Nominations must be submitted by 30 June 2013.

[No-profit supply of computers to developing countries](#)

Computer Aid International has already shipped over 50,000 PCs to more than 90 developing countries. Out of those 50,000 shipped over 35,000 have gone to educational institutions while the remaining to community organisations working in fields as diverse as HIV/Aids, environment, human rights and primary healthcare. Computer Aid International aims to: (i) Increase the number of refurbished computers being re-used overseas; (ii) increase the number of UK organisations donating their used IT equipment for re-use overseas; (iii) identify and work with those organisations in recipient countries able to derive maximum value from refurbished computers; (iv) provide training and work experience in computer repair to people from socially excluded communities.

Employment Opportunities

[Climate Change Scientist, Climate Change, ICRAF](#), Nairobi, Kenya

Term:3 years. Experience Requirements: PhD (atmospheric science, physical geography, plant ecology, agronomics or relevant science field); relevant publications in peer-reviewed journals at least in the pipeline; relevant post-doc highly advantageous; agroforestry systems and good understanding of social-ecological systems; work experience in developing country an advantage; programming and modelling skills; ability to handle large datasets; self-motivated and able to work under pressure; networking skills and capacity to work in multicultural teams; knowledge of the R programming language an advantage
Special Requirements: Excellent command of english demonstrated by good presenting and communication skills. Indicate "Application – Climate Change Scientist" on indicate "Application – Climate Change Scientist" on their application letters and email submissions. Contact: Human Resources, World Agroforestry Centre (ICRAF) Email: icrafhru@cgiar.org. Announcement: <http://www.worldagroforestry.org>. Deadline for Application: 15 May 2013.

The International Livestock Research Institute (ILRI) Jobs

The International Livestock Research Institute (ILRI) works to enhance the roles livestock play in pathways out of poverty in developing countries. ILRI has two main campuses in East Africa and other hubs in East, West and southern Africa and South, Southeast and East Asia. <http://www.ilri.org/>.

CGIAR is a global agricultural research partnership for a food-secure future. Its science is carried out by 15 research centres that are members of the CGIAR Consortium in collaboration with hundreds of partner organizations: <http://www.cgiar.org/>

- [ILRI vacancy: Data Systems Manager, Nairobi \(closing date 8 May, 2013\)](#)



- [ILRI vacancy: Research Technician- GIS/ RS Data Management, Nairobi \(closing date 8 May, 2013\)](#)
- [ILRI vacancy: Research Technician III – Data Systems, Nairobi \(closing 8 May, 2013\)](#)
- [ILRI vacancy: Research Technician – Data Collection & Management, Nairobi \(closing date 8 May, 2013\)](#)
- [ILRI vacancy: Research Technician- Cellular Immunology \(closing date 10 May, 2013\)](#)
- [ILRI vacancy: Research Technician- immunology and immune-chemistry \(closing date 10 May, 2013\)](#)
- [ILRI vacancy: Monitoring Evaluation & Learning Research Officer, Nairobi \(closing date 8 May, 2013\)](#)
- [ILRI vacancy: Bioinformatician, Nairobi \(closing 8 May 2013\)](#)

University of Birmingham Scholarships for International Students

In 2013/14, the University of Birmingham is offering 18 International Postgraduate Scholarships worth £10,000 towards the cost of a one year Masters (Taught or Research) programme. These awards are intended for tuition fees only and cannot be used towards living expenses. Applicants must have an excellent academic background; due to the level of competition for these scholarships, only applicants with a first class Bachelors degree (or equivalent) will be considered.

Applicants must also demonstrate excellence in an area of their life; this might be outstanding academic achievement, exceptional achievement in extra curricular activities (such as sport, music, managing events or societies) or significant achievement gained either in their working life or through volunteering and service to others. Applicants must also outline the contribution they will make to the University of Birmingham as a student and what they expect to gain from studying here.

In order to apply candidates must:

- Have been offered a place to study on an eligible one year Masters programme at the University of Birmingham;
- Be overseas for fee purposes;
- Be attending full-time and on-campus (not distance learning);
- have a valid student ID number;
- not be in receipt of a full fee scholarship from any other source;
- Have made adequate financial provision to study in the UK (including any associated visa/travel expenses);
- Be able to pay any outstanding tuition fees not covered by the scholarship.

Please be aware that you must have made an application to study at the University of Birmingham before submitting a scholarship application. To find out more about how to apply, please review our [application procedures](#). Applications will close on 31 May 2013 for entry in the 13/14 academic year.

Other

Africa: Smart science in the fight against malaria



Malaria continues to be one of the world's deadliest diseases, infecting more than 200 million people and killing more than 660,000 - mostly African - children annually, according to the UN World Health Organization. Prevention, including indoor spraying and insecticide-treated mosquito nets, and effective treatment with artemisinin-based combination therapy (ACT) has seen malaria mortality drop by more than 25 percent globally since 2000.

Scientists around the world are involved in research that aims to improve the diagnosis, prevention and treatment of malaria; IRIN has put together

five recent developments that have the potential to bring the disease closer to eradication.

Goat's milk - In 2012, researchers at the US's Texas A&M University reported that they had genetically modified a goat to produce a malaria vaccine in its milk. The scientists hope to produce a drinkable version of the vaccine within a decade.

Baker's yeast - Artemisinin combination therapy - whose main ingredient is made from the sweet wormwood tree, which is largely grown in China - is widely acknowledged as the most effective treatment for malaria. But unpredictable weather affects crop yields, causing price fluctuations and an unstable supply of the drug. Scientists at the University of California, Berkeley, recently announced that they had found a way to genetically engineer a strain of baker's yeast to mass-produce a semi-synthetic version of the drug.

The intellectual property rights for this technology - which was funded by the Bill and Melinda Gates Foundation - were provided free of charge in the hope that the research will lead to increased production of artemisinin treatment at a lower cost. According to MIT Technology Review, French pharmaceutical firm Sanofi has started manufacturing the drug and is expected to produce 70 million doses in 2013.



Mosquito repellent plants - The NGO Concern has found that planting *Lantana camara*, a plant with pink, yellow and red flowers, in northwestern Tanzania's Ngara District significantly reduced the number of malaria-carrying mosquitoes inside local houses. In collaboration with the local Ifakara Health Institute, Concern planted *Lantana camara* around 231 homes in Ngara District, then counted the mosquitos indoors. Their results showed "56 percent fewer *Anopheles gambiae* and 83 percent fewer *Anopheles funestas*, both malaria-carrying mosquitoes, and 50 percent fewer mosquitoes of any kind".

The residents of these households reported lower malaria rates. Concern plans clinical trials to further investigate the impact of the plant and its potential as a tool in the fight against malaria.

Floating spores - In 2011, scientists at Wageningen University in the Netherlands developed a synthetic oil to disperse spores of the fungi *M. anisopliae* and *B. bassiana*, which cause mosquito larvae to die before reaching adulthood. The easy-to-mix oil, when spread over open water, saw pupation levels at the Kenyan test site drop to less than 20 percent.

Smell - Mosquitoes use nectar from flowers for energy, and scientists at Ohio State University are creating synthetic flower scents to lure mosquitoes into traps. Health officials can then spray neighbourhoods based on whether they find disease-causing mosquitoes in the traps.

Lantana camara has mosquito-repellent qualities - At the University of Washington, researchers are investigating the particular human odour that attracts mosquitoes to humans, with the aim of developing insect-repellent that masks the scent.

NASA's Earth Observing System - In Ethiopia, where environmental factors such as temperature, altitude and climate are important factors in malaria prevalence, early warning systems can help determine where and when the disease is likely to hit hardest, and therefore where anti-malaria programming needs to be directed. Scientists from the International Research Institute for Climate and Society have developed a malaria early warning system to predict the areas in Ethiopia's East Shewa, in Oromia Region, that are most likely to be affected by the disease.

"The research investigated how land-surface temperature measured by MODIS [Moderate Resolution Imaging Spectroradiometer] can be used to estimate maximum and minimum air temperature and be linked with malaria incidences in Ethiopian highlands," the authors of the study said. "The project also investigated how Landsat [satellites that monitor the earth's resources by photographing the surface at different wavelengths] can detect water bodies which create the breeding sites for mosquitoes. Lastly, the research showed how DEM [digital elevation model] can be integrated to better map the risk of malaria related to elevation and temperature."

The scientists aim to develop similar systems for other areas of Ethiopia and other parts of the world where climatic and environmental factors are important in the transmission of malaria.

Cancer, cholesterol drugs - A recent study by the research institute Seattle Biomed found that liver cells - which are the first to become infected after a mosquito bite - operate similarly to cancer cells, and that cancer drugs could help turn the liver into a hostile environment for malaria.

In December 2012, scientists at the University of Utah announced the discovery that lovastatin, a cholesterol-lowering drug, when added to traditional anti-malarial treatment, decreased brain swelling and protected against cognitive impairment in mice with cerebral malaria.

Kenya children buried in landslide after heavy rain



Many families have had to move to higher ground as rivers burst their banks. Two children were trapped in their home after a landslide in western Kenya, police have told the BBC. They were asleep in a village in the Narok area when their house was covered by mud following heavy rain overnight, Narok police chief Peterson Maelo said. Rescue workers at the scene were attempting to dig them out, the Kenya Red Cross told the BBC.

Flooding across the country last month has left 36 people dead and displaced more than 52,000, the aid group said. Kenya's main

rainy season is between March and May and often causes floods.

Several other houses were also destroyed in the landslide in Olutrot village in Narok county, an agricultural area about 100km (62 miles) west of the capital, Nairobi. Mr Maelo said although rescue efforts were ongoing, the chances of finding the children alive were remote.

Kenya Red Cross Secretary General Abbas Gullet warned those living in areas prone to landslides to move because of the ongoing rains. Rescue efforts were continuing across the country to help those who had been marooned because of rising waters, he said.



Villagers near Garissa in the usually arid north-east of the country have also been cut off, he added. The BBC's Wanyama Chebusiri in Nairobi says roads in many areas have become impassable. The main highway linking Kenya to Uganda and then onto other landlocked countries is undergoing urgent repairs where some of it was washed away near Naivasha, he says.

Kenya's Deputy President William Ruto said the government had set aside about \$18m (£11.7m) to rebuild roads and assist the victims. Mr Gullet said the Kenya Red Cross was appealing for humanitarian assistance for people currently living in makeshift houses and tents.

Nigeria: NUC - Nigerian varsities go paperless

Propelled by the global educational challenge in the 21st Century, National Universities Commission, NUC, has stated that the Nigerian university system will now go paperless as it has launched a portal called, 'Nigerian University System Management Portal, NUSMAP. Speaking at the two-day workshop held at the University of Lagos weekend, the Executive Secretary of NUC, Professor Julius Okojie who spoke through the Quality Assurance Officer, NUC, Mrs Dorcas Agbara said; "NUSMAP is an online programme designed to enable our universities process, share and communicate data with the NUC, the public and other government agencies for proper planning and management."

According to him, the workshop targeted at directors of Academic Planning of Nigerian universities, Directors of ICT of Nigerian universities and other officers, was designed for training and re-training of personnel involved in the administration and data management of universities at all levels to promote efficiency and quality planning with verifiable data. "It's actually a challenge to the Nigerian university in terms of the basic minimum academic standards they have to meet in the area of ICT," he said.

"This system has the capacity to capture the activities of all directorates of the commission, which include Universities Programme Accreditation, Universities Academic Standards, University System Annual Review Meeting (USARM), Universities Research and Innovation, Finance and Budget, among others."

Okojie who maintained that NUSMAP is designed to vouchsafe NUC's commitment to bringing the Nigerian university system to standard in line with 21st Century realities, added that it will also improve on the NUC and Nigerian university operations and serve as an authoritative platform for exploring information about universities nationwide.

At the workshop, representatives from 21 South-West universities some of which were, University of Ibadan, Lagos State University, Olabisi Onabanjo University, Ogun State, Osun State University etc., were trained on the processes of using the NUSMAP. Commenting on the relevance of the application, Executive Consultant, Gucci-Chis Nigeria Limited and facilitator, Honourable Paul Adingwupu said; "The universities have for years been doing accreditation, they have been submitting documents and so on to NUC, these papers if analysed, are things that will lead to measurement of academic standard which is the bone of every university, adding, "if the standard is not kept, then the university cannot make it high."

According to him, NUC has taken a bold step and decided that every accreditation, every academic standard tour is going to be online so that the outside world and those rating the universities will see that we have the actual carrying capacity and what it takes to be in the first 1000 in ranking when this process is fully implemented. Adingwupu who noted that the NUSMAP has a Geographic Information System (GIS) which enables the NUC to verify all data, added that some would be sent in pictorial form and the Information Help Desk will help the prospective students, their parents and those outside Nigeria to have a feedback- oriented interaction with the appropriate resource centre of NUC.

His words; "All universities in Nigeria are participating in different zones because five zones were created: Federal University of Technology, Minna, NUC Abuja as a zone, University of Lagos, University of Benin and University of Calabar, so all the universities were shared to each of the zones and they would go to these zones and participate and all they need to know about university accreditation, university management and so on, will be accessible to them."

UN WSA Award - Nigeria begins search for local E-content Innovations

Nigeria has begun search for local E content that has global relevance for the United Nation 2013 World Summit Award. This year's edition will be hosted by ICTA, the Information and Communication Technology Agency of Sri Lanka. With UN WSA database opened for nominations, Nigeria's nominations and national pre-Selection contest starts from April 18th to June 30th 2013; contestants from the 6 geo-political zones are expected to submit their e-content innovation projects for their Nigeria's pre-selection of 8 best. The ultimate highlight of the global WSA 2013 is celebrating international e-Content delicacies at the WSA World Congress 2013.

With the great support of ICTA, WSA is going to host the smartest and most creative e-Content producers in Colombo, Sri Lanka from October 23 through 25, 2013. The World Summit Award (WSA - <http://www.wsis->



award.org/) is a global initiative to select and promote the world's best e-Content, started in 2003 in the framework of the United Nations' World Summit on the Information Society (WSIS) with the 1st WSIS conference held in Geneva. The award which takes place on a biannual basis, in collaboration with UNESCO, UNIDO, UN GAID is done through national contests, a global contest, held every 2 years, and numerous content-focused national and international conferences and workshops.

The UN World Summit Award is being coordinated in Nigeria to promote an increased impact of Nigeria's technological innovations on global stage on charity by the Eminent WSA National Expert for Nigeria, Mr Amos Emmanuel, President Programos Foundation.

Speaking recently in Lagos in a press conference to flag off the 2013 UN WSA, the national expert coordinator for Nigeria Mr Amos Emmanuel told IT Journalists that Nigeria is looking for local e-content products from 8 categories with global relevance. The categories being: e-Government & Open Data, e-Health & Environment, e-Learning & Science, e-Entertainment & Games, e-Culture & Tourism, e-Media & Journalism, e-Business & Commerce and e-Inclusion & Empowerment

Emmanuel, who is also the 1st Vice-President, Information Technology (Industry) Association of Nigeria, ITAN and Chief Software Architect/Ceo, Programos Software Group, explained that the WSA is a global activity to select and promote the world's best e-Content and most innovative ICT applications.

Madagascar needs more than \$41 million to end locust plague



Half of the country infested by locusts - food production seriously at risk. Madagascar needs more than \$22 million of emergency funding by June to start fighting a severe locust plague that threatens the country's next cropping seasons and the food security of more than half the country's population, FAO said today. The agency underlined, however, that a three-year strategy is needed - requiring an additional \$19 million.

Currently, about half the country is infested by hoppers and flying swarms - each swarm made up of billions of plant-

devouring insects. FAO estimates that about two-thirds of the island country will be affected by the locust plague by September 2013 if no action is taken.

In view of the deteriorating situation, the Ministry of Agriculture of Madagascar declared a national disaster on 27 November 2012. In December, the Ministry of Agriculture requested technical and financial assistance from FAO to address the current locust plague, ensure the mobilization of funds as well as the coordination and implementation of an emergency response.

The emergency funding that has to arrive by June will allow FAO, together with the Ministry of Agriculture, to launch a full-scale spraying campaign for the first year. Nearly 60 percent of the island's more than 22 million people could be threatened by a significant worsening of hunger in a country that already has extremely high rates of food insecurity and malnutrition. In the poorest southern regions, where the plague started, around 70 percent of households are food insecure.

The plague now threatens 60 percent of the country's rice production. Rice is the main staple in Madagascar, where 80 percent of the population lives on less than a dollar per day.

The locust swarms would also consume most green vegetation that might normally serve as pasture for livestock.

"We know from experience that this plague will require three years of anti-locust campaigns. We need funds now to procure supplies and to timely set-up the aerial survey and control operations," said Annie Monard, FAO Senior Officer and Coordinator of the FAO locust response. "Failure to respond now will lead to massive food aid requirements later on," said Dominique Burgeon, Director of the FAO Emergency and Rehabilitation Division. "Campaigns in past years were underfunded, and unfortunately it means that not all locust infestations were controlled," said Monard. She compared it to not uprooting the roots of a weed, in which case even more weeds come back.

The national Locust Control Centre has thus far treated 30 000 hectares of farmland since the six-month rainy season began in October 2012, but some 100 000 hectares that need to be treated haven't been, due to the government's limited capacity.

In late February, the situation was made even worse by Cyclone Haruna, which not only damaged crops and homes but also provided optimal conditions for one more generation of locusts to breed. The first year of the FAO strategy to control locusts would rely on large-scale aerial operations. Some 1.5 million hectares will be treated in 2013-14, which declines to 500 000 hectares in the second year and 150 000 hectares in the third and last year of the strategy. All the operations will be implemented in respect of human health and the environment.



The strategy also includes:

- Establishment and training of a Locust Watch Unit inside the Plant Protection Directorate, for monitoring and analysis of the locust situation over the whole invasion area;
- Aerial and ground survey operations;
- Monitoring and mitigation of locust control operations to preserve human health and protect the environment;
- Training in pesticide and spraying operations management.

An impact assessment of the locust crisis on crops and pasture will be conducted each year to determine the type of support needed by farming households whose livelihoods have been affected.

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

Conferences, Events		
Date	Location	Event
May 2013		
8-10 May 2013	Aachen, Germany	9th International Conference on Web Information Systems and Technologies (WEBIST) 2013
13-16 May 2013	Rotterdam, Netherlands	Geospatial World Forum 2013 Contact: info@geospatialworldforum.org
14-17 May 2013	Leuven, Belgium	16th AGILE Conference on Geographic Information Science
21-24 May 2013	Bonn, Germany	Water in the Anthropocene. Challenges for Science and Governance. Indicators, Thresholds and Uncertainties of the Global Water System
22-25 May-13	Belgrade, Serbia	2nd International Scientific Conference RESPAG - Regional Development, Spatial Planning and Strategic Governance
28-30 May 2013	Kampala, Uganda	UMEC 2013 1st Uganda, Mining, Energy Oil Gas Conference and Exhibition
June 2013		
4-7 June 2013	Ohio, USA	Mapping Global Change: Spatial Statistics 2013
10-12 June 2013	Salzburg, Austria	Symposium for Research in Protected Areas
17-18 June 2013	Ghent, Belgium	Conference on Desertification and Land degradation
19-20 June 2013	Napoli (Italy)	Four Decades of Progress in Monitoring and Modeling of Processes in the Soil-Plant-Atmosphere System: Applications and Challenges
23-27 June 2013	Florence, Italy	INSPIRE Conference 2013 Call for Contributions
July 2013		
3-5 July 2013	Denmark	From effective to intelligent agriculture and forestry
6-9 July 2013	San Diego, USA	ESRI Survey Summit - The Esri Annual Conference
7-11 July 2013	Catalonia, Spain	9th European Conference on Precision Agriculture (ECPA)
8-12 July 2013	San Diego, USA	ESRI International User Conference
21-26 July 2013	Melbourne, Victoria, Australia	IGARSS 2013 Deadline for abstracts/proposals: 10th January 2013 Check the event website for more details.
August 2013		
13-14 August, 2013	Cape Town, South Africa	Africa Geospatial Forum
25-30 August 2013	Dresden Germany	26th International Cartographic Conference - From Pole to Pole
26-31 August 2013	Busan, Korea	XXVII IUSSP International Population Conference



25-30 August 2013	Hong Kong, S.A.R. China	59th ISI World Statistics Congress ⁰ E-mail: isi@cbs.nl
26-29 August 2013	Sarawak, Malaysia	8th International Symposium on Digital Earth 2013
27-31 August 2013	Paris, France	IAG International Conference on Geomorphology
September 2013		
17-22 September 2013	Nottingham, U.K	FOSS4G 2013 Conference
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)
23-25 October 2013	Rio de Janeiro, Brazil	Sixth International Conference on Agricultural Statistics- ICAS-VI , Abstract deadline: 15 December 2012 FAO: www.fao.org/economic/ess/ess-events/ess-icas/en/
November 2013		
4-8 November 2013	Adis-Ababa, Ethiopia	GSDI 14 World Conference and AfricaGIS 2013 Conference Please consult the conference web site on a regular basis.
18 November 2013		African Statistics Day Celebrations - Organized by the UN Commission for Africa and the African Centre for Statistics.
December 2013		
28-31 December 2013	CRRAO AIMSCS, Hyderabad	CRRAO AIMSCS will be organizing a conference during the International Statistics Year, 2013 - Statistics 2013: Socio-Economic and Sustainable Challenges and Solutions
2014		
8-14 June 2014	Jeju ICC, Korea	20th World Congress of Soil Science (WCSS)
2015	Durban, South Africa	14th World Forestry Congress for SA
1-31 August 2016	Cape Town, South Africa	35th International Geological Congress . Registration deadline: 30 June 2016.

Please mention SDI-Africa as a source of information in correspondence about items in this issue.

To subscribe or unsubscribe to SDI-Africa, please do so online at: <http://lists.gsdi.org/mailman/listinfo/sdi-africa> and follow the steps

Gordon Ojwang', Editor, gojwang@rcmr.org or SDI-Africa AT gsdi.org or sdiafrica@rcmr.org

Global Spatial Data Infrastructure (GSDI) Association
<http://www.gsdi.org>
Copyright © 2013. All rights reserved.

DISCLAIMER:
The Editor, GSDI, and Web Host will not be held liable for any errors, mistakes, misprints or incorrect information.