Spatial Data Infrastructure – Africa Newsletter

GSDI
Global Spatial Data Infrastructure

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Spatial Data Infrastructure - Africa (SDI-Africa) is a free, electronic newsletter for people interested in GIS, remote sensing, and data management in Africa. Published monthly since May 2002, it raises awareness and provides useful information to strengthen SDI efforts and support synchronization of regional activities. ECA/CODIST-Geo, RCMRD/SERVIR, RECTAS, AARSE, EIS-AFRICA, SDI-EA, and MadMappers are some of the other regional groups promoting SDI development.

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The SDI-Africa newsletter is prepared for the GSDI Association by the Regional Centre for Mapping of Resources for Development (RCMRD) in Nairobi, Kenya. RCMRD builds capacity in surveying and mapping, remote sensing, geographic information systems, and natural resources assessment and management. RCMRD has been active in SDI in Africa through its contributions to the African Geodetic Reference Frame (AFREF) and SERVIR-Africa, a regional visualization and monitoring system initiative. RCMRD also implements projects on behalf of its member States and development partners.

If you have news or information related to GIS, remote sensing, and spatial data infrastructure that you would like to highlight (e.g., workshop announcements, publications, reports, websites of interest, etc.), kindly send them in by the 25th of each month. I'd be happy to include your news in the newsletter.

PLEASE share this newsletter with colleagues who may find the information useful and suggest that they subscribe themselves.

Back issues of the newsletter are at the GSDI website: http://www.gsdi.org/newsletters.php
Best regards, Gordon Ojwang, Editor, SDI-Africa_AT_gsdi.org or sdiafrica@rcmrd.org or gojwang@rcmrd.org

Input to this Issue

Thank you to Kate Lance, NASA/SERVIR-Africa (USA); Hussein Farah, RCMRD (Kenya); Karen.Levoleger, kadaster (Netherlands); Minnie Wong, University of Maryland (USA); Jörg Balsiger, Institute for Environmental Decisions (Switzerland); Clifford Okembo, ESRI-EA (Kenya); Teddy Ochieng, Oakar Services (Kenya); Michele de Nevers, Center for Global Development (USA); Moses M. Ngigi, Jomo Kenyatta University of Agriculture and Technology (Kenya); C.J. (Kees) de Zeeuw, Kadaster Interantional (Netherlands) and Frederik Staun, UNEP Risoe Centre (Denmark) for their contributions to this issue of the newsletter.

SDI News, Links, Papers, Presentations

Several projects in Africa are undergoing validation audit against the CCB Standards
Project documents may be downloaded at www.climate-standards.org/projects. One of the projects is Abote Community-Managed Reforestation Project located in Oromia, Ethiopia. The Auditor: Scientific Certification Systems (SCS). Comments are invited from the public about whether this project meets the requirements of the CCB Standards. Comments received by June 17, 2011 will be considered by the auditor during the validation process. For further information, contact: Gareth Wishart, CCB Standards Coordinator at gwishart@climate-standards.org. Website: www.climate-standards.org.

Experts deliberate cyber security with growth of Africa's information economy

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Africa is facing several challenges related to the Internet in relation to security risk, intellectual property infringement, and protection of personal data. This emerged at the CODIST II workshop on "Legal and regulatory Frameworks for the Knowledge Economy in Africa, and according to Aida Opoku-Mensah, Director of ECA's ICT, Science and Technology Division (ISTD), as Africa's information and knowledge economies grow, numerous legal and regulatory challenges are confounding policy makers, legislators and law enforcement bodies. Ms. Opoku-Mensah pointed out that with the installation of submarine cables around the continent, the access to the Internet has expanded exponentially in Africa and with increased usage she said, "Combating cyber crime has so far been left to the private sector.

" ECA has been supporting African countries to adopt e-commerce legislations, with notable successes in Ethiopia and Ghana. The draft legislation of the Government of Ethiopia is under review, expected to go to the House of Peoples Representatives in the near future. Ghana is also finalizing its cyber crime policy. At regional economic community level, a lot of work is going on at SADC and ECOWAS. However, compared to other regions, Africa lags behind most of the world in combating cyber crime. "Only 6 of the 52 African countries have a national legal framework on cyber crime, compared to 23 of the 44 Asian countries, 36 of the 46 countries in Europe, and 5 of the 12 countries in South America," said Dr. Mohamed Chawki, a senior judge in Egypt who spoke on best practices and enforcement in cyber security. Moktar Yedaly, Head of the Telecom and Postal Division of the African Union Commission stressed that the continent needs to be serious about taking measures to ensure cyber safety. He said that 99% of all e-mails worldwide constituted spam. "Most of them come from Africa," he said.

A number of recommendations were made at the workshop to serve as guidelines for cyber-legislation for e-transactions, cyber-criminality and personal data protection. The AUC and the ECA were urged to come up with a clearer agenda for the preparation and validation of the convention on cyber legislation in Africa. Participants also called for harmonization of all cyber legislation projects at member state level and at the level of Regional Economic Communities and the need for sensitizing, training and involving all stakeholders, including parliamentarians, policy makers, legislators and law enforcement bodies was emphasized.

Software piracy in Africa double global rate

The commercial value of unlicensed software installed on personal computers in Eastern and Southern Africa (ESA), which excludes South Africa, reached $109 million in 2010 as 83 per cent of software deployed on PCs during the year was pirated. This stands at almost double the global piracy rate for PC software, which is 42 per cent, having risen by 3.6 points on the previous five year average.

These are among the findings of the Business Software Alliance (BSA) 2010 Global Software Piracy Study, which evaluates the state of software piracy around the world. During the past 5 years since 2006, Botswana's piracy rate has dropped by 2 per cent; Kenya's by just 1 per cent; while Zimbabwe's rose by one per cent in 2008, but returned to the 2006 rate of 91 per cent in 2010. Zambia's piracy rate has remained unchanged year over year. Zimbabwe's piracy rate of 91 per cent is the second highest in the world.

"These findings show that little progress has been made in reducing the software piracy rate in East and Southern Africa and there is much more work to be done," said Dale Waterman, chair, BSA Middle East and Africa Committee, and also the Microsoft's Corporate Attorney for Anti-Piracy for the Middle East and Africa region. "The further we reduce software piracy, the better it will be for the region's economies." Globally, the opinion survey found strong support for intellectual property rights, with seven in 10 respondents expressing support for paying inventors for their creations to promote more technology advances. Strikingly, support for intellectual property rights was strongest in markets with high piracy rates. The survey also found widespread recognition that licensed software is better than pirated software, because it is understood to be more secure and more reliable.

Africa 'must embrace geospatial information'

African governments could become more sensitive to what their people really need by harnessing the wealth of available geospatial information, a meeting of scientists and policymakers has heard. This was one of the recommendations put forward by a meeting of the sub-committee on geo-information on the sidelines of the Second Session of the Committee on Development Information, Science and Technology (CODIST-II), in Ethiopia, earlier last month (2–5 May).
"Given that over 80 per cent of public and private planning and decision-making processes use geospatial data, governments of developing countries need to recognize and acknowledge the

importance of GIS [geographic information systems]," Wilbur Ottichilo, a Kenyan parliamentarian, told SciDev.Net.

One of the success stories presented at the meeting was the work of the Regional Centre for Mapping of Resources for Development (RCMRD) - based in Nairobi, Kenya, and established in 1975 by the Economic Commission for Africa - which provides advisory services and capacity building for GIS services such as surveying, mapping and remote sensing. Over the last seven years, RCMRD has been collaborating with the US National Aeronautics and Space Administration (NASA), to establish a satellite-based early warning system for disasters, SERVIR-Africa.

Dr. Wilbur Ottichilo, a former director-general of RCMRD, uses GIS to determine which areas within his constituency, Emuhaya, lack infrastructure or have poor harvests. The entire constituency is being mapped using the Constituency Development Information System (CDIS). The aim of CDIS is to create a 'smart' system that analyses, stores and displays geographical data to help with improved planning and management for food security and poverty alleviation. For example, it allows online monitoring of how crops are doing by looking at satellite images of vegetation in the area.

But Africa is still poorly mapped, with much of the data unreliable or held commercially, according to Derek Clarke, chief director of South African mapping organisation National Geo-spatial Information. This could be attributed to the lack of a methodological approach to the collection and maintenance of geospatial data, Clarke said. It is also a clear indication that the continent's national mapping organisations are poorly resourced. He added that any GIS technologies developed must be affordable and appropriate for the African context.

African nations call for ICTs to tackle disease

African health ministers have called for the use of information and communication technologies (ICTs) to help with attempts to tackle non-communicable diseases (NCDs) such as diabetes and sickle-cell disease. The recommendation that ICTs be harnessed to increase health awareness and empower individuals and communities was part of the Brazzaville Declaration on NCDs, which the ministers have signed. The declaration includes other recommendations, calling for the strengthening health systems, and support for partnerships and networks that bring together national, regional and global players including academic and research institutions, public and private sectors, and civil society to tackle the rising problem.

The ministers also urged the WHO, partners and civil society organisations to take the initiative and give technical support to member states so that they can implement the recommendations better, as well as monitor and evaluate what they have done. NCDs such as cancer, diabetes and heart diseases, have spread to the developing world and cause the majority of the deaths worldwide, according to the first global report on the status of NCDs released by the WHO last week (27 April). Some 36 million, or 80 per cent, of deaths caused by NCDs in 2008 occurred in the low- and middle-income countries.
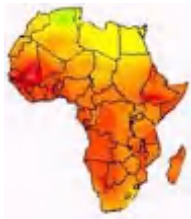
The declaration, named after the Congolese capital city where it was adopted last month (6 April), will be presented at the UN General Assembly High-Level Meeting on NCDs in September.

"It is high time African governments adopted new science and new technologies to help reduce NCDs on the continent," said Robert Mathenge, a cardiologist at the Nairobi Hospital in Kenya. "I am particularly excited about the prospects of telemedicine, where a few specialists can sit in Nairobi and interact with health workers in rural villages in real time and guide them through examining, diagnosing and treating patients," he told SciDev.Net. Such technologies, he said, will lead to the earlier diagnosis of diseases and the use of specialist treatments and preventive strategies in even the remotest parts of the country.

"African governments need to invest more in the development of ICT infrastructure. In the long run, they will reap big [benefits] because, if left unchecked, NCDs have to be treated with complicated, expensive technologies and medicines," he said. Davy Omolo, an ICT expert at telecommunications company Telecraft in Nairobi, said: "We have one of the fastest-growing ICT sectors on the continent and it is time we capitalised on this".Link to the Brazzaville Declaration on NCDs [309kB], Link to WHO's 'Global status report on noncommunicable diseases 2010' report.

ECA launches institutional repository - "Milestone in access and diffusion of information on Africa"

The Economic Commission for Africa (ECA) launched a unique Institutional Repository during a workshop on Open Access Publishing at its headquarters in Addis Ababa, Ethiopia. The workshop held, on the theme "Promoting Innovation Development and Diffusion in Africa through Open Access Publishing" was organized

as a pre-event of the Second Session of the Committee on Development, Information, Science and Technology (CODIST II) and brought together over 70 participants including chief librarians from the UN, the African Union and from Universities across Africa as well as Knowledge Management experts and Scientific Officers.

"The development and launching of the ECA Institutional Repository marks a milestone in the access and diffusion of unique and authentic economic and social information on Africa", said Aida Opoku-Mensah, Director of ECA's ICT, Science and Technology Division (ISTD). The website (http://repository.uneca.org) provides visitors with knowledge and information not available elsewhere including flagship publications, journal articles, conference proceedings and working papers as well as technical, mission and annual reports which were collected in the past 50 years. The publications are freely available to users worldwide.

"Access to ECA's information resources has for many years been available mainly to visitors to the ECA Library", explained Opoku-Mensah. "ECA has seized this opportunity offered to ensure a systematic collection, management, preservation and dissemination of its intellectual property." According to documents provided to ECA's Information and Communication Service, the repository represents the corporate memory, providing historical evidence of the Commission's actions and decisions.

CODIST II presentation and documents now available: Exploiting global geospatial data resources for planning in Africa

Over 70 CODIST delegates of African member states and observers drawn from different African countries and the rest of the world attended the second meeting (CODIST-II) organized by the ICT, Science, and Technology Division of ECA held from 2-5 May 2011 at the headquarters of ECA in Addis Ababa, Ethiopia.. The ISPRS workshop aimed to show how global data sets can be used in Africa and to explore the requirements for using geospatial data for planning purposes as well as the resources available to generate the required products and services.

After opening remarks by Dr. Hussien Farah, Director of RCMRD, and the ISPRS Regional Representative for Africa, on behalf of the President of ISPRS and an opening speech by Mr. Makane Faye, OIC of e-Applications, ISTD, on behalf of the Director of ISTD, Ms. Aida Opoku-Mensah, a variety of presentations were made.

The first presentation was by The National Geospatial Information (NGI), South Africa entitled "Current status of mapping in Africa and issues to be addressed". The presentation detailed the current status of fundamental datasets in Africa and confirmed that Africa is poorly mapped and most of the data sets are unreliable due to the lack of programmatic approaches to the collection and maintenance of these datasets at national level.
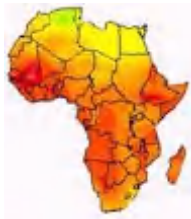
The second presentation was from ISRIC, the Netherlands, on the topic "Global datasets: Characteristics, availability and access". This presentation suggested that global datasets are being used for planning purpose in different applications such as: Land use, climate, soil, human activities, etc. and highlighted a number of publicly available datasets; some examples sited from environmental datasets and human influence datasets are: worldgrids.org for; global accessibility map, CIESIN, Global Land Cover 2000 (GLC), GridUNEP, ISRIC. Also demonstrated were the ASTER GDEM, and SRTM global datasets.

The third presentation was delivered by IGN France International, on Reference3D Database, which covers most of the world, including North Africa, West Africa and the Horn of Africa. The presentation focused on how Digital Elevation Models (DEM) are generated from Satellite images and discussed its applications (defense mapping, orthorectification, etc.) and how it can be used for online rectification of satellite images without the need for ground control points, making it cost and time effective.

The other presenters among others were from ESRI who focused on a new GIS platform in the cloud through which users can access GIS resources, including software and data, without the need to have their own proprietary software, and the result of their web based online processing can be put on their desktop for further applications. The major outcome from the workshop was new insight on the availability of global datasets, global geospatial portals, as well as new geospatial technologies for harnessing the global datasets for sustainable development. See the rest of Codist II presentations and documents at http://repository.uneca.org/codist/?q=node/109.

Winners of 2011 TIGA awards presented

The winners of 2011 Technology in Government in Africa (TIGA) awards were presented at a ceremony held at the Sheraton Hotel in Addis Ababa, on 2 May 2011. Started in 2007, this pioneering African programme

publicly recognizes the innovation, excellence, and leadership in Africa's public sector e-government development and its deployment. It is recognized as an honor to be nominated for the TIGA Awards, and a significant career achievement for the team members to be selected as an Award Winner. The winners in the following categories were presented:

Public service delivery to citizens/communities (G2C):

- eSoko Project, Rwanda (http://www.esoko.gov.rw)
- Government Online Centre (GOC) for Enhanced Public Service Delivery, Mauritius (www.gov.mu)
- Free and Open Access to Public Legal Information in Kenya, Kenya (www.kenyalaw.org)

Improved health services through the use of ICTs:

- Suive de la santé des enfants base sur l'utilisation du telephone portable: Pesinet et FrontLine SMS Medi, Mali (www.pesinet.org) (www.sante.gov.ml)
- mPedigree Kenya National Medicine Quality System, Kenya (www.mPedigree.Net)
- La telemedicine pour l'accés aux soins de santé, Cameroun (www.genesistelecare.com)

Public Private Partnership (PPP) in economic and financial eServices delivery (G2B):

- eTrade Africa - plateforme de facilitation des échanges de messages requis pour les exportations de merchandises vers l'Europe, Senegal (http://www.etradeafrica.com)
- Federal Road Safety Corps Drivers License (FRSC-DL), Nigeria (www.swglobal.com)
- Online Registration & Placement Software, Ethiopia (www.mcit.gov.et)

Nominees under the education services category will be awarded at the e-Learning Africa - 6th International Conference on ICT for Development, Education and Training, Dar es Salaam, Tanzania, May 25 - 27, 2011: http://www.elearning-africa.com/.

First report from satellite watch over Sudan

The first satellite images of Sudan aimed at preventing and monitoring human rights abuses during the recent referendum have been released. The Satellite Sentinel Project was launched just before South Sudan voted on separation from the North (9–15 January). By hiring satellite capacity, the human rights organisation Not on Our Watch was able to photograph the land and hoped to deter and monitor any armed conflict.

Speaking after the release of the data, Steve Wood, a vice-president of DigitalGlobe, the US-based satellite imagery company that supplied the images, told SciDev.Net that the geographical scale and amount of imagery collected and made available were unprecedented. "Around 750,000 square kilometres were photographed in 30 days," he said.

The images and analysis, released on 27 January revealed that company-sized units of Sudanese Armed Forces equipped with light armour and artillery were deployed in South Kordofan around the disputed oil-producing Abyei region and in other strategic areas along Sudan's volatile North−South border. But it found no evidence of the army moving forwards. "Neither side in this conflict is preparing for imminent forward troop movement," said Jonathan Hutson, director of communications at the Enough Project, a project collaborator.

Such large-scale projects might only be suitable for monitoring a predictable, large event, such as the referendum in Sudan, said Susan Wolfinbarger, a senior programme associate at the American Association for the Advancement of Science who works on Eyes on Darfur, a human rights initiative that uses satellite imagery to monitor atrocities in Darfur. The main limitation of such projects - large or small is the lack of intelligence from the ground, said Wolfinbarger. Without reports on where to focus efforts, the cost of purchasing imagery - US$10-25 per square kilometre can "quickly get out of hand", she said. But commercial digital imagery companies are moving in the right direction, said Wolfinbarger, citing DigitalGlobe and also the GeoEye Foundation, another US-based company that allows non-governmental organisations free use of imagery for purposes such as disaster response. The Satellite Sentinel was conceived by the film star George Clooney and funded with US$750,000.

Rwanda seeks to get students interested in science at early stage

Rwanda has hosted the country's first ever science exhibition for primary school children, to engage them with science and develop their analytical skills. The Science Village runs for three months in Kigali and expected to attract 40,000 students, encourages pupils to observe, experiment and practice scientific methods. "No effort will be spared to develop science in our country," said Marie Christine Gasingirwa, director of science in Rwanda's education ministry. Tito Uwiringiyimana, a pupil, said: "I did not know science was this fun".

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FACET Atlas - Forest cover and loss in the DRC from 2000-2010
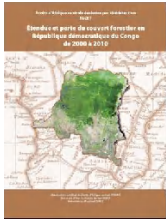
FACET (Monitoring the forests of Central Africa using remotely sensed data sets) is an OSFAC project whose goal is to quantitatively evaluate the spatiotemporal dynamics of forest change in Central Africa through the use of multi-temporal satellite data. The series of multi-temporal data from the FACET project will be a useful contribution to many environmental and planning projects. All results have been made available to the public.

The FACET publication is the result of a study of forest cover and forest cover change in the Democratic Republic of Congo (DRC). The analysis made use of an automated "wall-to-wall" remote sensing method, developed jointly by South Dakota State University and the University of Maryland, and incorporated over 8,000 Landsat ETM+ images. The atlas consists of Landsat image composites coupled with classifications of forest cover and forest cover loss for the periods 2000-2005-2010.

There are myriad uses for the thematic data and image composites provided with the DRC FACET Atlas such as: natural resources management including forests, biodiversity, wildlife habitat, protected area and mineral exploitation management; land use and transportation network planning; watershed and surface water monitoring; agriculture monitoring and planning. In addition, when combined with the appropriate carbon stock inventory data, the FACET methodology and data provide the capability for carbon monitoring for REDD and/or carbon markets. The Democratic Republic of Congo FACET Atlas and data are now available for download via: ftp://congo.iluci.org/FACET/. The FTP site contains the following files:

- High resolution DRC Forest Change Atlas PDF, subdivided into 12 individual .rar compressed folders (approx. 50MB each)
- DRC_FACET_atlas_HR_part01.rar to DRC_FACET_atlas_HR_part12.rar
- High resolution DRC Forest Change Atlas PDF, unzipped PDF (565MB)
- DRC_FACET_Atlas_HR.pdf
- Low resolution DRC Forest Change Atlas PDF, unzipped PDF (47 MB)
- DRC_FACET_Atlas_LR.pdf
- DRC Forest cover change classified image (56MB)
- FACET_forest_cover_change_image.zip
- Landsat image composites of the periods 2000 – 2005 and 2005 – 2010, subdivided into 4 parts (approx. 300MB each)
- Landsat_composite_2000_2005.part1.rar   to   landsat_composite_2000_2005.part4.rar   and landsat_composite_2005_2010 .part1.rar to landsat_composite_2005_2010.part4.rar

The forest cover change image and the two landsat image composites contain a readme file with data description and use instructions. If for any reason you are not able to use the ftp directory, please contact: contact@osfac.net.

New Interactive Atlas will help Democratic Republic of Congo manage forests

In January, WRI and the Democratic Republic of Congo's (DRC) Ministry of Environment, Nature Conservation, and Tourism (MECN-T) launched the first-ever DRC Interactive Forest Atlas - a unique GIS-based mapping and information system designed to shed light on the country's logging activities. Explore the Interactive Map viewer to examine in detail logging concessions, protected areas, and forest change in the Democratic Republic of Congo (in both English and French).

Covering two-thirds of the country's territory, the forests of the DRC are home to a wealth of biodiversity and serve as one of the planet's major terrestrial carbon sinks. In addition to supplying valuable wood products on the international market, the DRC's forests support the livelihoods of tens of millions of Congolese citizens. Historically, the DRC has experienced low levels of industrial deforestation, primarily due to the high cost of transporting forest resources out of the country and decades of warfare. However, with peace and relative political stability returning to the region, local and international eyes have turned to the wealth of forest resources available within the DRC's borders.

Buoyed by a rebound in international demand for wood products, particularly from Asian markets, industrial logging activities are again expanding across the DRC and the greater Congo Basin. Infrastructure improvements designed to increase rural accessibility and economic integration has accelerated forest degradation in even the most remote areas of the DRC. Access roads for extractive purposes and tracts cleared for local agricultural activities have fragmented large parts of the forest canopy, and significant
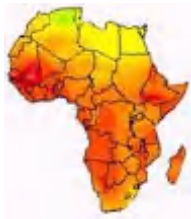
charcoal demand from the urban centers, combined with a growing subsistence agrarian population, have made smallholder land a primary threat for forest degradation. These factors, combined with increasing demand for forest conversion to industrial plantations for palm oil and other products, means that the integrity of the DRC's forests hangs in a critical balance. Recognizing the important role of – and demands on – its forest ecosystems, the DRC has partnered with the international community to improve forest sector governance and management. Despite these advances, the DRC government still faces a myriad of challenges in developing a comprehensive forest management and zoning process, as well as in the day-to-day monitoring of its forest-based activities such as logging, mining and agriculture. Among the principle obstacles is the lack of sufficient and accessible forest information, in combination with limited technical forest management capacity at national and local levels.

Kenya's new law to reduce number of issued title deeds

Capping land subdivisions to a minimum of 2.5 acres in agriculturally-productive areas is among a raft of reforms proposed by Kenya's Ministry of Lands to ensure efficient and productive land use in order to realise the goals of Vision 2030. This proposal will radically alter Kenya's land tenure and ownership system in such densely populated, but agriculturally rich, provinces like Central, Western, Rift Valley, Nyanza and parts of Eastern. In these regions, land has, in recent years, been sub-divided into such uneconomical units as to undermine productivity. The new guideline could lead to consolidation, considerably reducing from 4.3 million acres the number of issued by the Ministry of Lands.

The land reform programme got a major boost last month when various stakeholders met in Nairobi to discuss the draft National Land Commission Bill and other sticking issues. Provided for in the Constitution, the Commission is set to manage all public land for the national and county government. Lands minister James Orengo affirmed this when he addressed the one-day workshop at Multi-Media University, said the commission would also take charge of alienated government land, land transferred to the State, government forests, game reserves, water catchment areas, national parks, roads, rivers, lakes and other water bodies.
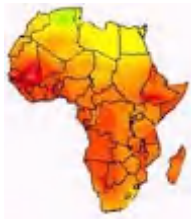
Mr Orengo said the Ministry had begun to formulate a National Land Use Policy to stipulate how land will be managed and tapped. "This policy will provide a basis for sustainable use and proper management of land resources, land use planning and environmental conservation. The Ministry has finalised a concept paper and is currently, with stakeholders, formulating the policy," the minister told the delegates.

Land sizes are one of the many reforms that are anticipated by the new Constitution and the National Land Policy. The two landmark documents stress that land should be held equitably, productively, efficiently and sustainably. The Constitution says the State may regulate land use and gives Parliament the power to enact legislation "to prescribe minimum and maximum land holding acreages in respect to private land." According to the draft National Land Policy, population growth and the demand for land have resulted in excessive fragmentation of land into uneconomic units. The policy proposes that the Government put in place a system to determine economically viable minimum land sizes for various zones and to bring the sub-divided land sizes into conformity with the postulates of economic viability. Land is now the most important source of national goods and services for the people, the national economy being primarily agro-based. About 80 per cent of the rural population derives its livelihood directly from land. Kenya is 582,646 square kilometres in area, but only less than 17 per cent of it is suitable for rain-fed agriculture. About 2.2 per cent of this is covered by forest reserves. Arid and semi-arid lands (ASALs) - characterized by grassland and savannah rangelands - make up the remaining 82 per cent. "If you sub-divide arable land into small units, it makes the land useless. That is why even the Constitution gives Parliament the mandate to set out the minimum and maximum acreages so that the land can be put into productive use."

Zimbabwe's private sector urged to support ICT projects

Delegates attending the Information Communication Technology symposium in Harare last month urged local businesses to support and fund ICT research, development programmes and centres. The symposium, hosted by the Zimbabwe National Chamber of Commerce in conjunction with ICT firms - Twenty Third Century Systems and Africom - was running under the theme "Embracing ICT for business growth".

Permanent secretary in the Ministry of Information and Communication Technology Engineer Sam Kundishora urged players in the private sector to facilitate the establishment of ICT infrastructure. "As a ministry we are struggling to establish communication infrastructure and it is our desire to create a communication national backbone."There is need for local people and businesses to develop interest and desire to support local ICT products. We need to trust and promote our own efforts," he said. Engineer

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Kundishora encouraged key players in the communication services sector such as Telecel, Econet and TelOne to collaborate and share infrastructure for the purpose of maximising utilisation. He said that shortage of energy in the country is also posing a challenge in the growth of the sector. His ministry is currently spearheading a review of the ICT policy, a factor that has been necessitated by technological advancements. "The 2007 ICT policy currently in place is now due for review. This follows the realization that the current one has been overtaken by events due to dynamism of ICTs," he said. "The new policy should be out before the end of the year."

In his presentation Afrosoft managing director Engineer John Mberi said there is need for the Government to formulate an enabling policy that will help unleash digital technology within the society. "We must focus on developing our human intellect and Government must put up a big budget for the development of Research and Development (R&D) centres. "The past ten years of economic stagnation erased local business competitiveness creating a unique socio-economic order needing re-engineering at all levels with latest technologies for relevance in the new global village," he said.

Fish farms need monitoring technologies

Poor countries could reconcile the soaring demand for fish with the need to safeguard biodiversity and make the fishing sector sustainable by harnessing a raft of new technologies, according to a report by the Food and Agriculture Organization (FAO).

The farming of fish and shellfish is the fastest-growing area of animal food production, accounting for almost half of the total supply of fish for food, says The State of World Fisheries and Aquaculture 2010, published on 31 January. And fish consumption is at an all-time high, said the report.

But, to ensure that wild fisheries and aquaculture continue to provide income for subsistence and small-scale fisheries and protein for billions of people - poor countries need to embrace the internet, geographical information systems (GIS) and remote sensing, said the report. Technology has "reached the point of becoming an essential step in providing the enabling environment for the development of marine aquaculture".

The capacity to use GIS - computer hardware, software, data and personnel designed to collect, update and analyze geographically referenced information - takes up a chapter in the report. Sensors can produce a wealth of data on temperature, the speed of the current, wave height and land and water use - whether they are on satellites, airborne devices, or the ground or are underwater. "Spatial tools provide ways to obtain, organise, analyse and report objective and quantitative ways to allocate space among all users and stakeholders," said James McDaid Kapetsky, a specialist from the US-based consultancy company Consultants in Fisheries and Aquaculture Sciences and Technologies.

"The driver [for using these technologies] is fundamentally competition for space for fisheries and aquaculture." The report said that GIS is already being used in developing countries, from Bangladesh to Cambodia and from Colombia to Malawi, to monitor aquaculture development. "The software is not costly," said José Aguilar-Manjarrez, aquaculture officer at the fisheries and aquaculture department of the Italy-based FAO. "There are many GIS and remote sensing software packages at low cost, plus the new trend is open source [free] software." But, he said, creating infrastructure, training personnel, and collecting, processing and maintaining data are expensive processes. In addition, some developing countries have limited understanding of the principles and methodologies associated with spatial decision-making tools in marine science. And there is a need to strengthen collaboration and data-sharing between organisations. In Colombia, the Marine and Coastal Research Institute (Invemar) is implementing a tool called Geovisor which will help fishermen locate shoals more efficiently using satellite information.

Call for Papers: Mapping innovations in spatial demography

Contributions are invited to a special edition of the Journal of Maps devoted to recent innovations in the usage of mapping and GIS in the field of spatial demography. The rationale for the special issue stems from the growing application of GIS and spatial statistics in research aimed at understanding population and behavioral characteristics associated with spatial demography. As a result, this is a general call for a special issue entitled 'Mapping Innovations in Spatial Demography'.

The Journal of Maps (http://www.journalofmaps.com) is an open-access electronic journal that aims to provide a forum for researchers to publish maps and spatial diagrams. It provides a unique outlet for graphical material that may otherwise be expensive or difficult to publish in a conventional paper-based journal. All papers are expected to consist of a map or series of maps accompanied by fairly brief

explanatory text. Papers should be bespoke, and the mapping of reasonable quality. All papers in this special edition will be peer reviewed. To submit a paper, authors should do the following:

1. Submit a short draft (500 word limit) outlining the key themes and scope of the paper, where possible including example mapping, by 29 July 2011.
2. Submit a completed paper (2500 word limit) by 6 January 2012.
3. The special edition will be published in December 2012.

Reviewers will discuss ideas for papers and their suitability with potential contributors prior to the short draft submission stage. Please email Jeremy Porter (jporter@brooklyn.cuny.edu) or Frank Howell (frankmhowell@gmail.com) in the first instance. All submissions should be made via the Journal of Maps website (www.journalofmaps.com) where further guidance on all aspects of submission can be found.

Call for papers: Young Scientist Workshop, International Water Week, 31 October - 4 November 2011, Amsterdam, Netherlands,

The Young Scientist Workshop is an intensive scientific event students and international young professionals or PhD student working in the area of urban water management or urban planning from the water industry and public organisations. The workshop focuses on urbanisation under pressures of growing population and climate change. The themes are:

- Drinking water availability
- Sewer systems
- Sewage treatment
- Drainage, including floods
- Integrated water management

. You are invited to prepare a scientific paper and/or case study addressing a specific water problem integral to the growth of cities under the stress of climate change. The topic concerns the challenges of providing water systems in urbanizing areas, a cross-cutting topic covering water management, water supply, sanitation and spatial planning. After review the selected papers will be published in the IWW-YSW proceedings.

Submit an abstract of about 500 words to the conference secretariat before 30 June 2011. Full paper manuscripts are expected to be submitted before 1 September 2011. The best paper will be selected by a scientific jury and the winner will be announced during the IWW. The prize associated with the award is 1500 euro. For information and registration, visit: ysw(at)waternetwerk.nl or www.internationalwaterweek.com.

International conference "Applied Geoinformatics for Society and Environment", 15-19 August 2011, African Institute for Capacity Development (AICAD), JKUAT, Nairobi

The Department of Geomatic Engineering and Geospatial Information Systems of JKUAT in conjunction with the Stuttgart University of Applied Sciences are co-hosting an international conference "Applied Geoinformatics for Society and Environment" at the African Institute for Capacity Development (AICAD), JKUAT, Juja from 15-19 August 2011. Further information, contact: Prof. Franz Behr at franz-josef.behr@hft-stuttgart.de.

4th African Leadership Conference on Space Science and Technology

Call for papers and exhibitors - 4th African Leadership Conference on Space Science and Technology for Sustainable Development (ALC2011) Theme: Building a shared vision for space in Africa, 26-28 September 2011, White Sands Beach Hotel, Mombasa, Kenya The African Leadership Conference (ALC) is a biennial forum established by the Governments of Algeria, Kenya, Nigeria and South Africa. These Governments are in the forefront of an ongoing plan in the continent for development... (1723 more chars). Source: Servir Community Blog.

AfricaGIS 2011 Announcement

EIS-AFRICA has issued the following statement regarding AfricaGIS 2011. After discussions with members of the local and international organising committee as well as potential sponsors of AfricaGIS 2011, EIS have had to come to a difficult decision to cancel AfricaGIS 2011 in Cairo, Egypt.

The current political situation in Egypt and uncertainty about the future has forced the EIS esteemed colleagues at NARSS to suspend all preparations to host AfricaGIS 2011. EIS-Africa, the Board of Directors and members of the International Organising Committee has place on public record gratitude to the members of the Local Organising Committee especially the officials of NARSS for their sterling effort. The

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decision was due entirely to circumstances beyond NARSS's control and in no way reflects on NARSS's professionalism and dedication to making AfricaGIS 2011 a huge success. In terms of protocol, EIS-Africa has made contact with the second bid nation to host AfricaGIS 2011 and will offer this country the right to host the event. Updates on the new host nation, date and venue will follow shortly. Sives Govender (Executive Director EIS-AFRICA).

Practical SDI implementation materials from within and outside of Africa

UK takes the helm of international effort to provide satellite images in times of crisis

The UK assumes leadership of the International Charter: Space and Major Disasters at a meeting in London on 11 May 2011. The Charter is an organisation that coordinates space agencies worldwide in gathering vital satellite images of disaster-stricken regions - providing the images to civil protection authorities to inform their response efforts and save lives. As Chair of the Charter, the UK Space Agency will take responsibility for implementing strategy and policy, and has committed to finding ways of widening national access to the Charter's services.

Speaking ahead of his keynote address at the Charter Board Meeting in London, Minister for Universities and Science David Willetts said: "The Charter is a great example of the enormous benefits space can bring to our everyday lives. It provides invaluable and immediate satellite images during times of crisis, from tracking extreme weather or to dealing with the aftermath of earthquakes and tsunamis, as we saw very recently in Japan. "During the UK's chairmanship we're keen to build on the Charter's success and open up international access to the world's satellite resources. This means the Charter will play an even bigger role in helping countries respond effectively to emergencies, and ultimately help save lives."

Since it was set up in 1999, the Charter has provided images during more than 300 disasters in more than 100 countries - most recently following the earthquake in Japan and the recent severe tornadoes in the southern United States. So far this year, the Charter has been activated for the flooding in Australia, Brazil, Mozambique, Namibia and most recently in central Midwest America, as well as hurricane Yasi, and earthquakes in Pakistan and New Zealand and Japan. The Charter has been activated over UK territory a total of five times to date: twice during the 2007 floods, once during the Lyme Bay oil spill that same year and twice during volcanic eruptions on the British Overseas Territory of Montserrat in 2003 and 2008. Further information, contacts Julia Short : Julia.short@stfc.ac.uk, Robin Wolstenholme: r.wolstenholme@bcmpublicrelations.com and Sally Catmull: sally.catmull@bis.gsi.gov.uk. For the UK Charter images, visit: http://www.flickr.com/photos/spacegovuk and links: http://www.dmcii.com/, http://www.disasterscharter.org/home, http://www.bis.gov.uk/ukspaceagency.

Satellites help Colombian fishermen chase fish

The US-based National Aeronautics and Space Administration (NASA) and the European Space Agency, researchers from the National University of Colombia identified chlorophyll hotspots, which indicate the presence of the phytoplankton that some fish feed on, and a range of surface temperatures.

The technology allows researchers to find and study promising fishing areas, but it may also help fishermen to spend less time and money looking for fish. Fisherman caught 40 per cent more fish in initial trials, according to the researchers. "We are not the first to use this methodology", John J. Selvaraj, lead researcher based at the Palmira branch of the National University of Colombia, told SciDev.Net. Chile, India and Japan have used similar technologies. "In our case, we are identifying those areas in the ocean where two masses of water with different chemical and physical characteristics meet [known as thermal fronts], allowing us to predict areas rich in fish." This technology may be useful both for fishing and for conservation, Selvaraj said.

The researchers are organising free workshops and teaching fishermen to read the satellite maps. They are also looking for funding to design websites with maps that are updated daily, since these productive areas may stay in one spot for only a few weeks, said Ángela I. Guzmán, a co-author of the study and biologist at the University of Colombia. But Leonor Botero, a marine biologist and research director at Sabana University, Colombia, said that uncontrolled commercial fishing has caused a quick decline in fish populations worldwide. "Applying technologies for reaching areas with big concentrations of fish to increase the catch could, in the long run, worsen the situation," she told SciDev.Net. "It is necessary to take into account breeding periods and the life cycle of each species and to allow populations to recover." "The

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development and use of sophisticated technologies to detect fish banks should be accompanied by rigorous research and monitoring of the populations that are fished in order to avoid exhaustion," she said.

Google maps can benefit ordinary people

In an interview, Mr. Momodou Janneh, a Google mapper, who have been mapping Gambia, Senegal, Sierra Leone and recently Sudan, and was part of the team that mapped Southern Sudan in preparation for the referendum held recently talks about the benefits of Google maps to ordinary people. He argued that Google maps are a potential catalyst for development to deprived communities.

He says there is a site called Google map maker where one can go to. There is satelite imagery on the site that one can modify or identify structures such as roads, mosques and churches, police stations and hospitals. Knowing some of these important places is essential. In an emergency, it is necessary that one knows where a hospital or police station is located. With the latest telephones one can get direction to where the nearest hospital or police station is situated. We hope to make it as good as Europe where one can get into his car, press his satellite navigation system and it will take the person where he wants to go.

Governments can use Google maps to find out where basic facilities such as hospitals, schools and roads are not available. The maps can identify communities that lack these facilities; Government can use this vital information to spread development to areas where it is much needed. Even aid agencies and charities can use Google maps to locate deprived communities. They in turn can use the information to help those communities. Janneh is ranked number 57 in the world recently organized a training aimed at putting as many Gambians as possible on Google mapping. He hopes to organize another training soon and any one interested in mapping his community is invited. If there is any department or institution that is interested in training its staff on Google mapping, let them contact me and am ready to train their staff free of charge. Janneh can be contacted at sanyangfishing@gmail.com.

Land cover atlas provides easy access to land cover change information

The Land Cover Atlas, recently released by the NOAA Coastal Services Center, provides user-friendly access to the regional land cover and land cover change information developed by NOAA's Coastal Change Analysis Program (C-CAP). This tool eliminates the need for desktop geographic information software or advanced technical expertise by processing the C-CAP data for the user and providing easy access to that distilled information. Users can visually explore and analyze NOAA's geospatial land cover data by county, query for specific types of land cover changes, and easily create county-specific reports that include maps, charts, and statistics. The Land Cover Atlas can help users see the effects of past land use decisions, document trends, and consider future land use planning needs.

GIS Tools, Software, Data

Web tools from CARPE and WRI provide geospatial information to support planning and environmental activities in the Congo Basin
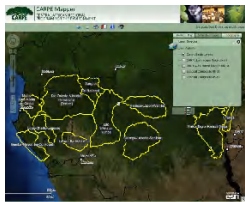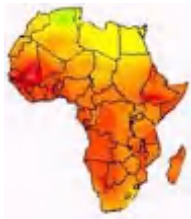
The United States Agency for International Development's (USAID) Central African Regional Program for the Environment (CARPE) has updated CARPE Mapper and CARPE Data Explorer in support of its activities in the Congo Basin. These state-of-the-art web tools will improve accessibility to geospatial data for Central Africa. The new version of CARPE Mapper is a more powerful, user-friendly Web mapping application that serves geospatial data provided by CARPE partners for the entire Congo Basin. Data layers include: infrastructure, hydrology, administrative boundaries and CARPE landscapes and macro-zones. The CARPE Mapper was developed with ESRI's Adobe Flex template application and ArcGIS Server 10. The new CARPE Data Explorer provides improved search and download functionality for basin-wide data and metadata including: maps, posters, shapefiles, imagery and other related documentation. CARPE Data Explorer was developed with the Geonetwork open source platform.

The Africa Infrastructure Knowledge Program

The Africa Infrastructure Country Diagnostic (AICD) was an unprecedented knowledge program on Africa's infrastructure that grew out of the pledge by the G8 Summit of 2005 at Gleneagles to substantially increase ODA assistance to Africa, particularly to the infrastructure sector, and the subsequent formation of the Infrastructure Consortium for Africa (ICA). The AICD study was founded on the recognition that sub-Saharan

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Africa (SSA) suffers from a very weak infrastructural base, and that this is a key factor in the SSA region failing to realize its full potential for economic growth, international trade, and poverty reduction.

Interactive Infrastructure Atlases: download a large number of interactive infrastructure atlases (maps) that allow you to easily create your own customized infrastructure maps ready for use in documents and presentations. For the more technical user, the public domain GIS data underlying these atlases can also be downloaded in the form of shape files for further analysis.

GIS Data Files: ArcGIS files have been placed on the website. They are suitable for GIS professionals or other interested parties who can use the underlying data to inform their own analysis and create their own maps. Only public domain data has been placed on the site, hence not all of the layers available in the interactive infrastructure atlases are available in ArcGIS form.

Forest Monitoring for Action (FORMA)

For people working on REDD and forest conservation issues, FORMA uses freely available satellite data to generate rapidly updated online maps of tropical forest clearing in Asia, providing useful information for local and national forest conservation programs, as well as international efforts to curb greenhouse gas emissions by paying to keep forests intact such as REDD. The tool can easily be expanded to other forest regions and the CGD team is working to do this.

Satellite data and advanced methods to map biofuel in ecosystems

BioCarbon Tracker, a Greenergy project developed by Ecometrica, is an innovative online project to map and monitor the impacts of biofuel and commerical agricultural demand on stocks of carbon in forests and other ecosystems - how changes in land use impact on the carbon stored in vegetation. Biocarbon is the carbon absorbed by plants through photosynthesis and stored in their biomass and soils. Maintaining stores of biocarbon is important for minimising carbon dioxide in the atmosphere.

BioCarbon Tracker uses satellite data and advanced methods to map the ecosystems where biocarbon is stored, identify vegetation at risk from land use change and monitor where high biocarbon stock land such as forest is converted to agriculture. It is a free service provided by Greenergy in association with Ecometrica, the University of Edinburgh and the UK's National Centre for Earth Observation. Check out the highest resolution online maps of terrestrial carbon currently available at http://biocarbontracker.com/.

Elshayal Smart GIS - Last FREE version 4.35 Map Editor Users

- Download and save Google Earth Images as rectified images with world file format .jgw
- Save the output layout images as rectified Images.
- Open and Convert NASA (ASTER & SRTM) DEM to Tin shape file

Elshayal Smart GIS Map Editor Features:

Free GIS Map Editor Software, Download, and mosaic Google Earth tiles map, Convert AutoCAD DXF to shape file, Convert NASA ASTER & SRTM DEM to Tin shape file, Trace, and save GPS route, Geo Reference, and Rectify Raster Images, Edit, and make shape files, Zoom in & Zoom out, Pan, Identify, and Selecting features, Edit, move, and Snap vertexes; Attribute Data Base query builder and Analysis, Spatial Location query builder and Analysis and Data transfer by location, Find Shortest Path, Convert Coordinates Systems, Convert Shape type and grouping; Edit, and make Data Tables; Layer properties; Undo, Redo; Thematic Color Field; Run VB Script; Rotate and Scale; Delete and Copy and paste selected features; and 3D View.

CDM Methodology and Technology Selection Tool

The UNEP Risoe Centre announces a new Methodology and Technology Selection Tool. The tool aims at filling a knowledge gap within the CDM and will assist CDM stakeholders getting an overview of technologies, the applicable methodologies and a general perspective through concentrated statistics of all CDM project types in any given sector. Building on the categorization of CDM Projects of the UNEP Risoe CDM/JI pipeline data base, which categorizes 25 types and more than 100 subtypes of CDM projects; the website provides snapshot information on most technologies relevant for emissions reduction and relate them to the approved methodologies currently applied in CDM projects. www.cdm-meth.org provides specific information on:

- The technologies used in CDM projects and the sectors where they are applicable
- The methodologies and their applicability for every subtype
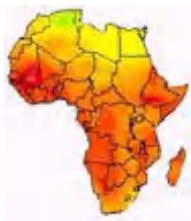
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Additionally a platform for exchange of methodology related experiences that allow practitioners to improve their understanding of different methodologies' and be aware of the barriers is provided.

Geospatial Research, Applications, Reference Material

### Structural and stratigraphic mapping of Emi field, offshore Niger Delta
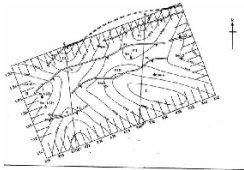
The Niger Delta, where oil and gas are predominantly trapped in sandstones and unconsolidated sands in the Agbada formation, ranked among the world's major hydrocarbon provinces. The traps, structure and stratigraphic, could be very subtle and complex and are therefore, difficult to map accurately. The degree of reliability and precision of the mapping can be greatly enhanced by integrating seismic data with well logs commonly used independently in hydrocarbon exploration and exploitation studies.

In this paper, seismic data were integrated with well logs to define the subsurface geometry, stratigraphy and hydrocarbon trapping potential of Emi-field, off shore Niger Delta. Lithologic units were identified on the logs and correlated across the wells. The stratigraphic cross-sections produced show a general lateral continuity of the lithologic units across the field. Seismic-to-well ties revealed that, high amplitude reflection events correspond to sand units, whereas, low amplitude reflection events correspond to shale units. Four horizons, H1, H2, H3 and H4 were mapped and structure contour maps produced for each of the horizons. Closures considered as good hydrocarbon prospects were identified and delineated. Stratigraphic plays such as pinch-outs, unconformities, sand lenses and channels are also suspected. The integration of seismic data with well logs proved to be a useful tool in structural and stratigraphic mapping and in predicting lateral and vertical variations in the lithologic units. It was successful in defining the subsurface geometry, stratigraphy and hydrocarbon trapping potential of the field.

The technique proved to be useful in structural and stratigraphic mapping and in predicting lateral and vertical variations in the lithologic units reasonably. Hydrocarbon prospect areas were delineated in the structured maps produced. The growth faults may have acts as migratory paths for hydrocarbon from the underlying Akata formation. Thus, it is necessary to integrate all exploration and evaluation tools so as to effectively explore the study area and optimize well locations. Amplitude variation with offset (AVO), seismic attributes analysis and seismic inversion should be carried out in the study area to better discriminate the lithology, characterize the reservoirs and define the hydrocarbon types.

### Satellite images could aid long-term disaster recovery
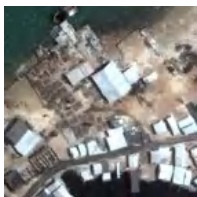
Satellite images could be used to track and quantify long-term recovery efforts in regions stricken by natural disasters, say researchers who will be entering talks with potential users in Haiti, Pakistan and Thailand from April. In the immediate aftermath of a natural catastrophe, such as the earthquake and tsunami that hit Japan on 11 March, the priority is searching for survivors and saving lives through providing food, shelter and basic sanitation. But longer term recovery including the rebuilding of infrastructure and amenities such as schools and hospitals can take decades, depending on the extent and the location of the disaster. Now, a group based at the University of Cambridge, United Kingdom, working with industrial partners Cambridge Architectural Research Ltd. and ImageCat Inc., says it has developed the first systematic approach to monitoring and evaluating this process. The method, which has been submitted to Disasters journal, involves tracking a region using high-resolution satellite images, which have become more abundant and affordable in recent years.

The researchers say that the required, one-metre resolution satellite images can be purchased for US$25 per square kilometre, and updated images can be acquired every 2-3 days. "Analysing past recovery processes will also allow us to identify examples of good and bad practice and to provide 'lessons learned' to stakeholders that can hopefully be applied to future and ongoing responses," Brown said. Their approach is to integrate satellite data into 13 'performance indicators' such as length of roads and distribution of housing. Data is then compared with on-the-ground reports collected from household surveys and interviews with recovery workers.

Detecting forest degradation in Marakwet district, Kenya, using remote sensing and GIS

Deforestation is a widespread problem and has many negative impacts. The biggest threat to forest is human activities. Despite increasing efforts regarding forest management and forest conservation, the
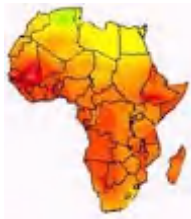
deforestation continues at a high rate to give space for other land uses such as agriculture and pasture. The world's population continues to grow and Africa is the continent with fastest growing population. During the last 100 years this has led to major changes in the African landscape, and Kenya is no exception.

This MFS (Minor Field Study) was conducted in cooperation with the nongovernmental organization SCC-Vi Agroforestry. The study area is located in Marakwet district in western Kenya and the district has one of the largest remaining natural forests in the country. At the same time, the area is experiencing ongoing illegal deforestation. The aim of the study was to investigate and map the deforestation in the study area during the 23 years period from 1986 to 2009 by using satellite data. Furthermore, the aim was to create a future scenario. Data of the population in the district was then compared with the results to find a correlation.

The result indicates great changes in forest cover. During the 23 years period, 4 149 hectares of forest have been cleared in the study area, representing a decrease of 14 percent. The deforestation rate has decreased but the problem remains. If nothing is done to prevent the ongoing deforestation, 45 percent of the forest in the study area will disappear until the year 2100.

## Cadastral innovation driven by society: Evolution or Revolution?

Our society is digitising rapidly and this also affects cadastral and land-administration organisations. Due to fast IT-developments and globalisation, the demand for data and services changes from office-based applications towards web-based and location-based. There is both a growing ability and need to analyse complex issues. Furthermore, decision making is done more and more in virtual (spatial) environments. Hence, the provision of high-quality authentic governmental data and services becomes more important. Our administrative systems have to be adapted accordingly.

This paper deals with the driving forces in society that causes a changing use and demand for land-administrative and cadastral data. Based on these changing demands, the data, systems, people, legal aspects and communication channels need to be adapted rapidly.

In this paper an overview of the consequences for the Dutch Kadaster is presented, to be translated into appropriate solutions and innovations. Implementation of measures to meet the actual developments requires a matching business strategy and compliance with often legally constrained business-processes in land administration.

The conclusion of this paper is that innovation is not as much an option but a prerequisite that affects our information strategy, systems, services, organisation and way of working. The increasing pace of innovation demands can no longer be tackled by a single-party strategy. Therefore, the need for collaboration (open innovation) is stressed. If cadastral organizations embrace such an open approach, they will be co-creating the evolution of land administration and spatial data information systems. If not, they risk being a spectator and follower of revolutionary land-registry developments. Further information, contact: C.J. (Kees) de Zeeuw at kees.dezeeuw@kadaster.nl, web site: www.kadaster.nl.

How do satellite images and airborne imagery relate to agriculture and forestry?
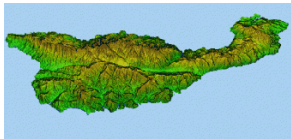
Satellite and aerial imagery play a significant role in modern day agricultural production and forest related activities. Advances in image sensors help to identify and delineate landscape level food production not only in different ways, but more quickly and effectively than before - and at higher resolutions. Image processing software supports these sensors, providing greater analytical capabilities, thus improved knowledge, than was previously possible.

The top ten per cent of agricultural producers use imagery in their operations, and modern day forest operations depend upon imagery for forest management purposes. If we strip away all of the talk and zero in on the primary value of satellite and airborne imagery to agriculture and forestry, the answer is two-fold. Firstly, imagery provides valuable information that is useful for planning and managing the potential crop output, in a sustainable way. Imagery results in more sustainable food production. Secondly, imagery enables the gathering of knowledge about agriculture and forestry through local to regional to global scales. That knowledge enables a better understanding of overall production factors, but also contributes toward risk management decisions and supports predictive modeling of food supply and consumption. If we know what the world's crops and forests are doing, then we can adapt for stable or unstable outlooks.

To understand the changes involving maps issued once a year as compared to near real-time, based on remotely sensed imagery today, it is important to realise that re-visitation frequency (time a sensor makes an image of the same place till the next time) has decreased considerably. There are more satellites and digital cameras in space / air than any other previous time. This means they revisit places more frequently -

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providing updated imagery (and processed results) more often. Additionally, the above frequency now includes more high resolutions (each pixel has more detail and extractable value). The per pixel cost /value has changed markedly - meaning more information per unit cost. What this results in is a shift to more frequent use of remotely sensed data to drive information and details, not only about seasonal cropping or yearly forest growth, but to act as a means for in-crop and current forest operational planning and operations.

Modest volcano-monitoring 'can still save lives'

A few, well-placed monitoring stations can make a huge difference to a developing country's ability to alert its people to an imminent volcanic eruption, an international meeting of seismologists heard this month. Poor countries sometimes install over-ambitious monitoring networks which then suffer because of unstable power sources or lack of information and communication technology (ICT) infrastructure, according to Andrew Lockhart, a geophysicist with the US Volcano Disaster Assistance Program (VDAP), which has installed networks on more than 40 volcanoes in 13 developing countries.

Yet, just a small amount of investment in tried and tested technologies for monitoring volcanoes can help reduce the fatalities and economic losses resulting from volcanic emergencies, he said. Volcano monitoring can also help anticipate and reduce risks, and improve understanding of volcanic hazards, which can sometimes cause other disasters such as earthquakes, he told the annual meeting of the Seismological Society of America (13-15 April). For example, advance warning of the October 2010 eruption at Merapi, Indonesia, helped 10,000 people escape danger. "It is important for policymakers to note that, although monitoring ability and hazard mitigation increase with the number and variety of monitoring sites, it is also true that a very limited network of well-placed telemetred seismic stations [to remotely measure and transmit information] provide a great deal of value in hazard mitigation," Lockhart told the meeting.

"A relatively small investment in digital seismic equipment buys a lot of monitoring capability if done correctly," he added. "Sustainability is difficult if a government chooses to make a large investment in the purchase and installation of many volcano monitoring stations but fails adequately to fund the costs of upkeep." Developing countries' monitoring systems can suffer from a variety of problems, including:

- demoralisation in the institutions that oversee them because of low pay, high stress and lack of resources.
- Animosity between rival national institutions with overlapping responsibilities for monitoring volcanic hazards and with differing levels of international support
- Lack of power and ICT infrastructure, or find it difficult to replace key equipment - sustainability is challenging because monitoring sites are exposed to extreme conditions.
- Benefits of training are rarely propagated or do not survive staffing changes, and poor government salaries drive well-trained engineers into the private sector.
- Lack of an adequate and flexible budget, which limits the adoption and application of available technology.
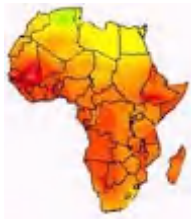
Training Opportunities

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.

GIS and remote sensing in disaster risk management training, 27 June - 1 July 2011, Nairobi, Kenya
Indepth Research Services (IRES) invites you to attend a five-days training in Use of GIS and Remote Sensing in Disaster Risk Management (3rd Edition). The course objective is to enhance the capabilities of executive managers and technical staff involved in disaster risk management by providing them with understanding on the use of spatial information in disaster risk management.

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![GSDI Global Spatial Data Infrastructure]

Participants acquire hands-on skills in application of geographical information system (GIS) and Remote Sensing (RS) in disaster risk management interventions, and learn to work with, aerial photographs, satellite images and digital maps that are the key to a better understanding of hazard, vulnerability and risk.

The course will discuss the Use of GIS and Remote Sensing in Disaster Risk Management under the following themes:-

- Hazard, vulnerability and risk assessment with GIS and RS;
- Application of risk information and spatial data infrastructure;
- Early warning systems and disaster monitoring;
- Damage assessment and data dissemination;
- Guided Exercises and study tour

There will be presentations from Google through their Kenya regional office representatives on Google Earth, MapMaker and Open Data Kit (ODK). Software vendors, academic institutions and other leading agencies in disaster risk management, GIS and Remote Sensing in the region will also make presentations. The registration fee is USD 950, Exclusive of VAT, which will cover all the documentation, administration and meals during the course. The participants are expected to pay for their own accommodation. Registration form: http://www.indepthresearch.org/downloads/Registration_GIS_RS.pdf, training@indepthresearch.org. Register before 15th June 2011 and enjoy a 10% discount.

African Regional Centre for Space Science and Technology Education in English (ARCSSTE-E)

The African Regional Centre for Space Science and Technology Education in English (ARCSSTE-E) is established in Nigeria at Obafemi Awolowo University Campus, Ile-Ife. Within the frame work of its mandate to build capacity in core areas of Remote Sensing and GIS, Satellite Communication, Satellite Meteorology and Global Climate and Basic Space and Atmospheric Sciences Applications.

The Space Education courses comprise a 9-month Post Graduate Diploma programme (January to September) every year; and an optional 12 months MSc degree programme. The list of courses:

- Satellite Communication (SATCOM)
- Satellite Meteorology (SATMET)
- Remote Sensing/Geo Information System (RS/GIS)
- Basic Space

The Center trains participants mostly from English speaking African countries: Angola, Botswana, Cameroon, Egypt, Ethiopia, Ghana, Kenya, Lesotho, Liberia, Malawi, Mozambique, Namibia, Nigeria, Sierra Leone, South Africa, Sudan, Swaziland Tanzania, The Gambia, Uganda and Zimbabwe. Deadline for applications: 30 September of each year.

ESRI Technical Certification

Beginning in January 2011, users will be able to test for five certifications. The remaining eight are still in development and will be available later in the year. 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. The ESRI Technical Certification Web site lists specific skills that will be assessed in each exam, as well as training courses that aid in acquiring and improving these skills. Advice on the best training and preparation for a particular certification is available. Read more.

ESRI South Africa presents a full spectrum of GIS courses: June-July 2011

- 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'

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Various training venues are available at Esri South Africa, for further information contact: 011 238 6300
Email the training team

Free ESRI Courses

Free online course modules from ESRI's Virtual Campus site. Learn the basics of many of their software packages and extensions or take some concept courses such as a review of projections.

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 in the following tracks are offered:

- Fundamentals of ArcGIS Desktop
- Data and Map Production
- Geoprocessing and Analysis
- Enterprise GIS
- Multi-user Geodatabases
- Remote Sensing

Make plans and take advantage of the courses offered at the Authorized Learning Centre in Nairobi, Kenya. Arrangements can also be made for client's site training on request for 12-16 students. Download our course catalogue and current class schedule at http://www.esriea.co.ke/index.php/instructor-led-training. To register, visit http://esrieatraining.cloudapp.net/. For more information, contact by email: training@esriea.co.ke, telephone: +254 20 2713630/1/2 or visit the offices located on 3rd floor, KUSCCO Centre, Kilimanjaro Avenue, Upper Hill, Nairobi, Kenya.

Training at Oakar Services

Oakar Services continues to building capacity for geospatial solutions within Eastern Africa. The following courses are available in 2011, which are offered at Oakar's Training Centre or client's site.

GIS based courses	Duration (Days)
Introduction to GIS	2
Fundamentals of ArcGIS	5
Managing Water Utilities Using ArcGIS	3
Introduction to Web Mapping	3
GIS for Natural Resources Management	3
Using GIS for Resource Planning and Management	3
Working with ArcGIS 3D Analyst	2

GPS based courses	
Data Collection Using GPS	2
Mobile Mapping Using MobileMapper Field software	2
Mobile Mapping Using ArcPad	2

Remote Sensing based	
Introduction to Remote Sensing	2
Image Processing with ERDAS Imagine	3
Fundamentals of ERDAS IMAGINE I	4
Fundamentals of ERDAS IMAGINE II	3
Introduction to Leica Photogrammetry Suite (LPS)	4
Stereo Analyst for ArcGIS	3

Specialist Course	
ArcFM UT (Utilities Solution)	5
Introduction to Cellular Expert and Implementation	5

You can register for Focused Training Events on GIS, GPS and Remote Sensing. Futher information and enrollment - www.osl.co.ke or email at training@osl.co.ke or call Catherine or Teddy on Tel: +254-20-2718321 / 2715276 | Mobile: 0721-244785 / 0733-448255.

ITC Education Brochure 2011-2012 online

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Read the new ITC Education brochure with all the degree, diploma and certificate programmes in geo-information science and earth observation starting in 2011. More information is available at www.itc.nl/Pub/Study/CourseFinder

NFP Course List 2011-2012

Short courses in agriculture, forestry and fishery, fellowship provided. Application deadlines: 1 October 2011.

L'Ecole Régionale post-universitaire d'Aménagement et de gestion Intégrés des Forêts et Territoires tropicaux (ERAIFT) [Regional School on Integrated Management of Tropical Forests and Territories] – l'ÉRAIFT est une école d'avant-garde au service du développement humain et durable de l'Afrique.

Elle a pour vocation de former des Spécialistes (DESS & Ph.D) de l'Aménagement et de la Gestion des Forêts et Territoires Tropicaux, par une Approche Interdisciplinaire, Globale et Intégrée, autrement dit Systémique. Contact: info@eraift.org.

Short-courses offered by RECTAS in 2011, Ile-Ife, Nigeria

The Regional Centre for Training in Aerospace Surveys (RECTAS) is offering a number of three-week courses. Also note that RECTAS is able to package and deliver customised training for intrested organisations. These could be either advanced or other certificate programs. Contact: info@rectas.org or thontteh@rectas.org.

RCMRD - Courses offered by the department of Remote Sensing, GIS and Mapping

The Centre offers the following courses in geo-information. The courses last between one week to three months, and offered through out 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

Funding Opportunities, Awards, Support

PhD Fellowship: Call for applications open

For the application deadline 1 November 2011, the following research topics are available within the two scientific fields of the FONASO programme (i) economics and policy, and (ii) ecology and silviculture.

The FONASO topics fall within the following 4 categories:
- Economics and Socio-Economics of Forest and Nature
- Governance, Policy and Sociology of Forests
- Forest Ecosystems and Ecosystem Services
- Silviculture and Sustainable Forest Management

FONASO doctoral candidates will be part of research groups at two or more of the twelve partner institutions. All applicants must choose one of the described topics as base for their doctoral study synopsis.

2011-2012 Fully Funded CARTA PhD Fellowships, Africa

The CARTA program draws together disciplines required to address the complex processes that influence health. These disciplines include Epidemiology, Psychology, Biostatistics, Anthropology, Health Economics, Health Promotion; Demography, Sociology, Health Systems, Health Policy, Development Studies, and their interfaces with the biomedical sciences. The CARTA multidisciplinary approach will prepare its graduates to better address questions of contemporary policy relevance such as the social determinants of health, and the limited impact of technological advances on health in Africa.

CARTA is currently offering a fully-funded, collaborative doctoral training program in public and population health. This program has been developed in response to the great challenges faced by Africa's institutions of higher education in addressing the training and retention of the next generation of academics in the region. Women are particularly encouraged to apply. CARTA has reserved a small number of scholarships for doctoral students conducting research on issues of sexuality and reproductive health and rights.
Participating African Universities: Makerere University, Uganda; Moi University, Kenya; National University of Rwanda; Obafemi Awolowo University, Nigeria; University of Dar es Salaam, Tanzania; University of Ibadan, Nigeria; University of Malawi; University of Nairobi, Kenya; University of the Witwatersrand, South Africa. Participating Research Institutes: African Population & Health Research Center (APHRC), Kenya; Agincourt Population and Health Unit, South Africa; Ifakara Health Institute, Tanzania; KEMRI/Wellcome Trust Research Program, Kenya. Application deadline: 15 July 2011.

European Commission (EC) - Food Security in Ethiopia
The EC aims to increase micro-finance services, marketing, small enterprise, and alternative employment to strengthen agricultural development in the food-insecure regions of Ethiopia. The program is open to nonprofit organizations in Europe, inter-governmental organizations, developing countries (e.g., Ethiopia), and OECD/DAC member states. Reference EuropeAid/131211/L/ACT/ET. The deadline for concept notes: 30 June 2011.

InnoCentive - Communications from Communities About Climate Change
In collaboration with the World Resources Institute, InnoCentive will make awards for the best ideas on communication platforms that connect communities with public and private organizations regarding community problems related to climate change. The awards will range from US$1 thousand to US$10 thousand. The closing date: 12 June 2011.

International Livestock Research Institute - Africa Biosciences Challenge Fund 2011
The Biosciences eastern and central Africa (BecA) Hub announces research fellowships for African agricultural scientists and students. Funding will cover travel, accommodation, stipend, and research costs for short-term projects. Research should focus on food and nutritional security or animal health, using the advanced capacity available at the BecA Hub. The program will accept 15 individuals from the BecA countries (listed in the announcement). Applications should be received before 10 June 2011.

U.S. Agency for International Development - MENA Water Grants 2011
USAID-Cairo announces the MENA Water Grants Program for training, applied research, and information dissemination to transform water policy, management, and capabilities within the Middle East and North Africa. USAID expects to make five grants. Eligibility is unrestricted. Funding Opportunity USAID-EGYPT-263-11-008-RFA. The closing date: 8 June 2011.

European Commission (EC) - Food Security in Dem Rep Congo 2011
The EC Delegation in the DRC calls for proposals to ameliorate food insecurity. Funding will be awarded in separate lots for projects that address three objectives: (i) improved handling and distribution systems for agricultural products in Kinshasa and other urban centers; (ii) raising the level of nutrition for vulnerable children in Lodja and Lomela; and (iii) agroforestry development for charcoal and other products in urban peripheries. Eligibility extends to nonprofit organizations in Europe, developing countries (including DRC), and OECD/DAC member countries -- and to inter-governmental organizations. Reference EuropeAid/131212/L/ACT/CD. The deadline for submissions: 7 July 2011.

International Elephant Foundation - Grants 2012
The International Elephant Foundation makes grants for conservation and research of elephants in Africa and Asia. Grant themes in 2012 are: actions to address human-elephant conflicts; actions to eliminate killing and trafficking of elephants; community capacity building; conservation education; management of elephant populations; and critical diseases. Awards are typically about US$10 thousand per year. Eligibility extends to organizations and individuals internationally -- including students, scientists, and institutions. Deadline for the application: 12 August 2011.

Stockholm International Water Institute - Stockholm Water Prize 2012

The Stockholm Water Prize is awarded annually for outstanding achievements supporting the availability, conservation, and protection of the world's water resources. The award is open to individuals and organizations of any nationality whose work contributes broadly to the conservation and protection of water resources. The Prize is US$150 thousand and a crystal sculpture. Deadline for nominations: 15 September 2011.

CODESRIA: Comparative Research Networks 2011

CODESRIA supports researchers in African universities and research centers through funding for Comparative Research Networks. The networks address priority research themes within CODESRIA's strategic plan, including: (i) Water and Water Resources in the Political Economy of Development and Citizenship; and (ii) Ecology, Climate, and Environmental Sustainability in Africa (among many other themes). Recent grants range from US$10 thousand to US$35 thousand per network. CODESRIA favors CRNs which are multidisciplinary, sensitive to gender issues, and inclusive of younger scholars. Closing date is 15 June 2011.

Consultative Group on International Agricultural Research (CGIAR) - IFAR'S Professional Development Program 2011

IFAR is a results-oriented foundation that supports partnerships, collaboration, and awards as a means of fostering scientific excellence in agriculture and related fields. IFAR's Professional Development Program in 2011 will consist of the annual IFAR Small Grants Program, including the Ravi Tadvalkar Memorial Scholarship, and the Wilfried Thalwitz Scholarship. (Additional details may be accessed at www.ifar4dev.org).

Nominations for these awards must be sponsored by one or more CGIAR Center/s (see www.cgiar.org for a full list of Centers), and the work programs proposed by applicants must be closely linked with the program of a CGIAR Center. Applicants are encouraged to collaborate with Center scientists when preparing their project proposals for submission to IFAR. Closing date is 30 June 2011.

TWAS - Grants for International Meetings 2011

The Academy of Sciences for the Developing World (TWAS) makes grants to support the organization of high-level international and regional scientific activities in developing countries by offering financial assistance for conferences, workshops, symposia, and special meetings held in these countries. Application deadline: 1 December each year.

TWAS - Prizes for Young African Scientists 2011

The AU-TWAS Young Scientist National Awards are prizes of US$5 thousand to young *(not over age 40)* African scientists in each of two categories: life and earth sciences; and basic sciences, technology, and innovation. Participating countries are Benin, Burkina Faso, Cameroon, Egypt, Ghana, Guinea, Lesotho, Malawi, Nigeria, Senegal, Sudan, and Zimbabwe. The closing date for nominations is 30 June each year.
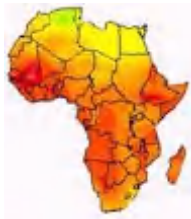
TWAS - Fellowships 2011

Each year, the Academy of Sciences for the Developing World (TWAS) coordinates with participating research institutions in the developing world to host visiting research fellows. The 2011 call announces fellowships for post-graduate training; post-graduate training for women only; post-doctoral research; and advanced research. The fields of research include biotechnology, natural sciences, chemical and biological sciences, and others. Partner (host) organizations are located in Brazil, China, India, Kenya, Malaysia, Mexico, Pakistan, and Thailand. The deadlines: 30 June - 15 September 2011.

Employment Opportunities

Chief Technician (GIS/Remote Sensing), Botswana

The University of Botswana seeks to employ a chief technician (GIS/Remote sensing). The incumbent will be responsible for the day to day up-keeping of the Remote Sensing teaching and research labs, making sure that all the equipment are in safe custody and in working condition, working with lecturers, demonstrators and teaching assistants and technical staff to assist in administering GIS and RS practical sessions for both undergraduate and graduate students, up-keeping and making available collective/shared digital data sets in the Department, will supervise the setting up of equipment or material for teaching and research as well as

help staff and other researchers, as appropriate, to effectively utilize equipment and image processing software for remote sensing operations; expected to supervise, train and guide junior staff under his/her field and evaluate and advise on the performance and training needs of RS Technical Staff; assist in purchasing new software/hardware, renewal of software licenses and acquisition of RS data from different data providers and any other material needed for the functioning of GIS/RS labs. Requirements:

- HND in Remote Sensing (RS) or Geomatics, but preferably a Masters Degree or equivalent with specialization in the above related field plus 5 years post qualification and demonstrated excellent administrative and supervisory abilities.
- Individuals with a first degree in a relevant field must have a postgraduate diploma/certificate in RS plus at least 3 years experience at a level of Senior Technician excluding the period of full-time study, displayed excellent administrative and supervisory abilities and a record of outstanding service in GIS/RS operations and IT can also apply.
- Strong interpersonal and Communication skills are an added advantage. Must have skills in aerial photography and different types of multi-spectral satellite and airborne data and be conversant with commonly used image processing software such as IDRISI, ENVI, ERDAS Imagine as well as Windows and DOS operating systems.
- Have an aptitude to learn new skills, be able to work with minimum supervision and must be fully conversant with the use of RS equipment such as mirror/pocket stereoscopes, field radiometers/spectrometers and Global Positioning Systems.

Send your application to: The HR Manager, Faculty of Science, Private Bag UB 00704

University of Botswana, Gaborone-Botswana; Telephone: (267) 355 2459; Fax (267) 318 5097; E-mail: fosvacancies@mopipi.ub.bw. Apply online. Closing date: 10/06/2011.

Project Manager, Capacity Development, Abuja, Nigeria

Pact seeks a Project Manager to oversee a short term capacity development (CD) project in northern Nigeria from June – September 2011. The Project Manager will work in coordination with Pact staff to establish working relationships with local health organizations; conduct organizational capacity assessments (OCAs); facilitate focus groups; lead results debriefs; and contribute to donor reports. The Project Manager will report to Pact's Global Director, Capacity Development and will be supervised on a daily basis by Pact Nigeria's Deputy Country Director. The Project Manager will lead, but not directly supervise, a team up to six local staff members. Although this is a short-term posting, there is potential for this position to evolve into a longer-term role. The incumbent should posses:

- Demonstrated interpersonal, team building and communication skills;
- Experience conducting organizational capacity assessments and facilitating focus groups;
- Ability to manage complex interwoven activities, and move a project towards its goals;
- Strong analytic and critical understanding;
- Excellent organization and planning skills;
- Self-starter and independent thinker; and
- Ability to travel regularly and at short notice to sometimes challenging settings.
- Master's degree or equivalent experience in organizational development, public administration, business administration, international development, or other relevant field preferred;
- Minimum 3 years' experience in program management required, 1 – 2 years in Africa and/or Nigeria preferred;
- Knowledge and understanding of the health sector in Nigeria; and

Please go to http://www.pactworld.org and complete an online application. Closing date: June 22, 2011.

National Director, Bamako, Mali

World Vision, (www.wvi.org) the world's largest international Christian humanitarian aid organization, seeks a National Director to lead the Mali office, based in Bamako. Skills required include:

- Track record of significant and successful senior management and leadership experience, both national and international. Knowledge and experience in one of the following: international development, emergency relief (domestic or international) and/or advocacy. Must demonstrate familiarity of the other two.
- Strong networking skills; previous experience building coalitions with bilaterals, multilaterals, government, foundations, churches, the NGO community and corporations. Knowledge of financial management, audit and compliance of multi-million USD budgets.

- Strong track record with donor agencies. Master's degree or equivalent experience in social sciences, management, international development or related field. MBA preferred. Fluency in French and English required.
- Strong Understanding of Human Rights, particularly Child Rights. Experience in Microfinance operations and/or non-profit or corporate governance.
- Demonstrated understanding of Mali's political, social-economic and cultural context preferred. Ability to work and travel extensively in country of assignment as well as internationally (approximately 20-25% of working time).

Successful candidate must show history of leading and managing large organizations with complex stakeholder environments. Candidate must be mature leader with proven track record in generating results. Apply at www.wvi.org or send CV to: clark_bowers@wvi.org. Application deadline: June 15, 2011.

Other

South Africa-hosted astronomy office to push development

South Africa will host a new office to spearhead a ten-year plan of the International Astronomical Union (IAU) to use astronomy to stimulate education and development worldwide. The IAU launched its Office for Astronomy Development at the South African Astronomical Observatory in Cape Town on 16 April as part of its 'Astronomy for the Developing World' plan. "Our quest is to improve people's lives in Africa and abroad," said Kevin Govender, the office's director. "We seek to develop ourselves and our society, and at the heart of this development is education."Astronomy stimulates curiosity and a desire to learn," he told SciDev.Net, giving it the potential to create a scientific, problem-solving culture that can empower people.

According to Robert Williams, IAU president, talented professional and amateur astronomers, engineers and teachers from around the world can be mobilized to benefit developing countries. The launch is the latest in a series of astronomy initiatives in South Africa. Before this hosting, Cape Town was home to the launch of the first pan-African astronomy network, which aims to "facilitate the use of astronomy in addressing the challenges faced by Africa", among other things. And South Africa is in fierce competition with Australia to host the Square Kilometre Array (SKA), a giant radio telescope - a decision is expected early next year.

South Africa's science minister, Naledi Pandor, said at the launch: "We chose to invest heavily in science and astronomy, because of its role in development, not only within South Africa, but all across Africa. Big astronomy projects [such as] SKA entail major capacity development programmes in order to train the next generation of engineers and astronomers from all over Africa." Link to 'Astronomy for the Developing World' strategic plan [1.76MB].

Partnership promoting agricultural development unveiled in Southern Sudan

The United States, Netherlands and two leading agriculture-focused nonprofits are collaborating to back the Southern Sudanese government's efforts "to transform farms into businesses."

The communiqué was signed between the U.S. Agency for International Development, Dutch government, Alliance for a Green Revolution in Africa and International Fertilizer Development Center on May 6 at the commercial Rajaf Farm outside Juba, according to a USAID news release. The four parties vowed "to work together in developing a commercial agriculture sector by increasing agricultural productivity, supporting agribusinesses, and improving agricultural research and technology." USAID Administrator Rajiv Shah said the U.S. government is ready to back the partnership with "hundreds of millions of dollars."

Agriculture is the leading industry in Southern Sudan. But most farmers are engaged in subsistence agriculture, the USAID news release noted. "Any effort to transform agriculture has to be comprehensive," Shah said during the signing ceremony. "The days of doing a small demonstration project in one part of a county and calling that agricultural development must be over."

Southern Sudan to improve agricultural research and technology Improved agricultural research and technology is among measures agreed in a collaboration to transform Southern Sudan's farms into agribusinesses. The Dutch government; the US Agency for International Development (USAID); the Alliance for a Green Revolution in Africa; and the International Fertilizer Development Center, United States, pledged

to develop a commercial agricultural sector for the nation by increasing productivity. Rajiv Shah, USAID's administrator, said the US government is prepared to sow "hundreds of millions of dollars" into the project.

Transboundary Nile basin waters: Egyptian Government ready to talk over allocation of water resources

Optimism is growing that the tension between Egypt, Sudan and upstream countries over the construction of the Ethiopia's Grand Renaissance Dam on the Blue Nile could ease after Egypt said it was ready for talks. Egypt's ambassador to Ethiopia, Tarek Ghoneim, said renegotiating the allocation of Nile waters and raising transparency in the matter would be very healthy and good for Egypt and the region.

The region has seen months of heated public debate around the renegotiation of Nile water sharing sanctioned by colonial agreements. East African Community states have expressed their intention to restart stalled negotiations with Egypt on the use of the Nile waters. A communiqué released after a meeting by EAC presidents in Dar es Salaam, last month said that "The Summit reiterated its readiness to host a special summit to advance negotiations on the Nile water question with a view to realizing a mutually acceptable solution among all riparian states."

According to reports, negotiations stalled when the delegation objected to the construction of the Grand Ethiopian Renaissance Dam, formerly known as the Grand Millennium Dam project, to be located about 40 kilometres from Ethiopia's border with Sudan. Until now, Egypt had snubbed talks on the Nile Basin Co-operative Framework Agreement (CFA), recently signed by the upstream Nile basin countries - Ethiopia, Kenya, Uganda, Tanzania, Rwanda and Burundi - it is hoped that the latest move will culminate in enhancing dialogue on the CFA. The Agreement would re-order Nile water sharing, at present still regulated by two 1929 and 1959 deals that allow Egypt a 90 per cent allocation of the river's waters. Of the water reaching the Aswan Dam in Egypt in a normal year, 86 percent originates in Ethiopia. The Renaissance Dam project is Ethiopia's biggest infrastructure project to date. It is expected to generate 5,250 MW of power and will cost $4.8 billion to construct.

## More science needed for tackling disasters

Science and technology will be essential for anticipating and responding to disasters, according to a review of the humanitarian practices of one of the world's leading national aid agencies, the UK Department for International Development (DFID). Natural disasters are killing more people each year, with climate-related disasters alone predicted to affect 375 million a year by 2015. Finding new ways of tackling them is essential, according to the Humanitarian Emergency Response Review, launched on 28 March.

"We are caught in a race between the growing size of the humanitarian challenge and our ability to cope," said Paddy Ashdown, a former British politician and chair of the team that produced the report. "It is, bluntly, not a race we think we are currently winning. Merely improving on what we have done in the past - enhancing the status quo - will not be sufficient. We must devise new ways of meeting these new, larger challenges."

The report tackles seven areas, including the anticipation of disasters, where science could be put to better use, said Ashdown. "What is clear is that prediction, although far from perfect, is possible for some high-risk nations. But disaster managers do not make enough use of such science, and scientists do not routinely produce information for this audience." The report cited the example of the 2010 floods in Pakistan: "The rainfall happened a month before the flood water caused its greatest devastation. The effects were predicted, but not acted on." It added that slow-onset disasters, such as famines, are regularly missed, despite the existence of tools such as the Famine Early Warning Systems Network, supported by the US aid agency USAID. Yet early intervention in such disasters costs a fraction of the bill arising from late intervention. Technologies already in use that offer "considerable potential" include the use of mobile phones for cash transfers; the use of satellites in tracking storms and providing imagery for humanitarian operations; and crowd-sourcing as a way of soliciting information from those affected by a disaster. See link to the 'Humanitarian Emergency Response Review'.'

Is open location the next open?

There are a growing number of open movements that include open access, open source software, open government, open standards, open data, open courseware, open science, etc. The Internet is the catalyst for
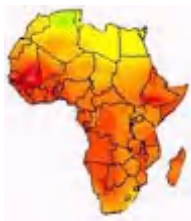
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these movements, with its ability to offer transparency, a repository, and a means to create community connections. With all the pushback on how both Apple and Google have stored personal location data, will open location be the next movement?

There are existing standards for interoperable linkages between location-based service providers, but what we're talking about here is more of a user-centric movement as backlash to how Apple and Google have treated user locations. Researchers at the *New York Times* just launched Openpaths that is specifically aimed at sharing archived locations from Apple devices for research purposes. This commendable effort goes a good way toward gleaning insight on aggregated location data without exposing identity, but it's aimed specifically at sharing of Apple's data before a patch is released to fix the problem. What Openpaths has started might provide a jumping off point for a means to consistently archive and analyze location outside of, and independent from, your cell phone carrier or smart phone environment.

Along the lines of other open efforts, the open location movement should be less about the commercial potential and more about possibility. At present we give away our location very freely, seldom realizing its value or the repercussions on how we are profiled. Our locations say a lot about us, and are being mined for all sorts of insight, but the catch at present is that we have little control. The idea of pervasive and consistent personal tracking, but with full control on when and how we share that information, has some interesting possibilities. Setting restrictions on location information is a tough road now that we've come to expect development platforms with open sharing of location. While the days of unregulated access to location may be over, the curtailing of 'clandestine' tracking is perhaps as simple as providing reports of what is known about movements, and providing a means for users to explore their records.

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

Date	Location	Event
June 2011		
3-5 June 2011	Bonn, Germany	**Resilient Cities 2011 congress**
6-9 June 2011	Kakamega, Kenya	**International Conference on Tropical Forest Resources**
24-25 June 2011	Cape Town, South Africa	**Climate Investment Funds (CIF) 2011 Partnership Forum**
July 2011		
3-7July 2011	Windhoek, Namibia	**2011 World Conference** - Windhoek, Namibia, Sustainable Value Chain Agriculture for Food Security and Economic Development
3-7 July 2011	Cape Town, South Africa	**Call for Papers: 9th Colloquium on Environmental Law** Contact: Glaudin Kruger at kruger@kruger-associates.com or Tumai Murombo at Tumai.Murombo@wits.ac.za. Deadline for abstracts submission: 28 February 2011.
3-8 July 2011	Paris, France	**25th International Cartography Conference (ICC 2011)** Contact: Comité Français de Cartographie +33-1-4562-7175, Fax: +33-1-4562-7176, Email: lecfc@lecfc.fr.
11-14 July 2011	Lisbon, Portugal	**Global Conference on Global Warming (GCGW-11),** Contact: Conference Secretariat at info@gcgw.org.
18-21 July 2011	Tunis, Tunisia	**4th IAA African Conference & 2nd Mediterranean Conference: Youth & Space Application**
20-23 July 2011	Balaclava, Mauritius	**2nd AMESD Forum**
July 29- 4 August 2011	Banos, Ecuador	**2011 International Biodiversity Conference**, Contact: Dr. Barker at barkerb@wildspotsfoundation.org.
August 2011		
3-4 August 2011	Kampala, Uganda	**1st Conference on Advances in Geomatics Research (AGRC2011)** Contact: agrc2011@tech.mak.ac.ug)

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15-17 August 2011	South Africa	**10th Information Security for South Africa (ISSA) 2011**
15-19 August 2011	Nairobi, Kenya	**Applied Geoinformatics for Society and Environment (AGSE) 2011 Conference** Contact: Franz-Josef Behr at franz-josef.behr@hft-stuttgart.de
21-25 August 2011	Merida, Mexico	**SER2011 World Conference on Ecological Restoration**
22-26 August 2011	Wellington, New Zealand	**5th International Symposium on GIS/Spatial Analyses in Fishery and Aquatic Sciences**
23-25 August 2011	Perth, Australia	**The 7th International Symposium on Digital Earth (ISDE7)** Theme: 'The Knowledge Generation', Contact: melissah.johnston@walis.wa.gov.au or walis@walis.wa.gov.au Abstract submission deadline: 28 February 2011.
September 2011		
4-8 September 2011	Cape Town, South Africa	**The 6th Science Centre World Congress**
12-16 September 2011	Denver, USA	**Call for presentations for FOSS4G 2011**
12-16 September 2011	Ticino, Switzerland	**3rd Symposium on Environmental Weeds & Invasive Plants (Intractable Weeds and Plant Invaders)**
13-15 September 2011	Livingstone, Zambia	10th IEEE AFRICON 2011 The top-event of IEEE in Africa
19 - 23 September 2011	Cape Town South Africa	2011 ACSEAC 2011 African Conference on Software Engineering & Applied Computing (ACSEAC)
26-28 September 2011	Mombasa, Kenya	**Call for papers and exhibitors** - **4th African Leadership Conference on Space Science and Technology for Sustainable Development (ALC2011)**: Building a shared vision for space in Africa,
26-30 September 2011	Aberdeen, Scottland	**World Conference on Marine Biodiversity**
October 2011		
3-7 October 2011	Cape Town, South Africa	**International Astronautical Congress 2011** Contact: enquiries@iac2011.com. Contact: enquiries@iac2011.com, Tel: +27 21 460 9357.
4- 6 October 2011	Saly, Senegal	**Call for Abstracts and Scientific Symposium on "Contribution of ocean data and information to sustainable development in Africa"**
5-6 October 2011	Port Harcourt, Nigeria	**Seventh International Conference on Sustainable Development**
5-7 October 2011	Beach Resort, Zanzibar	**6th ESRI Eastern Africa User Conference** Submit abstract by 29 July 2011 on any of the available tracks at events@esriea.co.ke.
10-14 October 2011	Kimberley, South Africa	**International Wildlife Ranching Symposium**
10-21 October 2011	Changwon, Korea	**UNCCD COP 10**, Contact: UNCCD Secretariat at secretariat@unccd.int
12-14 October 2011	Coimbra, Portugal	**WG II/4 & ICWG II/IV 7th International Symposium of Spatial Data Quality**
16-21 October 2011	Cairo, Egypt	**AfricaGIS 2011 Conference** Contact: africagis2011@narss.sci.eg or info.africagis2011@narss.sci.eg.
19-21 October 2011	Bloemfontein, South Africa	**1st International Conference on Clays and Clay Minerals in Africa and 2nd International Conference on Geophagia in southern Africa**

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31 October - 4 November 2011	Amsterdam, Netherlands	**Call for papers: Young Scientist Workshop, International Water Week**, Contact: ysw(at)waternetwerk.nl or www.internationalwaterweek.com.
November 2011		
1-3 November 2011	Beirut, Lebanon	**Esri Europe, Middle East and Africa User Conference**
7-12 November 2011	Worldwide	**1st Call for Papers: Worldwide Online Climate Conference (CLIMATE 2011/KLIMA 2011)**
16 November 2011	Nairobi, Kenya	**GIS Day**
16 - 18 November 2011	Delft, Netherlands	**2nd International Workshop on 3D Cadastres**, Contact: P.J.M.vanOosterom@tudelft.nl
21-23 November 2011	Mbale, Uganda	**International Conference on East Africa Mountains (ICEAM) 2011**, Theme: Reconciling Resource Demands, Climate Change and Conservation. Submit abstract online. Contact: info@iceam2011.org.
28 November- 9 December 2011	South Africa	**17th Conference of the Parties to the UNFCCC and 7th Meeting of the Parties to the Kyoto Protocol** Contact: UNFCCC Secretariat, secretariat@unfccc.int.
December 2011		
13-15 December 2011	Shah Alam, Malaysia	**Third International Conference on Management of Natural Resources, Sustainable Development and Ecological Hazards**
2012		
21-27 May 2012	Vilnius, Lithuania	**12th World Congress on Environmental Health: New Technologies, Healthy Human Being and Environment**
2-6 July 2012	Galle, Sri Lanka	**MMM3 : Meeting on mangrove ecology, functioning and management**
8-12 July 2012	San Diego, California USA	**ESRI User Conference**
8-12 July 2013	San Diego, USA	**ESRI International User Conference**
5-10 August 2012	Brisbane, Australia	**34th Session of the International Geological Congress (IGC 34)** Enquiries: info@34igc.org.
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.

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