



Spatial Data Infrastructure – Africa Newsletter



SDI-Africa Newsletter

October 2012

Vol. 11, No. 10

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



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](mailto:SDI-Africa_AT_gsdi.org) or sdiafrica@rcmr.org or gojwang@rcmr.org



Input to this Issue

Thank you to Kate Lance, NASA/SERVIR-Africa (USA), Hussein Farah, RCMRD (Kenya) and Karen Levleger, Kadastre (Netherlands) for their contributions to this issue of the newsletter.

SDI News, Links, Papers, Presentations

[GSDI 14 and AfricaGIS 2013](#): November 4-8, 2013, Addis Ababa, Ethiopia

The GSDI Association, EIS-Africa, the International Geospatial Society, and the United Nations Economic Commission for Africa (UNECA) are pleased to announce a close partnership in offering the joint GSDI 14 World Conference and AfricaGIS 2013 Conference. The theme of the conference is "Spatially Enabling Africa in Support of Economic Development and Poverty Reduction." This combined conference is planned to take place in the UNECA Conference Center (http://new.uneca.org/uncc/home_uncc.aspx) in Addis Ababa, Ethiopia from November 4-8, 2013. Pre-conference and post-conference workshops, meetings and seminars will also be supported.

AfricaGIS is the largest regularly occurring GIS conference in Africa with participants from the entirety of the continent. The GSDI World Conference moves across the globe to offer geospatial specialists in all parts of the world opportunities to better exchange ideas and learn from global peers in building spatial data infrastructure. For past conferences, see <http://www.gsdi.org/gsdiconferences>.

Substantial reduction in registration fees will be available for local participants, members of EIS-Africa and members of the International Geospatial Society who are from low income per capita nations. Substantial



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reductions in Exhibit and Sponsorship fees will be available for companies and agencies that are members of the GSDI Association. Consult the web site (<http://gsdi.org/gsdi14>) as the Call for Papers and details about the program, facilities and sponsorship opportunities become available.

2011-2012 GSDI Small Grants Program

Global Spatial Data Infrastructure Association (GSDI) makes small grants in cash and services to assist developing and emerging countries with infrastructure for access to spatial data. Grants can be awarded to SDI coordinating bodies (councils, committees) and GIS user groups, but the GSDI Association asks that one institution take responsibility for receiving/depositing the funds. Grants cannot be used to cover organization overhead expenses. These resources will be used to offer two types of grants this year:

- Cash up to 2,500 USD
- Professional Services to be determined

Professional Services will be coordinated by the GISCorps, an international initiative that offers volunteer GIS services (www.GISCorps.org). It is possible to request a combination of cash and professional services. Support may be used for technical or institutional projects, as long as tangible outputs are achieved and several institutions collaborate on the effort. A list of typical projects follows - but this list is not exhaustive:

- Convening of national or sub-national seminars or workshops related to SDI;
- Producing SDI- and EOS-related training manuals and modules;
- Establishing metadata and clearinghouse nodes (catalog services);
- Establishing standards-based web mapping and data access services;
- Accomplishing geospatial data and/or SDI surveys or inventories;
- Producing and disseminating newsletters and awareness-raising materials about SDI;
- Drafting policy and legislation related to SDI;

Proposals are due on 31 October 2011. E-mail to: Societal Impacts Committee, GSDI Association - grants@gsdi.org.

Liberia securing land records and digital back-up from Colorado wildfires



Director General Philomena Bloh Sayeh of the Liberian Centre for National Documents & Records Agency (CNDRA) recently spoke with Thomson Reuters on the leadership challenges in modernizing land records and recording systems following a 20-year civil conflict in Liberia. She noted that almost everyone in Liberia has been affected by undocumented land rights because a lot of people fled the country during the turmoil. "We had internally displaced people too, during this displacement people left their traditional place of habitation and while they were away, other people occupied those lands". During the turmoil we also lost many land documents.

The preparation for digitizing records for the nation has been ongoing for a couple of years, but started digitizing in December 2011 following a six month pilot digitization process. The land office has started digitizing older paper land deeds. Before, persons were recording land deeds by hand, which will change to the agency's database through the computers. The digitization will increase land tenure security and the road to a comprehensive land information database for Liberia. This land information database will enhance the economy through infrastructural planning and development, payment of taxes and provision of social services to the people. The use of registry to verify land deeds for people trying to get loans by local banks is proof of the economic value of registry. Liberia's CNDRA implemented Thomson Reuters OpenTitle software to scan, register, and file land records. September 17, 2012, Director Sayeh led the opening ceremony for the new Customer Service Office. Read more on the interview...

Lagos Land Information System goes online soon

The Lagos State Geographic Information Systems (GIS) and digital mapping would go online before the end of the year to speed up land documentation. The present land documentation system is slowed down by physical submission and retrieval of land information for processing land titles, particularly Certificate of Occupancy (CofO). The base station is ready and would become operational once some issues were resolved. The Surveyor General of Lagos State, Mr. Joseph Olorunjuwon Ajenla, said his mission was to integrate data from the land registry, land information systems and GIS to have a robust land registry. "At the punch of a bottom we will have the characteristics of all land in Lagos State."

He said very soon, the GIS system would be operational, explaining that the takeoff was delayed by some logistics "beyond anybody's control. It has been uploaded and everything is set. It is just some gray areas



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that are being fashioned out now." The Control Centre, he said ought to be in the office of the Surveyor General with backup from the ICT Centre. "This will be the control area from which everybody will access it from outside through the web. We have the officers on ground to manage all resources the public will need. Once you pay by using the card system, you will have access to the web page."

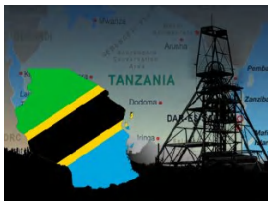
The explained that delay experienced in the issuance of Certificate of Occupancy (CofO) that was blamed on the survey department, he said surveys for public land was always on time since they had some zonal offices to take care of this and that more would be created. The existing ones include, Eti Osa, Epe, Ibeju Lekki, Ikorodu, Badagry, Amuwo and Ilupeju, adding that all these offices are on ground. "We are presently trying to create two more at Ojo to manage the riverine area to Agbara and Badagry will just have a stopover at Oke Afo and those in Ojo will take over from there down to FESTAC". Read more...

[Nigeria's National Population Census Tribunal nullifies Michika LG 2006 census](#)

The National Population Census Tribunal sitting in Abuja has voided the 2006 population and housing census conducted by the National Population Commission (NPC) at Michika local government area of Adamawa state. The Tribunal headed by Justice Kunle Ojo ruled that the NPC erred by excluding six border villages ceded to Nigeria from the republic of Cameroon following the 2002 International Court of Justice (ICJ) Judgment which redefined the boundaries between two countries. The six affected villages include Humjar Zirajaja, Chir-gi and Oula, Kelendourou, Mo-guema, Moukolveu Rourmsiki.

The census tribunal said that the figure of 155,382 given as Michika local government area population according to the 2006 census was not corrected because it does not include that of the six villages since they were not enumerated during the exercise. Reacting to the judgment Rep. Ganama Titsi Kwaga (ACN, Adamawa) commended the tribunal for doing justice to the case saying, "In the 1963 census our population was 165,000, I wonder how after 43 years it was reduced to 155,382 without the people migrating to somewhere else or any major natural disaster. Kwaga commended the resilience and effort of traditional community leaders of Michika whom he said pursued the case for the last three years.

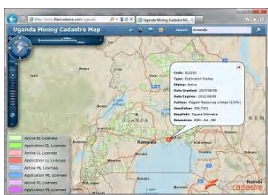
[Tanzania online mining cadastre portal launched](#)



Tanzania has launched a public and online mining cadastre portal to strengthen the government's capacity to manage the mineral sector. The portal, which has been developed by information technology company Spatial Dimension, formed part of the World Bank supported Sustainable Management of Mineral Resources project (SMMRP). The SMMRP's aim is to strengthen the Government's capacity to manage the mineral sector to improve the socio economic impacts of large and small-scale mining for Tanzanians and enhance private local and foreign investment. "It is fantastic that another Government has chosen to publish their mining cadastre data through our cloud based FlexiCadastre Portal. Around the world we are seeing a strong move towards Governments improving both the transparency and ease of doing business in their critically important resource extraction sector", said Mr Bill Feast, Managing Director of Spatial Dimension.

"An online portal is the first step towards providing both local and international investors with an efficient mechanism to interact with the Ministry on a fair and transparent basis. Many clients are now asking Spatial Dimension to include 'self-service' functionality into the portal while they wait for Mining Law and Regulation updates to allow for a fully transactional system where all applications, payments, renewals and returns would be conducted online", added Mr Feast. The portal site hosts some 67,000 mineral licenses. The Tanzanian Ministry of Energy and Mines is currently undertaking a full audit of all licenses and encourages stakeholders to engage directly with them should any data related issue be found. The portal is available from the Ministry's home page <http://www.mem.go.tz>.

[Uganda online mining cadastre portal launched](#)



Uganda's online mining cadastre portal has been launch. "Spatial Dimension is thrilled to welcome Uganda as our latest client to adopt the cloud based FlexiCadastre Portal for publishing public domain information on their mining sector", said Mr Bill Feast, Managing Director of Spatial Dimension. "Uganda joins the DRC who have successfully been publishing data for the past year through our Portal. We anticipate that a number of other countries in the region will soon adopt this platform to increase transparency and investment in their mining sectors", added Mr Feast.



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In April 2011 the Ugandan Ministry of Energy and Mineral Development, through the Department of Geological Survey and Mines contracted MTL Consulting Company Limited of Tanzania to implement a modern Mining Cadastre and Registry System based on FlexiCadastre. The goal of the project was to improve transparency and security of tenure; increase accessibility of information to private sector investors including small-scale miners; and ensure standardization and uniformity of mineral licensing procedures. It now allows for the efficient and reliable management of mineral rights for the benefit of all mineral stakeholders, the people and the Government of Uganda.

[Kenya to carry out farmers' census](#)

The Government of Kenya will carry out a Sh2 billion farmers' census to gather data for better planning. The PS for Agriculture Romano Kiome said the one-and-a-half-year programme would help the Government develop comprehensive software for all farmers and identify problems affecting them. It will also help in policy making and planning for prosperity in the agricultural sector. "We are sending staff to Rome next month for training to familiarize themselves with how to conduct the important exercise. It will help the Government to know how many farmers it will deal with," said the permanent secretary.

Dr Kiome made the remarks in Taita-Taveta County after inspecting Kenya Agricultural Productivity and Agribusiness and Kenya Agricultural productivity and Sustainable Land Management Projects. The region is among 20 counties that have benefited from donor funds to improve agriculture. So far, the Government has spent more than Sh7.5 million for sustainable agribusiness activities to help eradicate poverty in the region.

[Kenya judiciary launches traffic fine payment by Mpesa](#)



Motorist arrested and charged with traffic offences will no longer be waiting for long hours to pay fines and bails imposed on them by the courts. The Judiciary in conjunction with Safaricom has introduced a service that will help motorists pay fines through M-Pesa services. The service, dubbed Faini Chap Chap Mpesa was launched by the Chief Justice Willy Mutunga at the Kibera Law Courts.

This is a relief to many who have been complaining that the system of paying fines for traffic offences is tedious and time wasting. Traffic courts at City Court, Kibera, makadara and Milimani in Nairobi are usually jammed by traffic offenders. Approximately 500 people face traffic offences daily. The offence include speeding, alighting in undesignated areas, failing to fasten seat belts, overlapping and driving un-roadworthy vehicles. The fines range between Sh1,000 to Sh10,000. Normally a fine of Sh1,000 is paid at the courts while those fined over Sh5,000 are required to pay in the Judiciary account and this can take hours to process. See also Allafrica.com.

[More than 800,000 Kenyans to be cut from phone service](#)



More than 800,000 Kenyans will on 1st October be cut off from communication in a mobile phone shutdown that ends Monday afternoon. The switch-off of fake phones, which all the four operators confirmed, follows a directive from the Communications Commission of Kenya (CCK) that seeks to combat illegal trade, infringement of intellectual property rights and security threats. CCK director-general Francis Wangusi was categorical that the shutdown, which had been postponed three times before, would be effected at midnight (on September 30). (Read: [Telcom firms to turn off fake phones](#)). "We wish to categorically state here and now that there shall be no further extension of the deadline," said Mr Wangusi.

The switch-off, which also targets unregistered Sim cards, is expected to affect the mobile phone money transfer service, resulting in loss of revenue and inconvenience to users. CCK has, however, set a budget to meet the costs incurred by operators in effecting the switch-off, though the consumers will not be compensated. Safaricom, which has the largest number of fake handsets owing to its subscriber base, will switch off an estimated 670,000 fake handsets in 15 hours. Airtel Kenya has indicated that there are 100,000 users of fake phones on its network while yuMobile said it will block 45,000. Telkom Orange is expecting to shut off 20,000 fake phones. "This may have an impact on our revenues because we are likely to lose some customers in the move. But it is worth it," Safaricom chief executive Bob Collymore told the Nation. His yuMobile counterpart Madhur Taneja said the operator had a substantial number of counterfeits, but vowed not to compromise. Airtel Kenya managing director Shivan Bhargava said the number of subscribers on their network that would be affected was not high as "the majority of our customers likely to be affected have taken the initiative of replacing their handsets".



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Rwanda's land rights research gets \$12 Million U.S. funding

The United States Agency for International development (USAID) has committed \$12 million to fund a study on land related issues in Rwanda. The five-year project seeks to find solutions to wrangles emanating from land, the single most cause of conflict, especially in rural areas. The USAID vice president in Rwanda, Brian Frantz, made the announcement during a workshop to discuss land related issues in Kigali. The three-day workshop brought together officials from the Ministry of Natural Resources, USAID, NGOs, and universities, among others, to consider the priority areas of the study. "USAID has different issues it supports (in Rwanda) but land issues research will be addressed during this period," Frantz stated. He noted that his organisation would support research in selected areas to help the government and other stakeholders to solve land conflicts. "The land project was designed in five years and Abunzi, community mediators, will be trained to acquire enough knowledge to solve land disputes," he revealed.

The selected priorities are inheritance and succession law and practice in relation to land rights, land use consolidation about environmental and socio-economic impact, assessment of the determinant factors of land market value and mapping land dispute resolution processes and institution and making comparisons. Qualified researchers will be helped through the USAID support to find the solutions and measures taken to resolve them. The acting Director General in charge of Land and Mapping at the Ministry of Natural Resources, Pothin Muvula, appreciated USAID's initiative to support the study saying land issues still persist. "When the research is carried out in these selected areas, it will help implementers to know where they are, their weaknesses and improve their jobs thanks to the research results."

Ethiopia is to host the 11th Innovation Africa Digital Summit

State Minister Peter Gat Cot told a press conference at the signing of a memorandum of understanding (MoU) with Extensia Ltd., in partnership with the Ministry who is preparing to host the event that would kick off next March, that the upcoming summit is aimed at discussing the need to create sustainable national growth and development of the African Telecom and ICT ecosystem.

The summit, which would be conducted with the theme: "National Broadband Strategies and Agendas - Acceleration and Alignment," is supposed to have a great role on creating technology and business integrity among nations and private sectors, the State Minister noted. According to Peter, the summit is expected to bring together up to 350 companies from around the world including large ICT companies, ministers, regulators, service programme, major end users and leading international solution providers.

Extensia Director of Sales and Marketing Adrian Hall underlined that the summit is instrumental in bringing together the reputed international technology companies and policy makers in the sector so that Ethiopia will benefit more from attracting international ICT investors and it would be of paramount importance to further attract more investment into Ethiopia. The summit will also serve as a platform to share experiences with major ICT companies from across the globe. "Countries are looking at how they can improve their healthcare, education, business potential and the GDP growth. And that is all very closely tied with the national broadband connectivity".

Request for information about SDI Education and Training Material

As part of the project, 'Developing a framework for South African SDI education and training', funded by the GSDI Small Grants Program, Serena Coetzee and colleagues are conducting a survey of existing SDI training and education material. They are looking for material that can be used for SDI education and training, as well as material to inform the development of the framework.

Please send information about the relevant materials using attributes below:

- Title: <title of the material>
- Author(s)/Publisher: <author names and/or publisher>
- URL: <URL for the material or information about the material>
- Access: <open? free? cost? copyright? >
- Description: <description of the material (textbook, notes, course, presentation)>
- Contact: <name and email address that can be contacted for more information about the material>

For more information about the project, refer to <http://web.up.ac.za/default.asp?ipkCategoryID=18853&sub=1&parentid=16053&subid=16145&ipklookid=11>.

Results of this survey will be published on the project page. Please send the information to Victoria Rautenbach at victoria.rautenbach@gmail.com or Serena Coetzee at serena.coetzee@up.ac.za.



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[OGC wants comments on Land Information Domain Working Group Charter](#)

The Open Geospatial Consortium (OGC®) announces the formation of a new OGC Land Information Domain Working Group (Land Info DWG) to address CAD, Land Information System (LIS) and Geographic Information System (GIS) interoperability challenges facing industry domains concerned with the built environment. Organizations and individuals throughout the architecture/engineering/construction (AEC) industry need to be able to exchange detailed civil and survey engineering data within that industry. They, and others in fields as diverse as environmental sciences and location marketing, also need to be able use such data with geospatial data and geospatial applications. In general, geospatial systems have evolved from requirements for observation and analysis, whereas land information systems have evolved from requirements for design and legal property description.

To meet this data exchange need, over the past 10 years a group of volunteer organizations and individuals developed the LandXML model and associated XML schema. LandXML is a non-proprietary standard for data exchange among the land development, civil engineering and surveying communities. Over 70 registered software products support LandXML, and many organizations around the world, such as the Australian Department of Lands, the Federal Aviation Administration (FAA) and the US Army Corps of Engineers, rely on LandXML as a data exchange format for mission critical activities.

The goals of the Land Information DWG are to find the best approach for incorporating the LandXML schema into the OGC's standards base and to explore ways to incorporate land related information into OGC standards. This is the first time the OGC membership is tackling comprehensive integration of survey, civil engineering, and other land based data stored in CAD and GIS databases. This new work complements a legacy of activities in the OGC dating from the CAD-GIS DWG (now the 3DIM DWG), the CityGML Standards Working Group (CityGML SWG), and other OGC DWGs and SWGs. The draft charter can be downloaded from: https://portal.opengeospatial.org/files/?artifact_id=50172. Comments must be received by 15 October 2012. Please send comments to Gene Roe (gene.roe@lidarnews.com).

[AARSE 2012 International Conference](#), 29 October- 2 November 2012, El Jadida, Morocco.



The Conference Theme: Earth Observation & Geo-information Sciences for Environment and Development in Africa: Global Vision and Local Action Synergy.

The 9th AARSE International Conference, AARSE 2012, on Earth Observation & Geo-information Sciences for Environment and Development in Africa: Global Vision and Local Action Synergy will be held in El Jadida, Morocco, at the Faculty of Science, Chouaib Douakkali University from October, 29 to November 2, 2012. The conference will be a major event in the African and international community of Earth observation and geo-spatial information science in 2012; organized by the African Association of Remote Sensing of the Environment (AARSE) and the Chouaib Douakkali University, Faculty of Sciences (CDU_FS), in partnership with the International Islamic Organization for Education, Science and Culture (ISESCO) and the Moroccan Association of Remote Sensing of the Environment (MARSE).

Paper selection is based on abstract and full paper peer review following the guidelines provided in the "Call for Paper" document downloadable from the conference website: www.aarse2012.org. Questions regarding abstracts should be e-mailed to abstracts@aarse2012.org.

- **AARSE AWARDS** - All presenters are invited and encouraged to enter the AARSE award-winning competition for best paper presentation and best poster.
- **IEEE GRSS/AARSE TRAVEL FELLOWSHIPS** - To support travel costs, accommodation and registration fees to attend conferences of the two societies in the field of Earth observation by remote sensing. The beneficiaries of these conference fellowships shall be African scientists or students who have their paper accepted for oral or poster presentation at the AARSE biennial conference.

Practical SDI implementation materials from within and outside of Africa

[Better health through use of sustainable routine health information systems](#)

For the fifth RHINO On-Line Forum uses a different format. RHINO List subscribers were invited to submit questions that they might have about Geographic Information Systems (GIS) and its applications for Routine Health Information. Two GIS experts, Dai Hozumi and Alec McKinney of John Snow Inc (JSI) composed answers to questions which were mapped as layers of information, viewed and patterns analyzed. He drew conclusions and possible associations, identify and characterize at-risk populations, and test possible



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interventions. Ultimately, despite great public ridicule, John Snow destroyed the Broad Street water pump, which led to the end of London's Cholera epidemic.

Tracking the incidence of disease and the movements of contagions is a classic use of GIS but it is not the only use. Today, GIS is used to track and monitor disease, assess the capacity and distribution of health resources, monitor the use of health resources, and to analyze the demographic and health-related characteristics of a service area or population, just to name a few. GIS can be used to track the number and location, and of children who have been immunized for various diseases in a particular community and answer the questions.

Developing and Implementing Water Information System Platform (WISP) Tools



Geospatial information and technologies are crucial in the fight to better understand and manage ever more scarce water resources. The problem is especially critical to the future of many nations in the Middle East. This is the story of one project, supported by the World Bank, NASA and USAID to help implement and use advanced Water Information System Platform (WISP) tools and the underpinning data. The World Bank/NASA project "Regional Coordination on Improved Water Resources Management and Capacity Building Project

in Cooperation with NASA" for the Middle East and North Africa regions is being executed in Lebanon, Jordan, Morocco, Egypt and Tunisia, funded by the Global Environment Fund (GEF). Organisations involved in implementation include the National Council for Scientific Research - Center for Remote Sensing (Lebanon), Ministry of Water and Irrigation (Jordan), Centre Royal de Télédétection Spatiale (Morocco), National Authority for Remote Sensing and Space Sciences (Egypt), Centre Régional de Télédétection des Etats de l'Afrique du Nord (Tunisia) and Arab Water Council (AWC).

The project, with just over 5 million USD funding, supports the goals of the World Bank "Water Resources Sector Strategy – Sustaining Water for All in a Changing Climate", for improving client countries' access to technologies to increase the availability and dissemination of information for results-based decision making. Under the proposed project, the Bank has partnered with NASA to operationalize the various WISP tools across remote sensing agencies in MENA. Specifically, the WISP tools will be used in applications that include:

- Providing a compilation of past, current (and potentially future) water conditions; which can be used to inform improved water policy decisions;
- Providing maps of soil wetness and estimates of irrigation water use for large scale agricultural productivity assessments and planning;
- Estimating current water storage conditions in the uplands of river basins to improve river flow predictions;
- Evaluating potential increases/decreases in irrigation water requirements under various climate change scenarios and help in the planning of agricultural policies

The project described in the article was approved early in 2011 and began in May 2011. The first interim review was conducted in June 2012 and satisfactory progress was recorded at that time. The project is expected to run through May 2015 and the next major review is not due until June 2013. Read more..

Tracking Students with RFID Chips - Good or Bad Idea?

A Texas school district is implanting RFID chips on student identification cards to monitor pupils' movements on campus, and to track them as they come and go from school - an uncommon, but by now means new, application. A federally funded preschool in Richmond, California, began embedding RFID chips in students' clothing in 2010, while an elementary school outside of Sacramento, California, scrubbed a plan in 2005 due to parental uproar (over privacy concerns). A Houston, Texas, school district began using RFID chips to monitor students on 13 campuses way back in 2004.

The educational move to Big Brother-style monitoring seems to be motivated mainly by money, despite privacy and health concerns. For most state-financed schools, budgets are tied to average daily attendance, and if a student is not in their seat during morning roll call, the district doesn't receive daily funding for that pupil, as the school has no way of knowing for sure if the student was there. However, with RFID tracking, students not at their desk but tracked 'on campus' are counted as being in school that day, and the district receives its daily allotment for that student.



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The chips, which are not encrypted and chronicle students only by a serial number, also assist school officials to pinpoint where kids are at any given time. However, the lack of encryption makes it not technically difficult to clone a card to impersonate a fellow student or to create a substitute card to play hooky, and makes the cards readable by anyone who wants to install their own RFID reader (although all they would get is a serial number that's correlated with the student's ID number in a school database). Source: Wired - read the full article with links [here](#).

GIS Tools, Software, Data

[MIT Maps Disaster Areas in Real-time with Wearable Sensors](#)

A sensor that digitally maps the area through which the wearer is moving, in real time, has been created by scientists at the Massachusetts Institute of Technology (MIT). The project is supported by the US Air Force and the Office of Naval Research, and could help rescuers in a disaster. Similar research has been conducted by other companies, such as BAE Systems.

The device developed by the scientists at MIT - a small piece of plastic, worn on the chest - consists of accelerometers, gyroscopes, a Microsoft Kinect camera, a laser - called light detection and ranging rangefinder (Liidar) - and a button that allows the user to add text tags to the map to mark points of interest. The laser scans the area and measures the time it takes the light to reach various objects and return. The more level the rangefinder is, the more accurate the data will be, but in case it is tilted, gyroscopes come into play. Accelerometers provide information about the wearer's speed, and indicate changes in altitude. The system is still a prototype, but when tested in closed hallways without any GPS signal, it precisely mapped the environment as the user was moved through it. The data was wirelessly sent to a computer in a distant room, in real time. Source: BBC online News Technology - read the full article and access imagery [here](#).

[GRASS \(Geographic Resources Analysis Support System\)](#)

GRASS (Geographic Resources Analysis Support System) is Software for performing spatial analysis. It consists of more than 350 modules for processing vector (2D/3D), raster and voxel data. Many interfaces to other programs in related domains like geostatistics, databases, mapserver and even other GIS software exist. It can serve as a Desktop GIS and as the backbone of a complete GIS infrastructure.

GRASS was originally developed in the beginning of the 1980s by the US Army Construction Engineering Research Laboratories (USA-CERL) and was published as public domain software. When the USA-CERL withdrew from the GRASS development, an international developer team took over this work. Since 1999 GRASS has been published as free software under the terms of the GNU General Public Licence. GRASS is successfully used in scientific applications, commercial settings and by public officials all over the world. Download: <http://grass.osgeo.org/download/>

[MapGuide Open Source](#)

MapGuide Open Source enables users to develop and deploy web mapping applications and geospatial web services. MapGuide features an interactive viewer that includes support for feature selection, property inspection, map tips, and operations such as buffer, select within, and measure. MapGuide includes an XML database for managing content, and supports most popular geospatial file formats, databases, and standards. MapGuide can be deployed on Linux or Windows, supports Apache and IIS web servers, and offers extensive PHP, .NET, Java, and JavaScript APIs for application development. MapGuide Open Source is licensed under the LGPL.

[Opticks](#)

Opticks is an expandable remote sensing and imagery analysis software platform that is free and open source. If you are interested you can learn about the [history of Opticks](#).

If you've used commercial tools like: ERDAS IMAGINE, RemoteView, ENVI, or SOCET GXP, then you need to give Opticks a try. Unlike other competing tools, you can add capability to Opticks by creating an extension. Opticks provides the most advanced extension capability of any other remote sensing tool on the market

- Free and open source
- Supports the following file formats: NITF 2.0/2.1, GeoTIFF, ENVI, ASPAM/PAR, CGM, DTED, Generic RAW, ESRI Shapefile, HDF5, AVI, MPEG, JPEG, GIF, PNG, BMP
- Zoom, pan, rotate spatially large datasets



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- Quickly layer GIS features, annotations, results, and other information over your data to provide context
- Many image display controls such as colormap, histogram, transparency, etc.
- Support for datasets larger than four gigabytes
- Analysts can quickly combine steps using graphical wizards
- Support for processing data in its native interleave of BIP, BSQ or BIL
- Get [extensions](#) to drop in new capability.

Training Opportunities

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

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

[Call for application for postgraduate diploma in applied Geo-Information](#)

The National University of Rwanda through its centre for GIS and Remote Sensing (CGIS-NUR) wishes to call for 2012 intake application for its Postgraduate Diploma Programme in Applied Geographic Information Science: Geographic Information System, Remote Sensing, and their various applications. Further information, visit: www.nur.ac.rw and www.cgisnur.org. The program is run at Kigali or Butare, as evening or day program depending on the availability of students. All about postgraduate diploma programme or guidelines for filling and submitting the application: <http://www.nur.ac.rw/spip.php?article30>.

[ESRI Technical Certification](#)

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

- Improve success with GIS by creating a community of professionals proficient in using ESRI software.
- Help organizations maximize their investment in ESRI products by employing a workforce certified in using best practices.
- Create professional development opportunities.
- Provide an opportunity for individuals, partners, consultants, and other organizations to distinguish themselves among their peers.
- Assist hiring organizations in assessing candidate skills and abilities.
- Workplace experience, combined with GIS education and ESRI training courses, is the best preparation.

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. ESRI is available to advice you on the best training for a particular certification and also offer you the training that you need to prepare for your certification. [Read more](#).

[ESRI South Africa presents a full spectrum of GIS courses: September-October 2012](#)



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](#)

[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 experienced 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://esrietraining.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.

University of Twente - ITC Faculty of Geo-Information and Earth Observation: Registration for courses (2012-13)



Faculty of Geo-Information Science and Earth Observation

UNIVERSITY OF TWENTE

Apply online for courses starting in the academic year 2012-2013. Browse by programme (degree, diploma,

and certificate), course domain (disaster management, earth sciences, geoinformatics, governance, land administration, natural resources, urban planning and water resources) or location in the course finder at www.itc.nl/CourseFinder. For printed copy of the study brochure, email: alumni@itc.nl).

[Short-courses offered by RECTAS](#), Ile-Ife, Nigeria



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

[Elsevier Foundation -- Awards for Early-Career Women Scientists in the Developing World 2013](#)

The Elsevier Foundation, in partnership with the Academy of Sciences for the Developing World (TWAS) and the Organization for Women in Science for the Developing World (OWSD), supports an awards program to



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recognize talented early-career women scientists in the developing world. Each year, the program will choose one winner from eligible countries in each of Latin America and the Caribbean; East and Southeast Asia and the Pacific; the Arab region; Central and South Asia; and Sub-Saharan Africa. The 2013 nominations are for the life sciences. Each winner will be celebrated for her research excellence, and receive a cash prize of US\$5 thousand. The application deadline is 15 October 2012.

[United Nations Economic Commission for Africa and the African Innovation Foundation - Innovation Prize for Africa 2013](#)

The Innovation Prize for Africa honors and encourages innovations that contribute towards developing new products, increasing efficiency, and saving costs in Africa. Priority thematic areas for the innovations include agriculture and agribusiness; environment, energy, and water; and others. Applicants are invited from Africans and Africans in the Diaspora if their innovations are of significance to Africa. The winning proposal will be awarded US\$100 thousand; two runners-up will each receive US\$25 thousand. The closing date for submissions is 31 October 2012.

[United Nations Development Program \(UNDP\): South-South Development Expo 2012](#)

UNDP's Special Unit for South-South Cooperation invites nominations of projects and programs that demonstrate successful solutions in global development through effective leadership, innovation, and partnership. Priority themes include agriculture, environment, climate change, and renewable energy. Public and private organizations in the global South and North are eligible in several combinations (explained in the announcement). The top-rated submissions will participate at the South-South Development Expo at FAO Rome, and will be offered opportunities to meet donors and other partners. The closing date for nominations (in six languages) is 31 October 2012.

[UNESCO's Man and the Biosphere Program – Young Scientist Awards 2013](#)

UNESCO's Man and the Biosphere (MAB) program makes grants for conservation research through its Young Scientists Awards. Priority is for projects carried out in the world's biosphere reserves. Awards are up to US\$5 thousand in support of research on ecosystems, natural resources, and biodiversity. The deadline for applications (English or French) is 30 October 2012.

[TED Fellows Program - Global Fellows 2013](#)

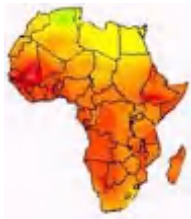
TED aims to help support the next generation of innovators to positively affect the world. TED particularly encourages applications from persons aged 21-40 in Africa, Asia-Pacific, the Middle East, Latin America, and the Caribbean. Fellows represent all fields of endeavor -- including environment, biodiversity, energy, and agriculture and food supply. The individuals selected by TED are offered conference attendance and international networking opportunities. The application period for TEDGlobal (i.e., the more international of the programs) is 22 October 2012.

[Netherlands Organization for Scientific Research - Research on conflict and cooperation over climate change](#)

The program "Conflict and Cooperation over Natural Resources in Developing Countries" (CoCooN) aims to contribute to sustainable development, poverty reduction, and the realization of the Millennium Development Goals. The current call addresses conflict and cooperation in the management of climate change. Applications are invited from consortia of research and non-research partners in the North and South. Eligibility and guidelines on how to apply are included (Dutch and English) in the announcement. The closing date is 16 October 2012.

[European Commission \(EC\) - Sustainable Environment and Natural Resources for Development in South Africa](#)

The EU Delegation in South Africa calls for proposals to support healthy ecosystems and sustainable use of natural resources in South Africa. The aim is to facilitate South Africa's resilience to climate change, a lower-carbon economy, job creation, poverty reduction, and sustainable livelihoods. The program is open to organizations in the EU, the European Economic Area, South Africa, and selected other developing countries. Partnerships are strongly encouraged. Grants are up to €1.5 million, varying by cost shares. Reference EuropeAid/133370/L/ACT/ZA. The closing date for concept notes is 23 October 2012.



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[Energy and Environment Partnership Program with Southern and East Africa -- 5th Call for Proposals](#)

The EEP with Southern and East Africa announces its 5th call for proposals. EEP will make grants up to €300 thousand for projects that produce renewable energy and/or that result in energy savings and efficiency. Matching funds are required, varying by the categories of applicants. The program is open to most types of organizations (except mainstream government organizations) operating in Botswana, Burundi, Kenya, Lesotho, Mozambique, Namibia, Rwanda, Seychelles, South Africa, Swaziland, Tanzania, Uganda, and Zambia. The program also welcomes regional proposals from two or three countries. The application deadline is 10 October 2012.

[Explorers Club - Eddie Bauer Grants 2013](#)

The Eddie Bauer grants support projects in the themes of climate change and the preservation and sustainable use of the Earth's resources, consistent with the mission of the Explorers Club. The Eddie Bauer Youth Grant is awarded to one or more eligible students; the Eddie Bauer Expedition Grant funds one or more eligible expeditions. There are no restrictions by nationality. Both categories of grants are for a maximum of US\$25 thousand. The application deadline is 15 October 2012.

[Critical Ecosystem Partnership Fund -- Eastern Afromontane Biodiversity, First Call for Proposals](#)

The CEPF announces its first call for proposals in the period 2012-2017 to support biodiversity conservation in the Eastern Afromontane "hot spot," stretching over a large region from Saudi Arabia to Mozambique. The program is open to NGOs, community groups, private enterprises, universities, and other applicants from civil society. Grants are likely to average US\$100 thousand for projects of 1-2 years that focus on priorities identified in the announcement. The deadline for letters of inquiry (English or French) is 19 October 2012.

Employment Opportunities

[Geological Modeller / GIS Specialist, South Africa](#)

The Geological Modeller will develop, maintain and take ownership for all 3D modelling, graphic and cartographic software systems. Ensure that project and feasibility study requirements of the Exploration Manager and Database Manager are delivered. As the successful candidate, you will be based on site and will report to the Exploration Manager. You will take responsibility for the following:

- Production of cross sections, long sections, plan views and generate volumes and surfaces for onsite geologists
- Interpretation of geological and mineralisation settings using various software tools such as GEMCOM, GEMS, ArcGis, MapInfo and Discover 3D
- Complete solids modelling, technical studies and due diligence projects
- Update existing geological models
- Verification and validation of critical exploration datasets used for 3D modeling
- Identify infill drilling areas and assist in planning and designing of drilling campaigns
- Produce detailed, high quality cartographic products
- Compile, manipulate and refine geographic data from a variety of sources
- Provide exploration software training to the exploration teams
- Communicate with team members to define data needs, project requirements and desired outputs

To be successful in your application, you will require the following qualifications, experience and skill set: Degree in geology, geological engineering or related field; Minimum of 5 years experience; Experience in geological exploration and evaluation projects, geological interpretations and modelling, and resource and reserve estimation; Experience with aerial image interpretation and digital image processing; Understanding of QA/QC requirements for drilling and underground programs; self-motivated and meticulous with excellent verbal and written communication skills.

To apply, please forward your resume as a Microsoft Word document, to Lisa Paluzzi, using the form in the website. Closing date: October 31, 2012.

[Lecturer in Soil Science, University of Botswana](#)

Applicants should have: (i) at least a Masters' Degree in Environmental Science or a related discipline/s (with a bias in Soil Science); (ii) a Bachelor's Degree in Environmental Science or related fields with at least a 2(i) pass and an overall aggregate not less than 65%; (iii) show evidence of engagement in research and service; (iv) a relevant PhD, teaching experience at a University or comparable institution and demonstration



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of effective academic leadership will be added advantages; (v) evidence of scholarship in GIS & Remote sensing and environmental system modeling will also be added advantages; (vi) the CV should provide a detailed list of courses (if any) ever taught as well as research Letters of applications are to address the stated qualifications and provide any other information to assist the University to determine your suitability for the position.

Applicants should inform their referees to (i) Quote the Vacancy Number(s) and Position(s) applied for and (ii) submit their references directly to the below address, before 12 October 2012. Send your applications to: The HR Manager, Faculty of Science, Private Bag UB 00704, University of Botswana, Gaborone-Botswana, Telephone: (267) 355 2454; Fax (267) 318.

[Researcher Conflict Prevention and Risk Analysis at Institute for Security Studies \(ISS\), Nairobi](#)

The Institute for Security Studies (ISS) is a pan-African applied policy research institute headquartered in Pretoria, South Africa with offices in Nairobi, Kenya, Addis Ababa, Ethiopia and Dakar, Senegal. The ISS is an established think tank working in the area of African human security. The Conflict Prevention and Risk Analysis division is seeking to recruit Researcher in the area of Conflict Prevention and Risk Analysis in the Great Lakes region.

The successful candidate will be required to assist senior researchers with research tasks and other programme deliverables. Specifically: • Provide research support to programme head and other researchers in the programme; • Assist in writing publications based on research results; • Media and stakeholder liaison to provide information, influence opinions and policies; • Presentation of research findings to various forums and stakeholders; • Participate and provide assistance for any workshops conducted in the office; • Actively pursue the exchange and protection of information amongst researchers and individuals to ensure effective knowledge management according to organizational objectives; • Participate in project teams according to the organizational standards. Requirements • A degree in a relevant social science discipline such as political science and Law; • Proven interest in Conflict prevention and risk analysis issues will be; • Ability to undertake networking with the academia and research institute's actors; • Research, analytical, writing, and computer (MS Office) skills; • Good communication and presentation skills.

Please apply with a detailed CV including three references and three single authored publications to Mr. Isaac Sihadi on email at pretoriajobs@issafrica.org. Closing date: 6 October 2012.

[Procurement Analyst at Clinton Health Access Initiative, Rwanda](#)

The Procurement Analyst will be responsible for assisting the Ministry of Health with all activities related to the procurement of medical equipment and hospital supplies required for the HRH Program. Responsibilities will include developing a system to collect data on current inventories at hospitals, modeling of equipment standards and norms, liaising with the Ministry of Health to write tenders and prepare bids, ensuring timely delivery of equipment and supplies, creating effective real-time updates on status of all orders placed, facilitating efficient communication with hospital locations and schools, and developing and coordinating maintenance plans. The ultimate objective is to assist the Ministry of Health to successfully provide hospitals and schools with the equipment and supplies needed to demonstrate high quality teaching and to aid in the delivery of high quality care.

- Minimum of three years' experience, especially in procurement and supply chain management (PSM)
- Very strong quantitative skills, including significant experience working in excel on budgeting and data management
- Exceptional diplomatic and interpersonal skills, and ability to build relationships
- Excellent organizational and problem solving skills •Strong communication skills
- Ability to multi-task and to be effective in high-pressure situations
- Ability to work independently on complex projects and proactively manage projects with minimal supervision

Applicants with management consulting or other relevant private and public sector experience are strongly encouraged to apply. Interested candidates should apply online at <https://careers-chai.icims.com/jobs/2804/procurement-analyst/job>. Closing date: 7 Oct 2012.

Other

[Tullow Oil, partners start drilling third well in Kenya](#)



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British explorer Tullow Oil Plc and its Canadian partner Africa Oil Corp started drilling a third well in Kenya, extending a campaign to discover more reserves after finding oil in the east African country earlier this year. Drilling of the well, known as Paipai-1 and located in northern Kenya's Marsabit County, started on Saturday. Its planned total depth is 4,112 metres and it could have as many as 121 million barrels of crude oil, Africa Oil said. Tullow hopes the well will encounter oil, rather than gas. "A discovery at Paipai would extend the producing plays of Sudan into Kenya and open a potentially significant and new petroleum province within Kenya," Keith Hill, Africa Oil's chief executive, said in a statement.

East Africa has become a hotbed of exploration after several petroleum discoveries in the area pushed the region into the international limelight. However, Kenya has yet to determine whether it has commercially viable quantities of hydrocarbons. Paipai-1 on onshore Block 10A is a joint venture of Tullow, the well operator with 50 percent of the exploration license, Africa Oil, holding 30 percent, and London-listed Afren, with the remaining 20 percent. Tullow is already drilling one other well in Kenya, known as Twiga-1, on Block 13T, about 30 kilometres west of where it made its oil discovery in March. Hill said the results of this well are expected before the end of October. The British company also was a venture partner in the offshore well, Mbawa-1, that encountered gas. However, Mbawa's operator Apache Corp said it had hoped to find oil and there was insufficient gas to justify costly investments in liquefied natural gas facilities and pipelines. If Tullow finds oil for a second time in Kenya, it may spur investment in infrastructure projects, such as a refinery and pipeline to its coastal ports. Kenya's energy minister Kiraitu Murungi said he thought the country had enough petroleum to warrant both projects. "We are becoming the new Middle East," Murungi said at a press conference in August. Tullow indicated it would be at least a year before it knows whether its March discovery can be extracted and exported.

[SDI South Africa Alliance: Enumeration](#)



Enumerations are essentially community-initiated and run censuses whereby a socio-economic and demographic profile is generated, and the tenure status, level of services and development aspirations are ascertained. Networks of the urban poor consciously adopt strategies of self-enumeration which becomes powerful negotiation tools in its dealings with governments. By leveraging its own resources through this exercise of information gathering, communities are best positioned to articulate a demand-sided development agenda. By making themselves "visible" to governments, informal settlement residents have the most up to date knowledge on how many households make up their settlement, how long they have lived there, and how they make a livelihood. One of the outcomes of the enumeration exercise is the production of "ID cards" – containing the number of people living in the shack, years of occupation – which is usually endorsed by local government and becomes the principle form of evidence to support shack dwellers' claims to the land they occupy.

Armed with questionnaires, chalk, booklets and tape measures, enumerators create a qualitative and quantitative map of their settlement. Their work is twofold: (a) to survey each household, and (b) to number and measure every structure. This information-gathering underpins the development of a physical and narrative picture of community-level challenges. A subsequent verification process within the community enables areas of disagreement to be identified and mediated by community members. Detailed documentation (graphs, charts and narratives) is prepared by CORC and disseminated to the community, city officials and other stakeholders. Development of the settlement can then proceed, with all stakeholders engaged around an information set controlled by the community which most accurately represents the community's developmental needs and aspirations.

[Somalia Rainfall Forecast Issued: 1st October, 2012](#)



[Download PDF \(190.71 KB\)](#)

Rainfall Performance (24th to 30th Sept. 2012)

Wet conditions prevailed in many places within Somalia over the last week. Belet Weyne in Hiran Region recorded the highest amount of rainfall (188 mm) on 29th September leading to floods and destruction of property in the town and its environs. Currently observed river levels along the Shabelle River are high with a moderate risk of flooding in the lower reaches of the river.

Rainfall Forecast (1st to 7th Oct. 2012) - The seven day rainfall forecast (map 2) calls for continued rainfall activities in most parts of the country as well as the Juba and Shabelle River basins in Ethiopia.



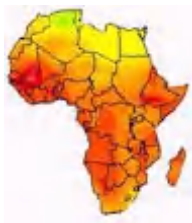
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Items newly added to this listing of events since the last SDI-Africa issue are marked * **NEW** *

Conferences, Events

Date	Location	Event
October 2012		
2-4 October 2012	Gauteng, South Africa	GISSA Ukubuzana 2012: Conference and exhibition of geoinformatics, ICT, surveying, remote sensing and location-based business
3-5 October 2012	Naivasha Sopa Lodge, Kenya	Esri Eastern Africa User Conference
8-12 October 2012	New Delhi, India	International Workshop on Geographic Information Systems (GIS) Applications in Public Health Contact: measure_training@unc.edu
15-17 October 2012	Oslo, Norway	Esri European User Conference
15-19 October 2012	Chengdu, China	International Conference on Mountain Environment and Development
16-19 October 2012	Madrid, Spain	TOPCART “I Congreso Iberoamericano de Geomática y Ciencias de la Tierra”
22-23 October 2012	Guayaquil, Ecuador	CfP – First Latin America Congress of Free and Open Source GIS (Latin OSGIS)
29 October-2 November 2012	El.Jadida, Morocco	AARSE 2012 International Conference , Theme: Earth Observation & Geo-information Sciences for Environment and Development in Africa: Global Vision and Local Action Synergy. Abstract submission - 2 January to 30 April 2012.
29 October-01 November 2012	Tampa, FL, U.S.A.	MAPPS/ASPRS 2012
November 2012		
06-09 November 2012	Redondo Beach, CA, U.S.A	20th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems
08-10 November 2012	Oporto, Portugal	CAMUSS, the International Symposium on Cellular Automata Modeling for Urban and Spatial Systems
13-14 November 2012	Amsterdam, The Netherlands	Be Inspired - Thought Leadership in Infrastructure Event
26-29 November 2012	Montevideo, Uruguay	8th FIG Regional Conference
December 2012		
03-05 December 2012	London, U.K.	European Space Solutions 'Discover what space brings to your life
13-16 December 2012	Enschede, The Netherlands	Gi4DM 2012 E-mail: info@gi4dm.net
2013		
13-16 May 2013	Rotterdam, The Netherlands	Geospatial World Forum
13-16 May 2013	Beurs, Rotterdam	Geospatial World Forum 2013
8-12 July 2013	San Diego, USA	ESRI International User Conference
2015	Durban, South Africa	14th World Forestry Congress for SA



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1-31 August 2016	Cape Town, South Africa	35th International Geological Congress . Registration deadline: 30 June 2016.
17-22 September 2013	Nottingham, U.K	FOSS4G 2013 Conference

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

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