

Spatial Data Infrastructure – Africa Newsletter



SDI-Africa Newsletter

May 2009

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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.asp>
Best regards, Gordon Ojwang, Editor, [SDI-Africa AT gsdi.org](mailto:SDI-Africa_AT_gsdi.org) or sdiafrica@rcmrtd.org or gojwang@rcmrtd.org

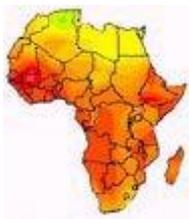


Input to this Issue

Thank you to Kate Lance, USRA/SERVIR-Africa (USA); Hussein Farah, RCMRD (Kenya); Ogunesan Damola, Nigerian Conservation Foundation's Lekki Conservation Centre (Nigeria); Yazidhi Bamutaze, Makerere University (Uganda); Wafula Okumu, Institute for Security Studies (South Africa) for their contributions to this issue of the newsletter.

SDI News, Links, Papers, Presentations

[11th International Conference on Global Spatial Data Infrastructure \(GSDI 11\)](#), 15-19 June 2009, Rotterdam, The Netherlands
Theme: Spatial Data Infrastructure Convergence: Building SDI Bridges to Address Global Challenges. Partners in organizing this conference include the GSDI Association, Joint Research Center (JRC) of the European Commission, EUROGI, Geonovum, Space for Geoinformation Innovation Program (RGI) and Delft University of Technology. The plenary and paper sessions of three major geospatial conferences are being integrated into a single program and held in the same venue. These combined conferences include the Eleventh GSDI Conference, the Third Inspire Conference and the Dutch National Conference reporting on Dutch SDI Results and Challenges. The organizers have invited presentations covering [suggested conference topics](#) on full range of practice, development and research experiences that advance the practice and theory of spatial data infrastructure development.



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[Contribute to Global Spatial Data Infrastructure Cookbook wiki](#)

The Global Spatial Data Infrastructure Association (GSDI) has published the GSDI Cookbook in a wiki environment and invites contributions to this resource from a broad community of geographic data providers and users. The [GSDI Cookbook wiki](#) provides the necessary background information to evaluate and implement existing components of SDI. The GSDI Cookbook includes topics on data development, visualization, discovery, standards, legal and economic issues, community building, and case studies. In light of the rapidly evolving technological environment that SDI operates within, contributions and updates are encouraged to the GSDI Cookbook especially in the areas of service interoperability, data discovery and data visualization.

The following contains the SDI Cookbook, broken down by chapter. Each chapter is then broken into subsections.

- [Chapter 1: The Cookbook Approach](#); [Chapter 2: Geospatial Data Development: Building data for multiple uses](#); [Chapter 3: Metadata: Describing geospatial data](#); [Chapter 4: Geospatial Data Catalogue: Making data discoverable](#); [Chapter 5: Geospatial Data Visualization: Online Mapping](#); [Chapter 6: Geospatial Data Access and Delivery: Open access to data](#); [Chapter 7: Other Services](#); [Chapter 8: Legal Issues and Economic Policy](#); [Chapter 9: Outreach and Capacity Building: Creating a community](#); [Chapter 10: Standards Suites for Spatial Data Infrastructure](#); [Chapter 11: Case Studies](#); [Chapter 12: Terminology](#); [Annex A. Abbreviations and Terminology used in the GSDI Cookbook](#).

To sign up for the GSDI News List, visit: <http://www.gsdi.org/> and subscribe at: <http://www.gsdi.org/newslist/gsdisubscribe.asp>. For further information, contact: GSDI News: news@gsdi.org.

[GEONETCast Workshop](#), 6-10 April 2009, RCMRD, Nairobi, Kenya



A successful workshop was conducted entitled “*Installation and configuration of a GEONETCast ground receiving station*” at the Regional Centre for Mapping of Resources for Development (RCMRD), Nairobi, Kenya from 6-10 April 2009. The workshop was jointly organized by staff from RCMRD, the Department of Water Resources and the International Institute for Geo-Information Science and Earth Observation (ITC), The Netherlands. During this week, an operational local GEONETCast ground receiving station was established and used for the purpose of the workshop. The data and information received will support the regional

centre in its future activities in the region. The workshop focused on the following topics:

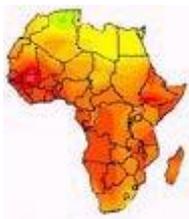
- Providing an overview of the data and products that are available in GEONETCast;
- Hands-on on setting up and configuring of a low cost C-Band GEONETCast ground receiving station at the RCMRD;
- Maintaining a consistent data archive using the GEONETCast Data Manager;
- Introduction to the GEONETCast toolbox, an ILWIS 3.6 OPEN *Beta* based plug-in capable to handle relevant images and products from GEONETCast for environmental analysis;
- Hands-on exercises to integrate the data into a GIS and demonstrations showing the versatility of GEONETCast and the ILWIS 3.6 Open *Beta* Toolbox.

Software utilities used during the workshop was provided to the course participants as well as necessary contacts to acquire a license and documentation needed to configure a ground receiving station. For further information, contact: Dr. Hussein Farah at Farah@rcmrd.org or Dr. B. Maathuis at Maathuis@itc.nl.

[Satellite to aid Namibia disaster management](#)

You are viewing page 1

The UN Office for Outer Space Affairs is helping the Namibian government to access satellite photography to support and prepare for a national flood emergency. The world body's agency, UN-Spider (UN Platform for Space-based Information for Disaster Management and Emergency Response) teamed up with the hydrological service at Namibia's Ministry of Agriculture, Water and Forestry to plot vital water-course information. Two experts from the hydrological service of Namibia later took part in a UN-Spider workshop - Disaster Management and Space Technology - Bridging the Gap - in Bonn, Germany. Source: [African Business](#), March 1, 2009.



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[ESRI and Microsoft Team-up in Kenya to help advance the goals of the Green Belt Movement,](#) February 10, 2009

ESRI has joined forces with the Microsoft Corporation to support the longtime efforts of the Kenyan-based Green Belt Movement. Rob Bernard, Microsoft chief environmental strategist said “Helping the world reforest and using technology to improve the effectiveness of strategies for helping heal our planet are essential in helping people and nations improve their local and the world’s environment,” “Microsoft Corporation was proud to combine forces with ESRI to use collective expertise in technology to help advance the goals of the Green Belt Movement.”

The Green Belt Movement is internationally known for its successful reforestation activities, planting more than 30 million trees since its founding in 1977 by Prof. Wangari Maathai, 2004 Nobel Peace prize recipient. According to Maathai, the introduction of computers with GIS software has “made the Green Belt Movement more efficient and effective in the use of our resources. This allows us to plant more trees and plant them where they will make the greatest difference.” The Green Belt Movement is using GIS to assess the status of various forests in the country, on-site selection of forest plots, and in calculating the acreage of designated sites to determine the optimum number of trees to be planted. Because the world is interconnected, deforestation in Africa will eventually have an effect across the entire globe, so what we do in Kenya with reforestation will ultimately have an effect on climate change throughout the world.”

[South Africa: Umbandila satellite launch delayed](#)

The launch of South Africa's R26-million Sumbandila satellite has been postponed from 25 March to occur in the period May 6 to May 10 due to rescheduling in Russia, where the satellite will be launched. The delay is not due to any technical, contractual, or political problem, but simply the result of a rescheduling of programmed launches by the Russian space agency Roscosmos. The satellite will collect data to be used in monitoring and managing disasters such as floods, oil spills and fires in the region.

The agency had to bring forward a manned mission to the International Space Station (ISS). This will involve the Soyuz TMA-14 crew vehicle, and was originally rostered for launch on March 26, after SumbandilaSat's take-off. The three-person crew of this Soyuz mission will include a space tourist, US software billionaire Charles Simonyi, who paid \$20-million for the trip, which will be his second flight with the Russians to the ISS. His first was in April 2007. The other two members of the crew are a Russian commander and an American flight engineer. South Africa was informed of the change.

SumbandilaSat is an 81 kg Earth observation microsatellite. It is based around a new satellite platform developed by Stellenbosch-based Specialist Company SunSpace and Information Systems (SunSpace). The microsatellite's main payload is a 6.25 m multispectral imager - that is, the imager has a resolution of 6.25 m x 6.25 m. This imager was also designed, developed, and made by SunSpace. SunSpace was spun-off by the University of Stellenbosch to exploit the expertise developed in the design, assembly, and operation of the university's own private-initiative satellite, SunSat, which, in 1999, became the first South African satellite to reach orbit. SunSat had a mass of 64 kg and carried a fairly small multispectral imager, operating in three bands (red, blue, and green) with a resolution of 15 m (that is, one pixel equating to 15 m x 15 m on the ground) at an altitude of 600 km - the first of its kind on a small satellite in any country.

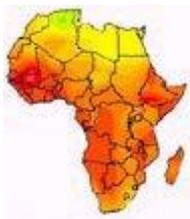
[Kenya-Uganda: All set for survey of Migingo Island in Lake Victoria](#)



In the recent time, Migingo Island in Lake Victoria has raised controversy over ownership between Kenya and Uganda. [Is this tiny island worth fighting for?](#) Resolving the Migingo dispute requires the two presidents to meet under the aegis of East African Community (EAC) or African Union (AU) to agree on basic principles of addressing the dispute. A technical team composed of representatives from both countries with the EAC, the AU and the UN, acting as guarantors of the agreement, will then carry out

the survey exercise. Surveyors now are ready with the equipment including the Global Positioning System (GPS) ready and Kenyan Foreign Affairs Minister Moses Wetang'ula, who is chairing the team of experts trying to resolve the issue, and his Ugandan counterpart Sam Kutesa are expected to flag off the work. The survey will cost KSh140 million and undertaken by the Lands ministries in the two countries. Other officials will be from the Foreign Affairs and Fisheries ministries.

Migingo Island, measuring a mere acre of land full of rocks and located 10km off Sori Bay in Karungu Division, Migori district of Kenya is one of the smallest of the hundreds of islands in Lake Victoria. Lake



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Victoria (68,800 Km²) is shared between the three original members of the East African Community - Kenya, Uganda and Tanzania. It is the world's second-largest freshwater water body after Lake Baikal in Siberia, provides a direct source of livelihood for an estimated 30 million people. Some 42,000 fishermen on the lake make at least \$72 million a year from exports of the Nile perch. Lake Victoria is also the source of the River Nile, a lifeline for millions in Egypt, Sudan and Uganda. Additionally, the lake serves as an alternative trade route for Uganda through the ports of Dar es Salaam and Mwanza.

The row over Miringi Island could be resolved by comparing document and maps on the demarcation of East Africa by the British Government. The survey map that will be generated will later be annexed to the final boundary treaty signed by the two presidents. In late last month, the two presidents signed an agreement to resolve the dispute with 60 days at the EAC heads of states meeting held in Arusha. The Miringi island dispute not only highlights the divisive legacy of the colonial boundaries and potential for conflicts over the sharing of trans-boundary resources, but also the lack of mechanisms to address border disputes in East Africa. Source: Daily Nation, 21 and 28 April 2009.

Digital maps to enhance disease outbreak response



Aid workers could gain a clearer picture of on-the-ground developments in crises such as Zimbabwe's cholera outbreak through the use of disease maps, say experts. [WikiMapAid](#), launched in March, 2009 will enable humanitarian workers and other members of the public to add vital information -such as the locations of hospitals, refugee centres, and food and water distribution centres; and reports of the current situation in an area to a version of Google Maps. They can also attach links to videos or photos. It is based on a Brazilian mapping tool called [Wikicrimes](#), which acts as an alternative source of crime figures to government data to build a picture of problem areas and put

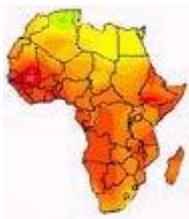
pressure on the Brazilian government to take action. Global Map Aid, which is leading the project, hopes that WikiMapAid will have the same effect and ensure that aid is distributed appropriately.

A total of 89,649 cases of cholera and 4041 deaths had been reported in Zimbabwe since the outbreak began in August 2008. But new cholera cases have fallen from around 8,000 a week at the start of the year to 2,151 in the first week of March. A central control centre was recently set up in Harare with help from the Zimbabwean Ministry of Health. However, there are concerns regarding the potential for unreliable reporting and to mitigate this, [Vasca Furtado](#) who developed the software for both mapping tools is developing a system to rate users based on whether their information is corroborated or disputed. Rupert Douglas-Bate of Global Map Aid says: "Even if we're just 80 per cent perfect, we will still have made a huge step forward in terms of being able to galvanize public opinion, raise funds, prioritize need and speed the aid to those who need it most."

Almost all Swaziland soil is 'damaged'

A study assessing the global impacts of land degradation - the decline in soil, water and vegetation quality has found that almost all of Swaziland's land has been degraded. More than half of the soil is damaged in Congo-Brazzaville, the Democratic Republic of Congo, Equatorial Guinea, Gabon, Sierra Leone and Zambia. Land degradation is always with us but its causes, extent and severity are contested. In this study, land degradation is defined as a long-term decline in ecosystem function and productivity, which may be assessed using long-term, remotely sensed normalized difference vegetation index (NDVI) data. Deviation from the norm may serve as a proxy assessment of land degradation and improvement if other factors that may be responsible are taken into account. These other factors include rainfall effects which may be assessed by rain-use efficiency, calculated from NDVI and rainfall. Results from the analysis of the 23-year Global Inventory Modeling and Mapping Studies (GIMMS) NDVI data indicate declining rain-use efficiency-adjusted NDVI on ca. 24% of the global land area with degrading areas mainly in Africa south of the equator, South-East Asia and south China, north-central Australia, the Pampas and swaths of the Siberian and north American taiga; 1.5 billion people live in these areas. The results are very different from previous assessments which compounded what is happening now with historical land degradation. Economic appraisal can be undertaken when land degradation is expressed in terms of net primary productivity and the resultant data allow statistical comparison with other variables to reveal possible drivers.

GIS: A tool for environmental education in Nigeria



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Geographic Information System (GIS) software has proven to be a useful tool both in formal and non-formal environmental education programs. The Nigerian Conservation Foundation has included the use of GIS as a tool for its school visits to Lekki Conservation Centre. Arcview 3.3 was used to visualize the National Boundary, States Boundaries, National Parks and Strict Nature Reserve in Nigeria was the first step. These promotes environmental education process by showing the students the location of the National Parks, Ramsar Sites, Strict Nature Reserves and the vegetation types in each reserve. The process included the use of hot linking tool to link the spatial data with sets of animal pictures peculiar to each of the National Parks. The result of this is that the GIS application was able to answer questions posed by the students such as location of a National Park? Name of a protected area? And which types of animals are found there? For more information, contact: Ogunesan Damola at adedamola.ogunesan@ncfnigeria.org.

[Opportunity to apply for a travel grant to attend the AfricaGIS 2009](#)

The ISPRS Foundation is seeking applications from individuals wishing to obtain travel assistance from the "Trust Fund Amsterdam 2000" (administered by the ISPRS Foundation) to participate in the AfricaGIS International Conference, which will be held in Kampala, Uganda, from 26 to 30 October 2009. Applicants should complete the form and read the [preamble](#) which can be downloaded from the [ISPRS website](#). Deadline for receipt of applications: 10 July 2009.

[Geospatial Technology Program for sub-Saharan Africa](#), 19-21 May 2009, Regency Ballroom, San Jose, California

The Bill & Melinda Gates Foundation recently awarded a grant to the Consultative Group on Agricultural Research (CGIAR), in partnership with CH2M HILL and ITC, to develop a geospatial technology program to aid farmers by providing timely and location-specific information that will allow them to make the best decisions possible on how to farm their land. The geospatial technology program initially focuses on sub-Saharan Africa and seeks to identify and develop partnerships, data, tools and services that deliver relevant, timely, and targeted information directly to farmers and those working on their behalf with the aim of boosting crop productivity and ultimately enhancing the economic well-being and quality of life of the poor.

This presentation will describe the program and its 'bottom-up' approach to geospatial technology development. The outcomes of several African workshops will be presented as well as progress on initial projects already being launched. Visit: <http://www.agcommons.org/> for further information on equipping Africa's farmers with location-specific information to reduce uncertainty and increase returns.

[International symposium on wetlands in a flood pulsing environment: Effects on biodiversity, ecosystem function and human society](#), 1-5 February 2010, Maun, Botswana

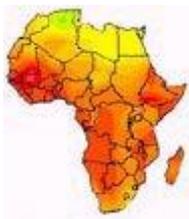
This groundbreaking multidisciplinary symposium addresses the importance and effects of pulsing hydrologic cycles on the functioning of wetlands. Its emphasis is on inland wetlands with focus on the importance of flood pulses on wetland flooding and linked responses on chemistry, biological productivity, biodiversity and human livelihood, history and culture. The symposium will be held at the edge of the Okavango Delta, one of the world's largest flood pulsed wetlands. All inflow to the Delta emanates from the Angola highlands, passes through Northern Namibia, arriving as a distinct flood pulse to the Delta where it covers many thousand square kilometers of grasslands with water. This process creates a dynamic, interlinked aquatic-terrestrial system with high biological productivity and biodiversity - drivers of a flourishing tourism industry and the base for the livelihoods of local populations.

The symposium will provide an opportunity to collect, summarize and synthesize the considerable multi-disciplinary knowledge that has been generated during the past 20 years, to give guidance to future research and to incorporate the flood pulse concept into policy and management. Deadline for submission of special session proposals: 1 June 2009. Deadline for submission of abstracts and workshop proposals: 1 October 2009.



[2009 IEEE International Geoscience & Remote Sensing Symposium \(IGARSS\)](#) - [List of accepted papers](#), [Short courses](#), 13-17 July 2009, Cape Town, South Africa.

Short courses not meeting the minimum number of registrants (10) by 22 May 2009 will be cancelled. Registration is separate from IGARSS 2009 registration. Fill out [Registration Form](#) and fax to: Within South Africa: 086 524 0001; Outside of South Africa: +27 21 788 6742; or shortcourses@igarss09.org.



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- [SC-2: Operational Monitoring of the African Savannas based on the MOD13Q1 Product](#)
- [SC-3: Processing of Reflected and Occulted Global Navigation Satellite System \(GNSS\) Signals for Earth Remote Sensing](#): 7-10 July, 8:30 - 17:30
- [SC-4: MODIS direct broadcast data for enhanced forecasting and real-time environmental decision making](#): 7-10 July, 8:30 - 17:30
- [SC-5: Terrain Height Data Generation](#)
- [SC-6: Polarimetric radar \(SAR\) image processing course](#)
- [SC-7: SAR and Interferometric processing for land applications](#)
- [SC-8: Optical and Thermal Field Methods in Terrestrial Remote Sensing](#)
- [SC-9: Advanced Satellite Techniques for Environmental Monitoring \(ASTEM\)](#)

[ESRI Eastern Africa User Conference](#), 24-25 September 2009, Addis Ababa, Ethiopia



[2009 GIMS User Conference](#), 21-23 October 2009, Alpine Heath, Northern Drakensberg, South Africa

The User Conference (UC) is a three day conference which will reflect GIMS and ESRI's vision for the future, where GIS solutions will play an increasingly vital role on an everyday basis in a myriad of different ways. The UC 2009 agenda will include topics which cover how GIS is impacting across all industries and those making use of the growing technology - GIS Users, GIS Managers, Developers, System Architects and IT Professionals, technical software users and key decision makers. Delegates will represent a wide range of industries including Central Government, Local Government, Defence, Education, Environment, Health, Private Sector, Public Safety and Utilities organisations.



[AfricaGIS 2009 Conference](#), 26-29 October 2009, Kampala, Uganda

The AfricaGIS2009 is a premier, continental conference. The broad sub-themes include:

- Geospatial information for climate change, vulnerability and disaster risk reduction
- Spatial Data Infrastructure in Africa; enhancing science-policy interface
- Geospatial information science for communication and education
- Geospatial information for integrated environment and natural resources mgt

Cross-cutting issues includes poverty, rural development, urbanization, gender, health, land, displacement and refugees, water and energy. Contact: info@afriagis2009.org. Abstract deadline: 30 April 2009.



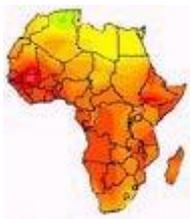
[2009 ESRI Middle East and North Africa User Conference \(MEAUC\)](#), November 9-12, 2009, Manama, Bahrain

Professionals across industries and at all levels of experience with geographic information system (GIS) technology are encouraged to attend this valuable forum. Join ESRI and your colleagues for the opportunity to explore your biggest project challenges and learn how to achieve more GIS-driven results in your organization or community. Contact meauc2009@esri.com.

Practical SDI implementation materials from within and outside of Africa

[A method for groundwater prospect zonation in data poor areas using remote sensing and GIS: a case study in Kalikavu Panchayath of Malappuram district, Kerala, India](#)

The present study was an attempt to delineate potential groundwater zones in Kalikavu Panchayat of Malappuram district, Kerala, India. The geo-spatial database on geomorphology, landuse, geology, slope and drainage network was generated in a geographic information system (GIS) environment from satellite data, Survey of India topographic sheets and field observations. To understand the movement and occurrence of groundwater, the geology, geomorphology, structural set-up and recharging conditions have to be well understood. In the present study, the potential recharge areas are delineated in terms of geology, geomorphology, land use, slope, drainage pattern, etc. Various thematic data generated were integrated using a heuristic method in the GIS domain to generate maps showing potential groundwater zones. The composite output map scores were reclassified into different zones using a decision rule. The final output map shows different zones of groundwater prospect, viz., very good (15.57% of the area), good (43.74%), moderate (28.38%) and poor (12.31%). Geomorphic units such as valley plains, valley fills and alluvial terraces were identified as good to excellent prospect zones, while the gently sloping lateritic uplands were



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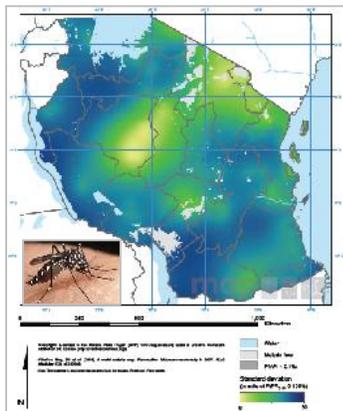
identified as good to moderate zones. Steeply sloping hilly terrains underlain by hard rocks were identified as poor groundwater prospect zones. Source: [International Journal of Digital Earth](#), March 2009.

[Paradigm shift in the demands for spatial data infrastructure assessment: experience from The Netherlands](#)

The Spatial Data Infrastructure (SDI) is an emerging phenomenon world-wide. With their growth also has the demand for assessment approaches to evaluate their development and progress. The early approaches were developed by scientists and were mainly curiosity driven. With the increasing involvement of government officials and policy makers over the years the assessment demands have also changed. Current demands focus on measuring implementation progress and the use of SDIs. SDI assessment developments in The Netherlands follow this overall generic trend and it is a challenge for scientists to contribute to these trends in which they are no longer leaders but contributors. For further information, contact: arnold.bregt@wur.nl, lucas.grus@wur.nl, joep.crompvoets@soc.kuleuven.be, W.Castelein@geonovum.nl and Jacqueline.Meerkerk@rgi.nl.

GIS Tools, Software, Data

[Country, regional and world level malaria \(database\) maps](#)

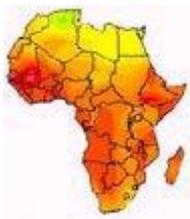


Africa bears the brunt of malaria with 98 per cent of high-risk areas on the continent. Researchers have created the first global map of malaria infection rates in more than 40 years, in an effort to help [inform policy and monitor progress](#) in fighting the disease. Malaria control has long depended on incomplete infection mapping or “spatial medical intelligence”. But in recent years the [Malaria Atlas Project](#) (MAP) has used GPS (Global Positioning System) to plot malaria infections based on community surveys in 87 endemic countries. Almost three million test slides from 2007 were compiled into 14,724 health surveys, which were plotted into MAP’s first global malaria infection [risk map](#). MAP scientists said results showed how malaria control is feasible; more than 70 percent of the 2.4 billion people at risk lived in low-risk areas. But [funding disparities](#) affected malaria prevention; 90 million African children did not have insecticide treated bed nets. Death and disability from malaria was highest in sub-Saharan Africa, based on 2007 data. There are

maps provided in 87 countries for which *Plasmodium falciparum* is endemic in three global regions, and for the entire world as detailed in the malaria mapping exercise in [Hay et al., 2009](#). The [global versions](#) are also available as a .kmz file which can be freely downloaded and viewed using Google Earth. The ‘limits’ maps show the spatial limits of *Plasmodium falciparum* transmission and identify malaria free, unstable or stable transmission areas as well as showing the location and observed value of the parasite rate surveys that underpin the mapping exercise. The ‘mean’ maps show the predicted spatial distribution of *Plasmodium falciparum* malaria endemicity. The ‘uncertainty’ maps provide a continuous index of the model uncertainty associated with each predicted endemicity map, highlighting areas where sparse data have lead to lower accuracy. The ‘uncertainty class’ maps show the same index classified into regions of low, medium, and high uncertainty. Details of the inclusion criteria for data included in the MAP database are available via links in nine languages. An example of the data abstracted from a [specimen paper](#) is also provided, along with an example of the [data abstracted](#). Additional information has been provided on how we go about [geo-positioning data](#) as well as a list of locations that we unable to be geo-positioned. The map of the extent of *Plasmodium falciparum* infection published ([full article](#)) on 24 March 2009 in *PLoS Medicine*.

[Kenya, the first country with downloadable data from Google Map Maker](#)

Google Map Maker is a Google Maps website where users can ‘draw’ on the map to create upgrade roads, cities, parks, etc... The end product is a full map completely from users on the internet. It was first launched in the East Africa countries, and now has extended to about 50 countries world wide, mostly ‘developing’ countries where there are no high quality maps available. Just released are the user generated maps for Kenya, downloadable in KML and ESRI *Shapefile* format, free for non-commercial use (i.e. academics). Kenya is the first country with downloadable data from Map Maker, and it is a pilot launch. Depending on the number of downloads of this data, the other 50 countries may be opened up too. So it is important to show



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management that people will like and use this data, and download stats are what management looks at! Get the data, simple [form](#) and then you get it.

[DEPHA: Data Exchange Platform for the Horn of Africa](#)

Website provides geospatial data for the countries of Djibouti, Ethiopia, Somalia, Kenya, Uganda, Sudan, and Eritrea. Data includes data for roads, place names, drainage, railways, boundaries, and other general GIS data in vector or raster format.

[Namibia: Maps and Other Data for North-Central Namibia](#)

Website contains environmental information and maps for north-central Namibia, collected from various sources across several sectors, both government and non-government.

Geospatial Research, Applications, Reference Material

[African farmers get geospatial info on their phones](#)



The ability to correctly diagnose and treat crop diseases such as banana wilt via mobile phone is just one of endless possibilities for smallholder farmers if location-specific (geospatial) information were available. Such a project would make use of mobile devices equipped with Global Positioning Systems and cameras. A pilot project that uses mobile phones to alert farmers in remote regions to where they can buy drought-tolerant beans has been launched in Kenya - just one of a set of pilot projects using mobile and geospatial technologies to improve communication of important information to farmers across Africa. In the first step of the system, researchers confirm where dealers are stocking drought-tolerant beans, mapping their locations. Scientists then use mobile phone services to send the information to government extension workers who have second-generation mobile phones, common in Africa. They can then relay the information to farmers in person or via their phones. "We will produce maps which can be used by extension officers or community development workers so that this information can be passed onto farmers who wish to acquire improved drought-tolerant bean seeds," says Andrew Farrow, a spatial analyst from the International Centre for Tropical Agriculture (CIAT) based at Uganda's Kawanda Agricultural Research Institute. He addressed the WhereCampAfrica mapping conference held at the International Livestock Research Institute in Nairobi, Kenya, last month (4 April 2009). The drought-tolerant bean mapping project is a Quick Win project of the AGCommons initiative which aims to enhance use of geospatial information in farming.

The [Grameen Foundation](#) is conducting another seven-month pilot project in two Ugandan districts, where community workers collect and disseminate information on crop diseases, acreage and projected harvests through mobile device surveys.

Another project is taking place in Kisumu and Homa Bay on the edge of Lake Victoria in western Kenya, where mobile phones are used to provide farmers and government workers with information about the soil. "Soil samples will be scooped and scanned using near-infra-red and mid-infra-red spectroscopy technology to identify the electromagnetic wavelengths of various elements in the soil," says soil scientist Peter Okoth, from the Nairobi branch of CIAT. The soil sample is given a fertility rating, then digitally mapped and accessed by mobile phone or the Internet using Google Map Maker. Other projects improve market access for smallholders by providing the daily price for commodities at a variety of nearby markets as well as options for buying farm equipment or obtaining agriculture-related funding. Farmers can also get information about the weather, crop diseases and pest outbreaks. Other Quick Win projects are taking place in Burkina Faso, Ethiopia, Ghana, Mali, Niger and Uganda.

According to [Tesfaye Korme](#) of the [Regional Center for Mapping of Resources for Development](#) (RCMRD), a study in Ethiopia is expected to capture information on rural road types, sea and inland water ports, airports, border crossings, private and community depots and silos and market locations for use by farmers and other service providers. The use of high-resolution mapping for fields would not only help with indepth knowledge about field characteristics, but also the acreage, which is a precursor for sustainable land management."

[Supervised land cover classification of a western Kenya lowland endemic for human malaria: associations of land cover with larval Anopheles habitats](#)

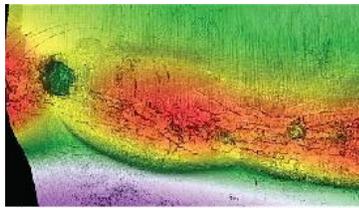


Spatial Data Infrastructure – Africa Newsletter



A supervised land cover classification was developed from very high resolution IKONOS satellite data and extensive ground truth sampling of a ca. 10 sq km malaria-endemic lowland in western Kenya. The classification was then applied to an investigation of distribution of larval *Anopheles* habitats. The hypothesis was that the distribution and abundance of aquatic habitats of larvae of various species of mosquitoes in the genus *Anopheles* is associated with identifiable landscape features. Results and discussion: The classification resulted in 7 distinguishable land cover types, each with a distinguishable vegetation pattern, was highly accurate (89%, Kappa statistic = 0.86), and had a low rate of omission and commission errors. A total of 1,198 habitats and 19,776 *Anopheles* larvae of 9 species were quantified in samples from a rainy season, and 184 habitats and 582 larvae from a dry season. *Anopheles gambiae* s.l. was the dominant species complex (51% of total) and *A. arabiensis* the dominant species. Agricultural land covers (mature maize fields, newly cultivated fields, and pastured grasslands) were positively associated with presence of larval habitats, and were located relatively close to stream channels; whilst nonagricultural land covers (short shrubs, medium shrubs, tall shrubs, and bare soil around residences) were negatively associated with presence of larval habitats and were more distant from stream channels. Number of larval habitats declined exponentially with distance from streams. IKONOS imagery was not useful in direct detection of larval habitats because they were small and turbid (resembling bare soil), but was useful in localization of them through statistical associations with specific land covers. Conclusion: A supervised classification of land cover types in rural, lowland, western Kenya revealed a largely human-modified and fragmented landscape consisting of agricultural and domestic land uses. Within it, larval habitats of *Anopheles* vectors of human malaria were associated with certain land cover types, of largely agricultural origin, and close to streams. Knowledge of these associations can inform malaria control to gather information on potential larval habitats more efficiently than by field survey and can do so over large areas. The complete article is available as a [provisional PDF](#). The fully formatted PDF and HTML versions are in production.

[Virtual Seismic Atlas: an open access community resource](#)



The Virtual Seismic Atlas is an open access community resource to share the geological interpretation of seismic data. By browsing freely through the site you will find seismic images and interpretations. And you can download higher resolution images for your use. Several cross sections displayed different styles with interpretation, from different areas (including North Africa e.g. offshore Tunisia). Website: <http://www.seismicatlas.org/>

[Encyclopedia of Earth](#)

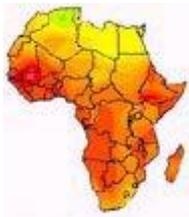
The *Encyclopedia of Earth (EoE)* is "...a new electronic reference about the Earth, its natural environments, and their interaction with society. The *Encyclopedia* is a free, fully searchable collection of articles written by scholars, professionals, educators, and experts who collaborate and review each other's work. The articles are written in non-technical language and will be useful to students, educators, scholars, professionals, as well as to the general public e.g. Hydrologic cycle: http://www.eoearth.org/article/Hydrologic_cycle.

[Call for Papers: Geomatica Journal, Special Issue on "Volunteered Geographic Information"](#)

Papers for this special issue must present research results and advanced work in progress related to, user generated geo-content and particularly linkages to neo-geography, Web 2.0 and/or participatory GIS. Discussions on major challenges that VGI introduces to geomatics sciences and engineering and foreseeable future directions are also welcome, and contributions reflecting international perspectives are strongly encouraged. Potential topics include, but are not limited to, the following:

- Citizens' motivations in providing volunteered geographic information,
- Quality, validity, responsibility and legitimacy issues of VGI, - privacy, confidentiality and ethical issues,
- Potential applications of VGI seen as 'human sensor networks' in public health, civil security, etc,
- Technological challenges and opportunities (access to wireless networks, mobile phones, etc),
- Applications for collaborative VGI (e.g. wikiGIS, wiki carto, etc.)
- Participatory GIS/mapping using VGI and user generated content,
- Cartographic challenges in the context of geospatial Web 2.0,
- Strategy (process, policy, technologies) to integrate VGI into formal GIS processes

Papers should be submitted in English or French to Guest editors: Dr. Stéphane Roche at stephane.roche@scg.ulaval.ca and Dr. Rob Feick at rdfeick@uwaterloo.ca in PDF. Instructions to authors



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are outlined in Geomatica and also available at CIG-ACSG web site. If the document is bigger than 3.0 MB, please submit it to editgeo@magma.ca. Each paper should not exceed 9,000 words. Deadline for submission of manuscripts: June 1, 2009.

[Call for Papers: 3rd International Academy of Astronautics \(IAA\) African Regional Conference](#), 24-26 November 2009, Abuja, Nigeria

The International Academy of Astronautics (IAA) has again given its approval to the National Space Research and Development Agency (NASRDA) of Nigeria to host the third edition of the African Regional Conference, with the theme “Space for Africa: Joint Participation, Knowledge Development and Sharing”. The 2009 Abuja Conference will highlight the role *Joint Participation, Knowledge Development and Sharing* can play in the development and growth of Space Science and Technology in Africa particularly in the application of space technology to the sustainable development of the continent. The conference will provide a platform for interaction among the scientific, academic and engineering communities of the world and Africa in particular to maximize the benefits of space exploration and exploitation. The conference would provide a forum for the presentation and discussion of topics related to the theme. “*Space for Africa: Joint Participation, Knowledge Development and Sharing*”. There will be limited space for sponsorship of African participants on a first come first serve basis.

Papers are invited in the following areas of the conference sub-themes:

- Integrated earth observation system for development;
- Space communications and navigation systems;
- Space transportation and propulsion systems;
- Space debris and near earth objects;
- Earth observation sciences and related technologies;
- Basic space science;
- Capacity building and the space enterprise

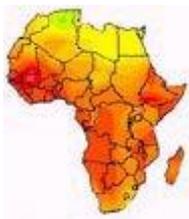
For further information, see [Fyer](#) and [Registration Form](#). Contact: Jide Ajayi at ajayijide2000@yahoo.com or ajayi@nasrda.net and Dr Joseph O. Akinyede at jakinyede@yahoo.com, jakinyede@nasrda.net, ajayijide@hotmail.com or. Abstract deadline: 15 June 2009.

[Call for Papers: 17th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems \(ACM GIS 2009\)](#)

The ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems 2009 (ACM GIS 2009) is the seventeenth event of a series of symposia and workshops that began in 1993 with the aim of bringing together researchers, developers, users, and practitioners carrying out research and development in novel systems based on geo-spatial data and knowledge, and fostering interdisciplinary discussions and research in all aspects of geographic information systems. The conference provides a forum for original research contributions covering all conceptual, design, and implementation aspects of GIS ranging from applications, user interface considerations, and visualization down to storage management and indexing issues. This year's conference builds on last year's conference great success and on being the premier annual conference of the ACM Special Interest Group on Spatial Information ([ACM SIGSPATIAL](#)). Researchers, students, and practitioners are invited to submit their contributions to this year's ACM GIS. Suggested topics include but are not limited to:

- Cartography and Geodesy; Computational Geometry; Computer Vision Applications in GIS; Distributed, Parallel, and GPU algorithms for GIS; Earth Observation; Geographic Information Retrieval; Human Computer Interaction and Visualization; Image and Video Understanding; Location-based Services; Location Privacy, Data Sharing and Security; Performance Evaluation; Photogrammetry; Similarity Searching; Spatial Analysis and Integration; Spatial and Spatio-temporal Information Acquisition; Spatial Data Mining and Knowledge Discovery; Spatial Data Quality and Uncertainty; Spatial Data Structures and Algorithms; Spatial Data Warehousing, OLAP, and Decision Support; Spatial Information and Society; Spatial Modeling and Reasoning; Spatial Query Processing and Optimization; Spatio-temporal Data Handling; Spatio-temporal Sensor Networks; Spatio-temporal Stream Processing; Spatio-textual Searching; Standardization and Interoperability for GIS; Storage and Indexing; Systems, Architectures and Middleware for GIS; Traffic Telematics; Transportation; Urban and Environmental Planning; Visual Languages and Querying; Wireless, Web, and Real-time Applications

Ph.D. students are encouraged to submit their Ph.D. research contributions and work-in-progress. Industrial experience papers that describe original industrial experiences, challenges, and applications as well as



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demo papers to be presented during the conference. Submissions will be made electronically and [online](#) only. Abstract submission deadline: June 18, 2009.

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 sdj-africa@lists.gsdi.org.

[MyCOE / SERVIR Biodiversity Initiative in Africa 2009-2010](#)



This is a new initiative that focusses on the local capacity to use geography and geographic technologies for biodiversity programs in Africa. It will build upon the current work and partnership with NASA, USAID, ESRI, the [Regional Centre for Mapping of Resources for](#)

[Development](#) (RCMRD, which hosts [SERVIR-Africa](#)) and other public/private partners. A MyCOE / SERVIR Biodiversity Youth Cadre will be formed from participants competitively selected for their long-term potential to contribute to biodiversity issues in Ethiopia, Kenya, Malawi, Namibia, Somalia, Sudan, Tanzania, Uganda, Zambia, Angola, Benin, Botswana, Burundi, Comoros, Djibouti, Democratic Republic of Congo, Eritrea, Ghana, Guinea, Lesotho, Liberia, Madagascar, Mali, Mauritius, Mozambique, Nigeria, Rwanda, Senegal, Sierra Leone, South Africa, Swaziland and Zimbabwe. U.S.-based students and scholars may also be eligible to participate in other ways.

1. Eligible youth applicants should be citizens or residents of the above countries and enrolled or completing studies at a university or similar educational institution (upper level undergraduate students, graduate students or post doctoral students (within 6 years of receiving the PhD) in any field may apply to be MyCOE / SERVIR Fellows. Both students and their faculty advisors or other mentors will receive stipends to conduct projects of 6 months duration and receive support to attend a capacity building and GIS workshop at the RCMRD in Nairobi, Kenya.

2. All selected projects will meet the following criteria:

- Have duration of 3 to 6 months of research activity;
- Use geographic technologies such as GIS and GPS;
- Incorporate activities that respond to local threats to biodiversity;
- Address local areas with biological significance;
- Have a committed mentor to participate in capacity building activities;

3. Participants will receive a monthly research stipend (f3-6 months), travel to attend a one-week long workshop in Nairobi, designate and supported mentors, geospatial data resources, living expenses .

Interested students or persons interested in serving as local mentors should contact Dr. Patricia Solis, at psolis@aag.org before 26 June 2009.

[Two GEONETCast short courses prior to IGARSS '09](#)

Prior to the 2009 IEEE International Symposium on Geoscience and Remote Sensing (Earth observation - origins and applications from 13-17 July 2009 in Cape Town, South Africa), two GEONETCAST short courses will be taught:

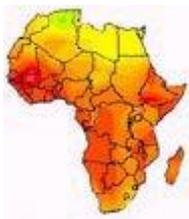
[GEONETCast and the monitoring of African marine ecosystems](#)

Presenters: V. Byfield, National Oceanography Centre, Southampton, United Kingdom and S. Bernard, CSIR, Stellenbosch, South Africa

[GEONETCast and Water Security](#)

Presenters: T. Woldai, B. Maathuis, C. Mannaerts, Department of Water Resources and Earth Systems Analysis, ITC, The Netherlands

For more information: Download the [flyer](#) (433 kB). Visit the [IGARSS'09](#) website. [Source: SERVIR-Africa community news]



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[GEONETcast for Natural & Water Resources Management - Pre-conference workshop Africa GIS2009](#)

22-24 October 2009, Makerere University, Department of Geography, Kampala, Uganda

This workshop will help to bring participants up to speed with recent developments with respect to the GEONETCast data dissemination and ground receiving system, freeware toolbox to import the data, associated (multi-temporal) modeling and GIS applications. Furthermore it will stimulate the applicants to further develop and strengthen educational and research activities and collaboration in these fields.

The workshop is build on the GEONETCast system and utilizes the various data sources provided which will contribute to a better understanding of the natural processes going on in relation to water and natural resources conditions (e.g. flood and drought phenomena) at a basin and continental scale. The workshop will equip the participants with up-to-date knowledge and skills (through computer practical) using (real-time) image and data disseminated via GEONETCast. Tools used are freeware and are at disposal of participants after termination of the workshop. [Source: [SERVIR-Africa community news](#)]

[UNESCO-IHE Regular Short Course: GIS and Remote Sensing](#)

2-13 November 2009, UNESCO-IHE Institute for Water Education, Delft, The Netherlands

There has been a rapid growth in the use of digital spatial and temporal data in many aspects of urban water systems management (for example urban planning, pipe-network systems analysis, river basin management, groundwater analysis and water pollution assessment). The aim of this course is to provide both a solid theoretical understanding and a comprehensive practical introduction to the use of geographic information systems and remote sensing technologies for the analysis and solution of different water and environmental problems. Contact: z.vojinovic@unesco-ihe.org.

[Facilitating community managed disaster risk reduction course](#), 11-22 May 2009, Addis Ababa, Ethiopia

Over 40% of the population in the horn of Africa lives in drought prone arid and semi arid areas. Other widespread challenges in the continent such as; floods, conflict, HIV/AIDS, disease epidemics, and environmental degradation continue to impoverish the different communities. In this course, you will learn:

- Apply the philosophy, concepts and principles of community managed disaster risk reduction;
- Analyze various disaster risk reduction frameworks and models with special focus on common hazards in the horn of Africa;
- Identify and analyze different types of hazards and examine community managed approaches to reduce disaster risks;
- Facilitate the process of participatory risk analysis and assess the impact of major hazards like drought, floods, disease epidemics, conflict, HIV/AIDS and other common hazards;
- Apply the community planning process in the context of disaster risk reduction efforts and adapt participatory tools for doing so;
- Develop an action plan to support community managed disaster risk reduction efforts taking into consideration the major hazards in the region.

[Facilitating community managed disaster risk reduction course](#), 19-30 September 2009, Kampala, Uganda

Contact [International Institute of Rural Reconstruction, Africa \(IIRR Africa\)](#) regional office or country offices for details.

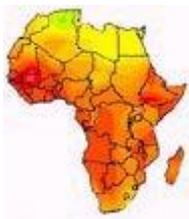
[GLOWA-Volta Upcoming Trainings & Workshops](#)



The central objective of the GLOWA Volta Project (GVP) is the analysis of the physical and socio-economic determinants of the hydrological cycle in the Volta Basin in the face of global change.

Based on this, the project aims at the establishment of a scientifically sound Decision Support System (DSS) for water resource management that has been adequately tested. The GVP is in its third phase (GVP III, June 2006 - May 2009), which is geared towards the synthesis of the research, capacity building, and the transfer of decision support tools, and knowledge.

- 2009 (3-5 days), Advanced MikeBasin/WEAP, Venue: yet to be decided.
- 2009 (5 days), Landuse Systems and Modelling (LUDAS), Venue: yet to be decided.
- 2009 (2 days), Geoportal and Database User Workshop (in french), Venue: yet to be decided.



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[UNISA Short Learning Programme in GIS](#), online & Pretoria, South Africa

Explore GIS a [two module semester course](#) offered by the Department of Geography in the College of Agriculture and Environmental Sciences at the University of South Africa. The course is offered through distance education, but students need to attend a compulsory workshop (maximum three days - probably in Pretoria) for module EGIS02K. Both modules can be completed in one semester. Deadline for registration (second semester): [16 July 2009](#).

[2nd Toponymy training course for Eastern Africa](#), Nairobi, Kenya

Held prior to and organized in conjunction with the [25th United Nations Group of Experts on Geographical Names \(UNGEGN\)](#) session in Nairobi, May 5-12, 2009. Contact: toponymy@geo.uu.nl.

[Institute for Meteorological Training and Research \(IMTR\) courses 2009](#), Nairobi, Kenya

Contact: imtr@meteo.go.ke, aura@meteo.go.ke.

[GIMS course schedule for March, April and May 2009](#), Midrand, Cape Town, Durban and Port Elizabeth, South Africa. GIMS is an ESRI accredited learning centre servicing Southern Africa.



[ESRI East Africa training schedule for January-June 2009](#)

Modules include:

- ArcGIS Desktop I, II and III
- Mobile Mapping using ArcPad & GPS
- Building Geodatabases
- Working with ArcGIS 3D Analyst
- Advanced Analysis using ArcGIS
- Introduction to ArcGIS Server
- Introduction to the Multi-user Geodatabase
- Working with ArcGIS Spatial Analyst
- Working with ArcGIS Network Analyst
- Working with ArcGIS 3D Analyst
- Advanced Analysis Using ArcGIS



[Southern and East African Mineral Centre \(SEAMIC\) 2009 courses](#), [Geoinformation Department](#), Dar Es Salaam, Tanzania. The Geo-information department's main function is to promote the standardisation of all geo-science information available in the sub-region and its conversion into an accessible format for dissemination, with a view to improving accessibility to geo-science data to the public. Mr. Mesfin W. Gebremichael, mesfin@seamic.org, seamic@seamic.org.



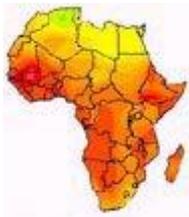
- May 18-29, 2009: GIS Principles and Applications
- June 8-19, 2009: Geophysical and Geochemical Data Processing

[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] –



[Promotion : inscriptions ouvertes](#), Kinshasa, République Démocratique du Congo. Le [cursus de l'ERAIFT](#) aboutit à l'obtention d'un Diplôme d'Etudes Supérieures Spécialisées (DESS). Ce diplôme est l'équivalent d'un Master du système « LMD » (Licence, Master, Doctorat) des Accords de Bologne. Il est reconnu par le Conseil Africain et Malgache pour l'Enseignement Supérieur (le CAMES). Le programme du DESS comprend 16 chaires dont l'enseignement s'étend sur une période de 12 mois. L'étudiant dispose ensuite de 6 mois pour rédiger son mémoire. Le contenu de ce dernier repose sur l'approche systémique, et

s'inscrit dans le cadre de l'aménagement intégré du territoire, du développement humain, durable et écologiquement viable, de la lutte contre la pauvreté et de la gestion rationnelle de l'environnement. L'autre grade décerné par l'ERAIFT est le Diplôme de Philosophiae Doctor (Ph.D.) en Aménagement et gestion intégrés des forêts et territoires tropicaux. Bourses disponibles, mais limitées en nombre. Contact: info@eraift.org.



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Short-courses offered by RECTAS in 2009, 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 thontteh@rectas.org.

CGIS-NUR Training Program 2009, Rwanda

- Introduction to GIS
- Cartography & Mapping with ARCGIS (Basic)
- Cartography & Mapping with ARCGIS (Advanced)
- Geoprocessing using Model Builder and Python



ESRI Online Seminar - Getting Started with Map Templates, June 25, 2009 (12 PM, 2 PM, & 6 PM - New York time)

ESRI Online Seminar - Getting Started with the ArcGIS API for Microsoft Silverlight, August 27, 2009 (12 PM, 2 PM, & 6 PM - New York time)

ESRI Online Seminar - Getting the Most out of the 2009 ESRI User Conference, July 2, 2009 (9 AM., & 11 AM, 12 PM & 2 PM - New York time) or (4 PM & 6 PM - UTC/GMT)

LUMA-GIS, Lund University GIS Centre (Sweden) Master's program in GIS

Lund University Master's program in GIS is a free, distance-learning, 2-year program for full-time students. The entire program is given in English and is equivalent to 120 European ECTS credits (1.5 ECTS credits are approx. equivalent to 1 week full-time studies). All courses, given as "distance education", means that the teaching methods and course examinations are conducted over the Internet. The program is equivalent to a degree of Master in Sweden. It is the responsibility of international students to verify if the program is also recognized as a degree of Master in their country of origin. The entire program is free of charge for all students, meaning that there are no tuition fees. The students will be supplied with all required computer software and licenses, theoretical material (except course literature for some courses), practical exercises, and data. Course literature (books) may be required for some of the more advanced courses. In such cases, students will have to buy these themselves. Applications for program that starts in January 2010 opens in July 2009.

MSc degree or Postgraduate diploma course in Land Administration



ITC's MSc degree (18 months) and Postgraduate diploma (9 months) courses in Geo-information Science and Earth Observation for Land Administration starts on 14 September 2009 and comprises two components:

- Understanding the scientific concepts, models and methods of land administration
- Operational aspects of creating a land administration organisation.

See [fellowships](#) matters and on-line registration: [MSc degree course](#) and [Postgraduate diploma course](#).

Upcoming ITC distance education courses

- Environmental Impact Assessment and Strategic Environmental Assessment with spatial decision support tools, starting 8 June 2009 (6 weeks). Registration deadline: May 11, 2009.

Upcoming ITC certificate courses

- [Multi-Hazard Risk Assessment](#), starts on 18 May 2009 (6 weeks). Registration deadline: 4 May 2009.
- [Using Geographic Information Systems \(GIS\) in disease control programmes](#), starts on 22 June 2009 (2 weeks). Registration deadline: 11 May 2009.

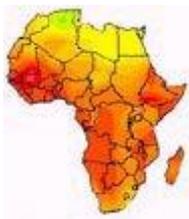
Diploma course

Geoinformatics, with ARU, Dar es Salaam, Tanzania. Specialisation modules: Digital Photogrammetry & Remote Sensing, GIS Operation, Cartography and Geo-Visualisation.

ITC Refresher Courses 2009

Refresher courses, which are certificate of attendance courses (mostly of two-week duration) organised for alumni in their home countries or regions, are meant to increase the impact and prolong the effect on earlier training. In 2009 the following courses are available:

- [Sustainable Economic Development and Conditions for Land Administration](#) - Windhoek, Namibia, June 2009.



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- [Impacts of infrastructure and transport - Modelling and mapping for sustainable infrastructure development in an urbanising landscape in West Africa](#) - Kumasi , Ghana , August 2009
- [Use of low cost earth observation data in environmental and climate monitoring applications: taking further the African Union - AMESD initiative](#) - Butare , Rwanda , October 2009
- [Designing and utilizing geo-information infrastructures for effective electronic governance in Eastern Africa \(GEOGOV - EA\)](#) - Kampala, Uganda , October 2009.

Funding Opportunities, Awards, Support

Grant: The SaveEarthGame

IEEE invites you to create a game for players to use Earth Observations of our environment for solving issues of the world around us. Show how real-world events such a flooding or drought, changes in energy or climate affect the Earth and impact people. There are 2 components to the competition: 1. Suggest an idea for a computer game to show how using earth observations can make the world a better place. Focus areas might include Disasters, Health, Energy, Climate, Water, Weather, Ecosystems, Agriculture, and Biodiversity. Open to all ages. The deadline for part 1 has passed: 10 April 2009. 2. Build a playable prototype game. This is open for amateur and advanced game developers or teams, ages 13 and up. Deadline: June 2009.

African Union Scientific Awards

The [African Union Scientific Awards](#) will be awarded to African scientists who have remarkable achievements, demonstrated by number of publications, number of research graduate students, applicability of the scientific work to Africa's challenges, and its patentability. Only nationals of the African Union (AU) Member States are eligible for this Award. The award categories are:

- African Union Young Scientist National Award targets young scientists (of less than 35 years on 31 December of the year of contest) in AU member states and valued each at USD 5,000. These awards are for the AU Young Scientist National Award for Life and Earth Sciences, and AU Young Scientist National Award for Basic Science, Technology and Innovation. Application deadline: 30 June 2009.
- African Union Women Scientist Regional Award targeting excellent women scientists in the African Union Regions (Central, Eastern, Northern, Southern and Western) and each valued at USD 20,000. These awards are for the African Union Women Scientist Regional Award Life and Earth Sciences and African Union Women Scientist Regional Award for Basic Science, Technology and Innovation. Application deadline: 30 June 2009.
- African Union Scientific Award targeting outstanding African Scientists in the African Union and valued each at USD 100,000. The awards are for African Union Scientific Award Life and Earth Sciences and the African Union Scientific Award for Basic Science, Technology and Innovation. Application deadline: 9 September 2009.

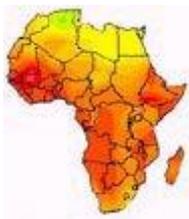
Grants - Charles A. and Anne Morrow Lindbergh Foundation

Lindbergh Grant support research or educational project that will contribute to a balance between technology and environmental preservation. Grants of US\$10,580 will be awarded to individuals for research and educational programs. Thematic areas are agriculture, animal resources, plant resources, water resources, general conservation and waste minimization. Open to citizens of all countries. [Full PDF version](#), [Application Letter](#) (PDF), [Applying for a Lindbergh Grant](#) (PDF), [Application](#) (PDF), [Endorser Report](#) (PDF), [Application Instructions](#) (PDF), [Application](#) (Word), [Endorser Report](#) (Word). Application deadline: 11 June 2009 for funding in 2010.

International Foundation for Science (IFS) - "Green Water" Grants

The International Foundation for Science (IFS) invites young scientists to submit research proposals that address: Good management, conservation and use of green water for increased food and biological production through:

- Land management and soil water conservation i.e. soil management practices to increase soil moisture, to increase rain water infiltration in the root zone and water retention, as well as to reduce evaporation on the soil surface
- Soil practices to reduce soil erosion and impact on rain water infiltration
- Increase of infiltration through agriculture, rain harvesting or water conservation practices



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- Soil fertility management and efficiency of water use for increased production
- Plant management impact on efficiency of rain water use, effects of plant density on rain water use efficiency, relationship between intercropping and run off
- Use and development of drought resistant plants thereby impacting positively on the water demand for food production and a sustainable environment
- Research on the socio-economic aspects of green water use and management

Candidates must be under the age of 40, hold at least an MSc degree, be citizens of developing countries and be carrying out their research in a developing country. Researchers in Sub-Saharan Africa up to 45 years of age may apply, providing they obtained their last higher degree within the last 5 years. Deadlines: 30 June 2009 and 31 December 2009.

[International Foundation for Science \(IFS\) Grants](#)

The International Foundation for Science (IFS) is currently accepting research grant proposals from young researchers from developing countries. Each year IFS awards around 250 research grants with a value of up to USD 12000 for research projects that will be carried out in developing countries. Eligible research proposals will address issues that fit within the broad topic of sustainable management, use or conservation of biological or water resources. Researchers with IFS support usually have a Masters degree or a PhD, or they are currently enrolled in a PhD programme. See [IFS website](#) for application forms and detailed eligibility criteria. Application deadlines: 30 June and 31 December 2009.

[The Zayed International Prize for the Environment](#)

The Zayed Prize, awarded on a biennial basis, recognises and promotes pioneering contributions in the field of environment and sustainable development. The Zayed Prize is classified into three award categories:

- Global leadership in environment and sustainable development: US\$500,000
- Scientific/ technological achievements in environment: US\$300,000
- Environmental action leading to positive change in society: US\$200,000

For further information, contact: [The Zayed International Prize website](#) or zayedprz@emirates.net.ae. Deadline: September 1, 2009.

[Call for applications: Swedish Research Links Programme](#)

The Swedish Research Links Programme seeks to foster research ties between researchers in Sweden, on the one hand, and researchers in Asia, the Middle East and North Africa region (MENA) and southern Africa on the other. The key condition for the Swedish Research Links Programme is that researchers from the countries involved must submit joint applications on projects of mutual interest. The Swedish Research Links Programme offers two forms of grant for international research collaboration:

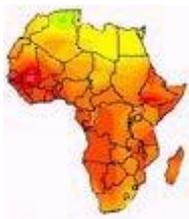
- International Collaborative Research Grant (up to three years – 2010-12)
- International Planning Grant (one year - 2010)

The Programme is intended to support international research collaboration by funding the research partners' joint activities, such as exchange research visits between the partners, seminars, workshops and joint publishing. Minor items of equipment for use in the collaborative project may also be funded. Funding is awarded for both basic and applied research. The following African countries are listed in the OECD list (DAC list) of aid recipients (www.oecd.org/dac/stats/daclist): Algeria, Egypt, Libya, Morocco, Tunisia, South Africa, Botswana and Namibia. Application deadline: 6 May 2009.

[2009 Knowledge Interchange and Collaboration Programme \(KIC\) Call](#)

The KIC grants for local and international travel and sponsored scientific events in various forms and administered solely by GMSA are open from 1 January 2009 onwards. Applications will be accepted as per instructions in the [KIC 2009 Manual](#). Local travel - long stay (≥ 1 week) R10,000, International travel - short stay (≥ 1 week & ≤ 1 month) R25,000 and International travel - long stay (≥ 1 month & ≤ 3 months) R40,000. A proportion of the budget will be earmarked for young (within 5 years of obtaining their PhD) researchers and a portion for established researchers. In the latter group rating will be an advantage. Science councils and student applications will not be considered. The investment in the discretionary support for travel and scientific events will focus on travel grants and events support. All researchers who are full-time employees or on a full-time contract to any of the following organizations are eligible:

- South African universities;



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- National research institutions such as National Research Facilities, and other government funded laboratories including research hospitals; and
- Museums.

Applications should be submitted to: KICgrants@nrf.ac.za. KIC 2009 Travel Grants Application [[Word](#)], KIC 2009 Scientific Events Grants Application [[Word](#)]. For further information, contact supportdesk@nrf.ac.za. KIC website: <http://www.nrf.ac.za/kic/>.

Wildlife Conservation Society: Research Fellowship Program

The [Research Fellowship Program \(RFP\)](#) is administered by WCS-Global Conservation's Training & Capacity Building Program and jointly funded by the Conservation Leadership Programme (CLP). The RFP is a small grants program (grants of up to \$25,000, the average grants is \$10,500) designed to build capacity for the next generation of conservationists through supporting individual field research projects that have a clear application to the conservation of threatened wildlife and wildlife habitat. We seek projects that are based on sound and innovative conservation science and that encourage practices in conservation that can contribute to sustainable development. Most of the grantees are professional conservationists from the country of research and/or post-graduates pursuing a higher degree. The RFP supports marine or terrestrial field research in Africa, Asia, and Latin America regardless of the nationality of the applicant. CLP funding is restricted to nationals from Algeria, Angola, Argentina, Azerbaijan, Bolivia, Brazil, China, Colombia, Egypt, Georgia, India, Indonesia, Libya, Malaysia, Mexico, Pakistan, Russia, Trinidad & Tobago, Turkey and Venezuela. The RFP supports projects for only one year, so preference is given to discrete, short-term projects. Deadline: September 15.

ECA-backed initiative offers African scientists training in US

To strengthen the foundations of science and business development in Africa, the [Economic Commission for Africa \(ECA\)](#) and the US-based Research Triangle Institute (RTI) have set up a program to help promising research undertaken by African scientists, reach the commercial market place. The 2009 inaugural Challenge focuses on two categories: biomedical engineering and water quality, which is central to the human rights and personal dignity of every person. Deadline for submitting entries: 31 May, 2009. For further information, contact: dondieki@uneca.org.

World Bank Summer Internship Program

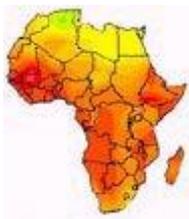
The Internship Program is open to students who are nationals of the Bank's member countries and attracts a large number of highly qualified candidates. The goal of this Internship Program is to offer successful candidates an opportunity to improve their skills as well as the experience of working in an international environment. Interns generally find the experience to be rewarding and interesting. To be eligible for the Internship Program, candidates must possess an undergraduate degree and enrolled in a full-time graduate study program (MSc or PhD). Deadline for Winter Internship (December-March) is October 31, 2009.

Employment Opportunities

Research Associate /Deputy Principal Investigator-Malaria, Nairobi, Kenya

PSI is one of the largest organizations providing malaria control services and has delivered tens of millions of Insecticide Treated Nets (ITNs) and insecticide retreatment kits and more than 15 million malaria drug treatments. PSI's Malaria Control Department, based in Nairobi, provides technical assistance to 32 country programs (24 in sub Saharan Africa,) and their host governments on a range of malaria control issues including implementing national scale ITN, malaria treatment programs, and communications campaigns to improve malaria prevention and treatment behavior in the community.

PSI Research & Metrics seeks a research associate/deputy principal investigator to increase the use of population and market evidence in malaria control decision making at field and international levels using quantitative and qualitative research strategies relevant to intervention development, monitoring and evaluation. The Research Associate/Deputy Principal Investigator will work with PSI's Principal Investigator for Malaria in setting the standards for study design, continually improving data collection, and assure the accurate presentation of results. The incumbent should have a post-graduate degree in public health, tropical medicine, entomology, parasitology, behavioral sciences, population studies, or a related field. Two to three years of professional experience in the following areas:



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- Design, analysis, dissemination, and management of behavioral research pertaining to public health interventions in developing countries
- Management of multiple studies and teams in different countries
- Design and implementation of operations research and population-based surveys
- Specific methodologies and analyses which may include: behavioral studies, multivariate analysis, GIS, tracking surveys, mapping studies, multi-item scaling
- Experience in malaria or other infectious diseases
- Extensive knowledge of a statistical analysis program (SPSS or STATA)
- Experience designing different types of qualitative and quantitative studies
- Excellent interpersonal skills and proficiency in French is desirable

Apply online at <http://www.psi.org>. Deadline: 8 June 2009.

Head of regional office - West Asia and North Africa (WANA), Cairo, Egypt

The International Strategy for Disaster Reduction (ISDR) is a multi-disciplinary and multi-stakeholder platform to enable societies to increase their resilience to natural, technological and environmental disasters and to reduce associated environmental, human and economic and social losses. The position is located in the International Strategy for Disaster Reduction secretariat (UNISDR), in Cairo, Egypt reporting to the Deputy Director in Geneva. Work implies frequent interaction with the following: Staff at all levels, within UNISDR, administrative partners in the field, UNOG and OCHA counterparts and the disaster risk reduction community as well as national counterparts. Representatives of other UN agencies and other UN specialized agencies; member state personnel with responsibility for disaster risk reduction; non-governmental organization representatives; and representatives and officials in national governments, international and regional organizations, IFIs, and research institutes.

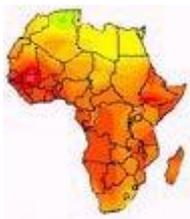
The applicant should have advanced university degree (Master's degree or equivalent) in business administration, management, economics, social or natural sciences, international relations, with emphasis on development issues and risk management issues or a related field. A first-level university degree in combination with qualifying experience may be accepted in lieu of the advanced university degree. A minimum of ten years of progressively responsible professional experience and practical experience; a documented track record of senior management experience and leadership including ability to form and support strong and productive partnerships, at the international level and within the United Nations system; experience of the specific programme area associated with this post, such as disaster risk reduction, humanitarian, development and disaster management fields. A strong asset is familiarity with current strategic issues in WANA and working experience implementation in WANA. Fluency in English and working knowledge of Arabic are desired; knowledge of other UN languages an asset. Deadline: 7 May 2009.

Director, emergency operations, Baltimore (USA), Nairobi (Kenya)

The Director of Emergency Operations will work to transform CRS' emergency programming, in support of the agency's emergency strategy objective: CRS is an innovative and effective emergency prevention, preparedness, protection and response organization. The Director will manage a department with staff in Baltimore and Nairobi, and an auxiliary staff network of emergency RTAs & focal points, that together provide 'state of the art' programmatic innovation and operational support to CRS worldwide. The Director will play an important representational, coordination, and at times fundraising role relative to the CI network, the USG and EU, foundations and major CRS donors, the global PVO community, and the UN system, with the goal of building prestige and recognition for programmatic excellence among beneficiaries, partners and donors. The incumbent should have:

- Masters degree in International Relations or a related field or the equivalent experience required
- Significant overseas emergency & development experience, leading programs in partnership with local government and Church partners and in coordination with international humanitarian actors
- Excellent management and leadership skills
- Strong organizational and communications skills
- Excellent representational and coordination skills
- Resource acquisition experience preferred
- Programming and performance evaluation and shared learning experience preferred
- Proficiency in French or Spanish strongly preferred
- Ability to travel (international and domestic) 25% of time

Application deadline: 6 May 2009. Source(s): [Catholic Relief Services \(CRS\)](#).



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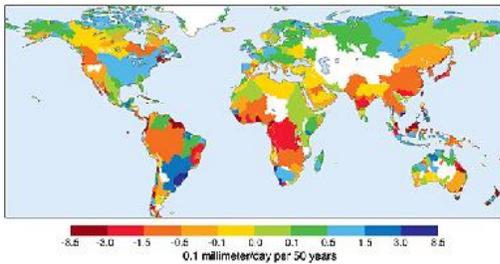
Other

[PolicyMap launches affordable e-resource for students: Online mapping tool lets University students utilize professional-grade data at an accessible student rate](#)

TRF's PolicyMap.com today announced that it is opening up its vast wealth of online market and demographic data to university students at a deeply discounted rate. Students now have easy, affordable access to the same professional-grade data utilized by thousands of policymakers and professionals across the nation. The electronic resource is intended to aid scholarly research and support class discussions through the application of credible data that was previously scattered across the web or unavailable for students.

University students can utilize TRF's PolicyMap.com for quick access to more than 4,000 data indicators related to demographics, real estate markets, education, employment, money and income, crime, energy, and public investments. These indicators are aggregated from a variety of sources including U.S. Census, Claritas, FBI, IRS, the Postal Service, and the Home Mortgage Disclosure Act. "Students can now support their coursework not just through data, but with compelling visual maps, charts, tables, and reports," said Maggie McCullough, Director of TRF's PolicyMap.com. "The full range of data and GIS functionality on TRF's PolicyMap.com is available to students at just \$35 per semester, a fraction of the cost to standard subscribers." For details, students and professors who wish to subscribe can visit <http://blog.policymap.com> or call 1-866-923-MAPS.

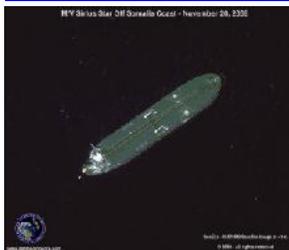
[Water levels dropping in some major rivers as global climate changes](#)



Rivers in some of the world's most populous regions are losing water, according to a new comprehensive study of global stream flow. The study, led by scientists at the [National Center for Atmospheric Research \(NCAR\)](#), suggests that in many cases the reduced flows are associated with climate change ([lower rainfall](#), more evaporation and higher water use). The process could potentially threaten future supplies of food and water. The results will be published on May 15 in the American Meteorological Society's Journal of Climate. The scientists, who

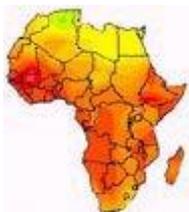
examined stream flow between 1948 and 2004, found significant changes in about one-third of the world's largest rivers. Of those, rivers with decreased flow outnumbered those with increased flow by a ratio of about 2.5 to 1. Several that channel less water serve large populations, including the Yellow River in northern China, the Ganges in India, the Niger in West Africa, and the Colorado in the southwestern United States. Many factors can affect river discharge, including dams and the diversion of water for agriculture and industry. The study raises wider ecological and climate concerns, including the accumulation of deposits from dissolved nutrients and minerals in the oceans as well as the global ocean circulation patterns, which are driven by changes in salinity and temperature, and plays a vital role in regulating the world's climate. For further information, visit [UCAR Communications](#) or contact: Yvonne Mondragon at yvonnem@ucar.edu.

[Somali pirates hijacked tanker, M/V Sirius Star, located by IKONOS high-resolution satellite sensor](#)



The satellite [IKONOS Satellite sensor](#) acquired a high-resolution satellite image of the supertanker M/V Sirius Star hijacked by Somali pirates on Saturday November 15 2008. The brand new M/V Sirius Star supertanker, with a 25-member crew and owned by Saudi oil company Aramco, is 330 meters (1,083 feet) long, about the length of an aircraft carrier, making it one of the largest ships to sail the seas. The area lies far south of the zone where warships have increased their patrols this year in the Gulf of Aden, one of the busiest channels in the world, leading to and from the Suez Canal, and the scene of most past attacks. It was the largest vessel seized yet in a surge of pirate attacks, and the farthest out to sea that the well-

armed fighters, bolstered by millions in past ransoms, have successfully struck. Maritime experts warned that the broad daylight attack, reported by the U.S. Navy on Monday November 17, 2008, was an alarming sign of the difficulty of patrolling a vast stretch of ocean key for oil and other cargo traffic and confirmed the vessel, carrying around 2million barrels of oil, has anchored off the coast of Somalia near the city of Harardera.



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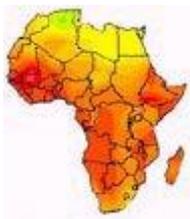


Remote sensing technology provides an additional [security tool](#) to monitor business assets on a global level. With the successful launch of the GeoEye-1 Satellite on September 6th, 2008 providing image resolutions of 0.5m, more information can be analyzed and Rush security tasking collections become faster than ever.

Australian Bushfires Spark Open Data Debate

Australia's southeast suffered its worst ever outbreak of bushfires last month. The fires killed more than 200 people, left thousands homeless and devastated huge swaths of the state of Victoria. In certain circles, the disaster has also sparked renewed debate about the need for open data and the role of private industry in assisting with information flows to the public in disaster situations. Throughout the emergency, GIS officers from Victoria's Department of Sustainability and Environment and the Country Fire Authority confronted the task of mapping the worst natural disaster in the nation's history. Several elements differentiated the response effort from previous operations. 'This was the first time that the DSE and CFA mapping units worked from the same control room,' says DSE fire mapping manager Todd Gretton. It was also the first time that the CFA's Emergency Information Mapping System, which is still on official trial, was used in a major incident. The map is available at <http://google-au.blogspot.com/2009/02/victorian-bushfire-events-map.html>. It's not just the private sector that has taken the initiative. DSE has signaled its interest in co-operating with Google on future bushfire mapping initiatives. 'We have advised Google that we would welcome the opportunity to work with them before the next fire season,' says a departmental spokesperson.

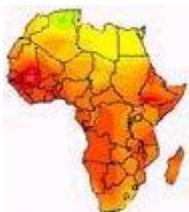
Conferences, Events		
Date	Location	Event
Items newly added to this listing of events since the last SDI-Africa issue are marked *NEW*		
May 2009		
3-8 May 2009	Eilat, Israel	FIG XXXII General Assembly and Working Week Theme: New Horizons across the Red Sea - Surveyors Key Role in Accelerated Development. Contact: fig@fig.net .
4-5 May 2009	Berlin, Germany	7th IAA Symposium on Small Satellites for Earth Observation Abstract deadline: 31 October 2008.
4-8 May 2009	Stresa, Italy	33rd International Symposium on Remote Sensing of Environment "Sustaining the Millenium Development Goals" (ISRSE33) Contact: ISRSE33, isrse33@symposia.org .
4-8 May 2009	Berlin, Germany	7th IAA Symposium on Small Satellites for Earth Observation Contact: Ute Dombrowski, Ute.Dombrowski@dlr.de .
5-12 May 2009	Nairobi, Kenya	25th Session of the United Nations Group of Experts on Geographical Names (UNGEGN)
6-8 May 2009	Gauteng, South Africa	2009 SA PhD Project Conference The conference programme will include plenary, cocktail, conference dinner and the PhD Project Fair. Contact: wendy.lambert@nrf.ac.za .
6-8 May 2009	Kampala, Uganda	IST-Africa 2009 Conference & Exhibition Online submission deadline for full paper or workshop proposal: 9 November 2008.
10-13 May 2009	Rabat, Morocco	7th ACS/IEEE International Conference on Computer Systems and Applications (AICCSA-09) . Paper deadline: <u>October 13, 2008</u> .
19-21 May 2009	San Jose, CA, USA	2009 Where 2.0 Conference: Becoming Location Aware
23-29 May 2009	Accra, Ghana	IAIA09: Impact Assessment and Human Well Being Abstract deadline: <u>15 January 2009</u> .
25-29 May 2009	Molde, Norway	ISO/TC 211 28th Plenary – with WGs and ECs prior to plenary.
25-29 May 2009	Chengdu, China	2nd International Conference on Earth Observation for Global Changes (EOGC2009) Contact: Conference Secretariat, xfzhang@pku.edu.cn .
June 2009		



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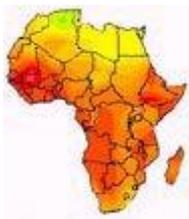
2-5 June 2009	Cologne, Germany	Global Change in Africa: Projections, Mitigation and Adaption Send abstracts to africa-conference@uni-koeln.de . Abstract deadline: 31 March 2009. For further information: www.impetus.uni-koeln.de/africa
5-9 June 2009	Providence, RI, USA	Conference on putting health in place with GIS Abstract submission deadline: 31 October 2008.
14-19 June 2009 * NEW *	Albena Resort, Bulgaria	International Multidisciplinary Scientific Geo-Conference and Expo - SGEM (Surveying Geology & mining Ecology Management) Contact: Valentina Nikolova
15-18 June 2009	Washington D.C, USA	Intergraph 2009
15-19 June 2009	Rotterdam, The Netherlands	11th International Conference on Global Spatial Data Infrastructure (GSDI 11) Theme: Spatial Data Infrastructure Convergence: Building SDI Bridges to Address Global Challenges.
22 June 2009	Nottingham, UK	1st Open Source Gis UK Conference 2009 Abstract submission deadline: 15 February 2009.
24-26 June 2009	Paris, France	ICGIS 2009: "International Conference on Geographic Information Systems" Paper deadline: February 28, 2009.
24-26 June 2009	Ljubljana, Slovenija	27th Urban Data Management Symposium Full paper submission deadline: September 29, 2008.
July 2009		
3-6 July 2009	Perm, Russia	INTERCARTO-INTERGIS 15 Abstract deadline: February 2, 2009.
Second half of 2009	Addis Ababa, Ethiopia	UN-SPIDER Regional Workshop "Building Upon Regional Space-based Solutions for Disaster Management and Emergency Response for Africa"
3-6 July 2009	Ghent, Belgium	INTERCARTO-INTERGIS 15 Abstract deadline: February 2, 2009.
5-8 July 2009	Newfoundland, Canada	6th International Symposium on Spatial Data Quality (ISSDQ 2009) "Quality: From Process to Decisions" Contact: Rodolphe Devillers, issdq2009@mun.ca .
6-8 July 2009 * NEW *	St. John's, Newfoundland, Canada	6th International Symposium on Spatial Data Quality (ISSDQ 2009) Contact: Dr. Rodolphe Devillers
7-9 July 2009	South Africa	Geospatial Africa 2009
7-10 July 2009	Salzburg, Austria	Geoinformatics Forum Salzburg (GI Forum2009) Contact: GI_Forum Team, office@gi-forum.org .
11-14 July 2009	San Diego, California	ESRI Survey & Engineering GIS Summit Contact: segsummit@esri.com .
13-14 July 2009	Oxford, United Kingdom	The 3rd International Conference on Geosensor Networks Deadline for paper submission: April 3, 2009.
13-17 July 2009	Cape Town, South Africa	IEEE IGARSS'09 Abstract deadline: 4 January 2009. Contact: Dr. Harold Annegarn, han@rau.ac.za . On the conference and exhibitions, contact Bryan Stewart, bstewart@cmsworldwide.com .
13-17 July 2009	San Diego, USA	29th ESRI International User Conference Abstract deadline: 14 November 2008.
13-17 July 2009	Accra, Ghana	2nd International Association of Agriculture Information Specialists (IAALD) Africa Chapter Conference
13-17 July 2009	Big Bear Lake, CA, USA	Society for Conservation GIS (SCGIS) Annual Conference
24-26 July 2009 * NEW *	Hyderabad, India	Third International Conference on healthGIS 2009 Contact: Dr. Nitin K Tripathi



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27-31 July 2009	Vancouver, BC, Canada	GeoWeb 2009
August 2009		
2-5 August 2009 * NEW *	Kampala, Uganda	International Conference on Computing and ICT Research Contact: Jude Lubega
2-7 August 2009	Accra, Ghana	2nd Regional Workshop of the Global Earth Observing System of Systems (GEOSS) Support for Decision-Making in the Coastal Zone: "Strengthening Observing Systems Capacity for Managing and Mitigating the Impacts of Human Activities and Coastal Inundation in the African Region"
10-14 August 2009	Trieste, Italy	Conference on high resolution climate modeling: The impact of SST changes and the MJO on tropical cyclones Contact: smr2051@ictp.it .
12-14 August 2009	Fairfax, VA, USA	17th International Conference on Geoinformatics Abstract deadline: February 15, 2009. Contact: Liping Di at ldi@gmu.edu . Updates: http://www.geoinformatics2009.org .
16-22 August 2009	Durban, South Africa	57th Session of the International Statistical Institute (ISI 2009) See also: Baton of international leadership passes to Africa .
17-28 August 2009	Trieste, Italy	Advanced Workshop on Evaluating, Monitoring and Communicating Volcanic and Seismic Hazards in East Africa Application deadline: April 30, 2009. Contact: msmr2048@ictp.it .
23-28 August 2009	Nairobi, Kenya	2nd World Congress on Agroforestry - The Future of Global Land Use Contact: WCA2009 Organizing Committee, wca2009@cgiar.org .
24-28 August 2009	Dresden, Germany	1st International Conference on 3D Maps: ICA Symposium "True-3D in Cartography" Contact: Mrs. Steffi Sharma, info@conwerk.net .
September 2009		
3-4 September 2009	Paris, France	WG III/4+5 Workshop on Object Extraction for 3D City Models, Road Databases & Traffic Monitoring - Concepts, Algorithms & Evaluation (CMRT09) Contact: Franz Rottensteiner: rottensteiner@ipi.uni-hannover.de or Uwe Stilla: stilla@bv.tum.de .
6-12 September 2009	Hyderabad, India	8th IAHS Scientific Assembly and 37th IAH Congress APFM will organise a special session on Integrated Flood Management.
7-25 September 2009	Trieste, Italy	Open Source and Internet Technology for Scientific Environment Contact: smr2057@ictp.it .
10-11 September 2009	Cape Town, South Africa	Royal Institution of Chartered Surveyors' (RICS) International Legal Research Symposium 2009 Abstract deadline: 3 April 2009. Contact: p.chynoweth@salford.ac.uk .
16-18 September * NEW *	Johannesburg, South Africa	MapAfrica 2009 Contact: info.mapafrica@gisdevelopment.net
21-25 September 2009	Brittany, France	The Ninth International Conference on Spatial Information Theory (COSIT 2009)
21-25 September 2009	Bath, UK	2009 EUMETSAT Meteorological Satellite Conference
24-25 September 2009	Addis Ababa, Ethiopia	ESRI Eastern Africa User Conference
27 September - 2 October 2009	Marrakech, Morocco	XXVI IUSSP International Population Conference Application deadline: 15 September 2008.
30 September-2 October 2009 * NEW *	Itajai, Santa Catarina, Brazil	9th International Symposium on GIS and Computer Mapping for Coastal Management (CoastGIS'09) Website: http://www.coastgis.com.br . Contact: Rafael Sperb (Chair)
October 2009		



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9-11 October 2009 * NEW *	Singapore, Singapore	2009 IACSIT Autumn Conference Deadline for abstracts/proposals: 10 June 2009.
13-16 October 2009	Cape Town, South Africa	2nd DIVERSITAS Open Science Conference: Biodiversity and society: understanding connections, adapting to change Abstract deadline: Deadline 31 March 2009.
20-23 October 2009	Sydney, Australia	FOSS4G 2009 Conference
20-23 October 2009	Drakensberg, South Africa	2009 GIMS User Conference
26-29 October 2009	Kampala, Uganda	AfricaGIS 2009 Conference . Theme: Geo-spatial information and sustainable development in Africa: Facing challenges of global change. Abstract deadline: 30 April 2009. Contact: info@africagis2009.org or Shuaib Lwasa, S.Lwasa@cgiar.org .
November 2009		
4-6 November 2009 * NEW *	Seattle, WA, USA	17th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACM GIS 2009) . Abstract submission deadline: <u>June 18, 2009</u> .
9-12 November 2009	Manama, Bahrain	2009 ESRI Middle East and North Africa User Conference (MEAUC) Contact meauc2009@esri.com .
11-12 November 2009 * NEW *	Tanta, Gharbia Governorate, Egypt	Sixth International Symposium on Geophysics Contact: Prof. Abdelaziz L. Abdeldayem. Deadline for abstracts/proposals: <u>30 September 2009</u> .
15-22 November 2009	Santiago, Chile	XXVI International Cartographic Conference Contact: Conference Secretariat at info@icc2009.cl . See also The World's Geospatial Solutions
17- 21 November 2009	Sydney, Australia	FOSS4G Annual Conference
24-26 November 2009	Abuja, Nigeria	3rd IAA Regional Conference Space for Africa . Theme: "Joint Participation, Knowledge Development and Sharing". Contact: Jide Ajayi at ajayijide2000@yahoo.com or jajayi@nasrda.net and Dr Joseph O. Akinyede at jakinyede@yahoo.com , jakinyede@nasrda.net . Abstract deadline: <u>15 June 2009</u> .
December 2009		
14-16 December 2009	Accra, Ghana	2nd IEEE International Conference on Adaptive Science & Technology Abstract deadline: <u>14 May 2009</u> . Contact: icast@edictech.com .
2010		
1-5 February 2010 * NEW *	Maun, Botswana	International symposium: Wetlands in a flood pulsing environment - effects on biodiversity, ecosystem function and human society Deadline for submitting abstracts and workshop proposals: <u>1 October 2009</u>
6-10 March 2010	Alexandria, Egypt	International Conference on Coastal Zone Management of River Deltas and Low Land Coastlines . Abstract deadline: <u>31 October 2008</u> . Contact: Professor Nabil Ismail, nicoastmarine@gmail.com .

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

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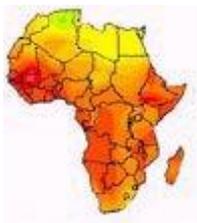
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Gordon Ojwang', Editor, SDI-Africa AT gsdi.org or sdiafrica@rcmr.org or gojwang@rcmr.org

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Global Spatial Data Infrastructure Association

<http://www.gsdi.org>

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