

Spatial Data Infrastructure – Africa Newsletter



SDI-Africa Newsletter

June 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@rcmrd.org or gojwang@rcmrd.org



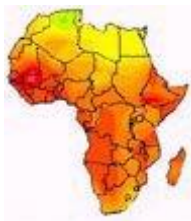
Input to this Issue

Thank you to Kate Lance, USRA/SERVIR-Africa (USA); Hussein Farah, RCMRD (Kenya); Charles M. Kamamia, RCMRD (Kenya); Aster Gebremariam, ECA (Ethiopia) and Anamika Das, GIS Development (P) Ltd (India) for their contributions to this issue of the newsletter.

SDI News, Links, Papers, Presentations

[Nigeria: Nema Sets Up GIS](#)

In what it called an effort to efficient its work in managing disaster across the country, the National Emergency Management Agency (NEMA) has established a functional Geographic Information System (GIS) lab for Early Warning for disaster responses. The Director General of the Agency AVM Muhammad Audu-Bida made the statement on 7 May the first 2009 Ministerial Press Briefing in collaboration with Federal Ministry of Information and Communications. He said, the lab is one of the significant facilities of the agency for its disaster risk reduction programme, saying it would collect special data on disaster, analyses and prepares useful information that would help to aid responses to disaster. The DG said hitherto, disaster management in Nigeria was mainly humanitarian relief supplies with huge funds expended annually. Among other things the agency adopted for coordinating disaster management included Mission Control Centre (MCC), which is a computer based satellite technology that uses what he called the "COSPAS-SARSAT hi-tech system". This system is designed to pick distress alerts and location data to assist in Search and Rescue Operation (SRO), by using satellite and ground facilities to detect and locate the signals of distress



Spatial Data Infrastructure – Africa Newsletter



beacons operating on 406MHz. The MCC which is located in the NEMA headquarter would alert the nearest Rescue Coordinating Centre (RCC) or the Disaster Response Units of the Army, Air Force, and the Navy for immediate action when there is a distress alert from the beacon located on the ship or aircraft.

[Launch of the Kenya Agricultural Information Network](#)

The Kenya Agricultural Information Network (KAINet) was officially launched on 14th of May 2009. It was initiated in April 2006 in response to demand from the national and international community to promote information exchange and access among stakeholders in the agricultural sector. KAINet has evolved from the on-going Kenya Pilot AGRIS Project, which aims at building capacities in information management, dissemination and exchange in network members in Kenya. In an effort to reach its partners and beneficiaries, KAINet has embarked on a mission to bring the latest information on the ongoing activities both in the field and at the KAINet offices highlighting important issues on agricultural information management in Kenya. The currently published publications can be downloaded:

- [KAINet's ICM Strategies](#)
- [Institutional and National Setup Manual](#)
- [KAINet's Poster](#)
- [KAINet's Flyer](#)
- [KAINet Policy Brief](#)
- [Institution-Based Information Systems Kenya Agricultural Information Network \(KAINet\) Planning and Strategy Building.](#)

The network was established with financial support from the Department of International Development (DFID) through Food and Agriculture organisation of the United Nations (FAO) and has been implemented through collaboration between the Kenya Agricultural Research Institute (KARI), Association for Strengthening Research in Agriculture in East and Central Africa (ASARECA, CAB International and KARI). The KAINet is currently hosted by KARI. Its initial participating institutions are universities, research institutions, and Government ministries represented by Jomo Kenyatta University of Agriculture and Technology (JKUAT), Kenya Forestry Research Institute (KEFRI), Kenya Agricultural Research Institute (KARI) and Ministry of Agriculture (MoA). More institutions are expected join the network when KAINet is rolled out.

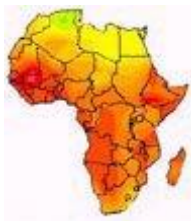
[African Reference Frame \(AFREF\) and GNSS Data Processing Training Course](#), 24 Aug - 4 Sept 2009, RCMRD, Nairobi.

Although GNSS/GPS data users have greatly increased in the last few years, in Africa there is lack of GNSS base stations that could enhance its application. Further more, there is no uniform geodetic reference system for Africa, which makes basemaps not compatible and the sharing of mapping information difficult. AFREF project was initiated by the United Nations for Economic Commission for Africa (UNECA) to overcome these difficulties. AFREF will consist of a network of continuous, permanent GNSS/GPS stations that allow free access on generated data to users in Africa when fully implemented.

The Regional Centre for Mapping of Resources for Development (RCMRD) in conjunction with the Center of Geophysics, University of Lisbon, Portugal has organized a training course on African Reference Frame (AFREF) and GNSS Data Processing to be held between 24th August and 4th September 2009 at RCMRD headquarters, Nairobi. The objective of the course is to provide technical skills in base station installation, data handling and dissemination and precise analysis using scientific GNSS processing software for AFREF realization. The target group is land surveyors, geodesist, engineers, researchers and cartographers from African countries with experience in Global Navigation Satellite System (GNSS) technologies. The course contents:

- Introduction to Global Navigation Satellite System (GNSS)
- Reference systems, datum and coordinate systems
- IGS data and products
- AFREF concepts and progress
- Establishment of Continuously Operating Reference GNSS Stations
- Practical field works on Static GNSS surveys
- GNSS data post processing
- On line GNSS data processing

For further information contact: Muya Kamamia at rcmrd@rcmrd.org or muyack@rcmrd.org. Website: <http://www.rcmrd.org>. Deadline for application: 25 July, 2009.



Spatial Data Infrastructure – Africa Newsletter



[Department of Rural Development and Land Reform, South Africa to Co-organise Map Africa 2009](#)

The Department of Rural Development and Land Reform, South Africa is the Co-organiser for Map Africa 2009 - the 4th Annual African Conference and Exhibition on Geospatial Information, Technology and Applications. The conference is scheduled for 16-18 September, 2009 at Birchwood Hotel & O R Tambo Conference Centre, Johannesburg, South Africa. Apart from the plenary sessions which will cover the large gamut of Geospatial applications and technology areas the other focus area of the conference are Local Governance, Utility and Infrastructure and Agriculture and Environment Management. Map Africa will have the conglomeration of speakers from end user organizations, industry and government at large. Welcoming the Department of Rural Development and Land Reform on board, Sanjay Kumar, Chief Executive Officer, GIS Development said, "We are very pleased to have the department as co-organiser of Map Africa 2009 as it has made tremendous contribution to the development of geospatial technologies in South Africa.

Map Africa 2009 aims at facilitating interaction, discussion, and collaboration amongst the participants. It will provide a platform to share the latest developments in the GeoInformation field and also promote the products and services among a large gathering consisting of top decision makers from government and private sector to prospective users, academicians, vendors, policy makers and representatives of various national and international organizations working in the arena of this technology. This year, there is an intension to add a new dimension to involve and engage an intense dialogue and discussion with major end user groups of geospatial technologies, in turn, helping a better understanding between map producing agencies and user departments. An exhibition will be held in conjunction with the conference where organizations will have the opportunity to showcase their product and services. For further information, contact: Anamika Das at anamika.das@GISdevelopment.net. Source: GIS Development - [Press release](#), May 25, 2009.

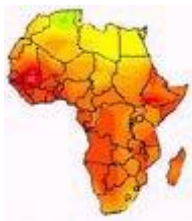
[SCGIS Cameroon Launched](#)

The Society for Conservation GIS (SCGIS) exists internationally as 'a non-profit organization that builds capacity, provides knowledge and supports individuals using GIS and science for the conservation of natural resources and cultural heritage' (www.scgis.org). The Cameroon Chapter (scgis_cameroon@yahoo.fr) This e-mail address is being protected from spam bots, you need JavaScript enabled to view it) now seeks to establish with the participation of GIS practitioners and institutions shall facilitate the extension of the services of this global network to Cameroon. Cameroon hosts a community of GIS users with diversified expertise all creating and using spatial data in their day-to-day work. All of these actors are paying heavily to duplicate each others data, services etc. SCGIS will be working to identify these users, their requirements, gaps in member's capabilities and steps towards bridging them. Members of SCGIS will incrementally look for avenues to share experiences while helping each other in their different GIS tasks.

[Deadly flooding during the rainy season in Namibia](#)



Water levels on the Zambezi River in southern Africa remained high on April 14, 2009, when the Moderate Resolution Imaging Spectroradiometer (MODIS) on NASA's [Terra](#) satellite captured the top (left) image ([download large image](#)). The swollen river had destroyed crops and forced thousands of evacuations in Namibia's Caprivi region as of April 12, reported the AFP news service. Water, black in this false-color image combining visible and infrared light, stretches across kilometers of land that were dry in January (top right image), before the seasonal rains had started. Plant-covered land is green, and bare earth is tan. A single fire in southern Zambia is outlined in red. Clouds are light blue and white. The flooded Zambezi spills over into the Chobe River, the Bukalo Channel, and Lake Liambezi in the April 14 image. The Zambezi River routinely floods during the annual rainy season, but in 2009, the floods were more extensive than normal. As of April 12, water levels were still rising, reported the AFP. The United Nations Office for the Coordination of Humanitarian Affairs expected the floods to last through mid-May. [Daily images](#) of the flood region are available from the MODIS Rapid Response System.



Spatial Data Infrastructure – Africa Newsletter



[T-MARC Project Leads GIS Mapping in Tanzania](#)

The T-MARC project will be launching Phase Two of its work to measure coverage, quality of coverage, and access to condoms in "hot spots," or areas where sexual negotiations and acts occur. The second round of activities GIS and GPS devices are used to map retail outlets that sell HIV prevention products (male and female condoms) and track their proximity to high risk areas or "hot spots. In the first phase, over 300 hot spots were enumerated, 75 hot zones were created, and over 300 retail outlets were mapped. After successfully completing the pilot, it was determined that condom coverage in the pilot area was good, with 86% of high-risk areas having at least one condom-selling outlet per two high-risk meeting places or hot spots. However, the quality of condom coverage remained poor in certain areas, primarily due to stock outs and low promotional material visibility. The pilot also found that 81% of the hot spots in Kinondoni were within a radius of 100 meters of a condom selling outlet, encouraging news in terms of availability. In order to reach representatives of all of the at-risk groups in Tanzania, Phase Two of the GIS/GPS mapping exercises will target two new regions; Mbeya in the South, representing both rural populations and a major transportation corridor, and Arusha, representing the mining community.

[More floods expected in Botswana](#)



More floods should be expected in Botswana, the Red Cross has warned. Almost 4,000 people were displaced in March 2009 by some of the worst flooding ever seen in the northwest, prompting criticism of the country's early warning system. Most of the displaced are still sheltering in 10 emergency camps around the country, while the swollen Okavango River - the region's fourth largest waterway has shown little signs of abating. With waters continuing to rise, aid agencies and government have not yet been able to quantify the extent of the damage. Seasonal flooding occurs from late May to early June, and more communities would see flooding as water moved down the extensive river system of which the Okavango is a part. Gabaake Gabaake, Botswana's Permanent Secretary in the Ministry of Minerals, Energy and Water Resources, told a recent workshop on cross-border water management in Gaborone that flood damage could have been minimized if an early warning system had been in place. Climate change experts have forecast that the flood-prone areas of southern Africa and even communities not usually affected by seasonal flooding are likely to see more severe flooding more often. Early warning systems would play a vital role in making sure information reached people in time. The Botswana Red Cross Society is working closely with the government to strengthen the early warning system and make sure that neighbouring Angola and Namibia, who share several large rivers with Botswana, are also involved. A recent report by the UK-based aid agency, Oxfam, projected that by 2015 climate disasters would affect 50 percent more people than at present, overwhelming the humanitarian aid system. Source: Johannesburg, 15 May 2009 (IRIN).

[Using cellphones to make health statistics more accurate](#)

Health workers in Botswana, Burundi, Cote d'Ivoire, Gabon, Liberia, Mali, Swaziland and Togo are being trained to collect their own national health statistics using cellphones. The same free open-source programme software, called the EpiSurveyor, has streamlined the once cumbersome paper-based data management of diseases in Benin, Burkina Faso, Cameroon, Democratic Republic of Congo, Ethiopia, Ghana, Kenya, Madagascar, Rwanda, Senegal, Sierra Leone, Uganda and Zambia. Source: SciDev.Net.

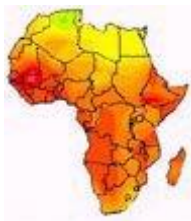
[Preserving the world's second largest tropical forest in the Congo basin](#)



[Cameroon](#) and the Democratic Republic of Congo are negotiating a voluntary partnership agreement with the European Union in a bid to export verified wood only, reducing illegal logging and helping to preserve forest carbon sinks and biodiversity. Preliminary negotiations are also underway in Liberia, while Gabon and the Central African Republic have also expressed interest in taking part. Ghana signed the first partnership agreement last year while Congo-Brazzaville signed in March this year.

[Geographic information systems: a new weapon in the fight against HIV/AIDS](#)

At a workshop, one of the preparatory events of the [First Session of the Committee on Development Information, Science and Technology \(CODIST I\)](#) billed for Addis Ababa from 29 April to 1 May 2009 and attended by some 150 international participants, at least four key areas in which national mapping agencies



Spatial Data Infrastructure – Africa Newsletter



can contribute to the fight against the spread of HIV/AIDS and improve health delivery in Africa were identified. The international workshop organized in collaboration with UASID, UNAIDS, North Carolina-based Measure Evaluations and the ECA on the use of geographic information systems in the fight against the HIV/AIDS pandemic.

1. Underlying the multifaceted nature of the fight against HIV/AIDS, given limited resources, it is often the case that spatially targeted interventions have the potential to produce better results with more effective spending when resources are spatially focused.
2. Several public health maladies (such as malaria, TB, etc.) have strong correlations with environmental factors, such as altitude, humidity and precipitation, diurnal temperature range, land cover, etc. Research continues on the epidemiological-environmental nexus in the HIV/AIDS field.
3. National Mapping Agencies also have a role to play in monitoring HIV/AIDS rates at the sub-national level. Data at the finest spatial resolution available allows for better understanding of not only current geographic patterns of HIV/AIDS infection but to also of “corridors” of transmission.
4. National Mapping Agencies in many countries may be the only agency equipped (with hardware, software, and expertise) to produce maps illustrating HIV/AIDS rates across a country or to analyze spatial data appropriately.

National mapping agencies and GIS technology are giving national AIDS programme managers a new, clearer view of epidemiological and programme data in a handful of countries. The workshop was therefore an opportunity to learn from the experiences of these institutions and GIS technology, and to forge new partnerships that will spread the use of this technology to better target the use of limited national resources. For further information, contact: ecainfo@uneca.org.

Remote sensing in Mozambique



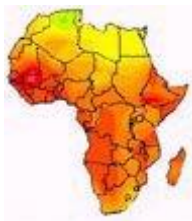
The [Coastal East Africa](#) program at WWF recently purchased high resolution satellite imagery of the marine zone of Quirimbas National Park. These stunning images capture the vibrant coral reef and mangrove ecosystems of coastal Mozambique and can detect fringing reefs, sand channels, seagrass beds and shallow lagoons between the archipelago's islands and sometimes, even large fish. WWF is now manipulating the data to create the marine equivalent to topographic and land cover maps for underwater features. This will help local scientists know what habitats are where, and ultimately improve management of these delicate ecosystems - in the same way that maps are used to zone protected areas on land all around the world. A recent excursion to Ibo Island – located within Quirimbas National Park – provided the first on-the-ground look at the island's expansive lagoon ecosystem. This makes it possible to create a link between the features in the satellite imagery to what exists underwater. The pattern of habitats will ultimately affect patterns of marine species, and map products can guide the delineation of certain natural resource uses within the park.

Africa's coastal populations at risk as climate changes



Tropical cyclones, also called typhoons and hurricanes, are powerful storms generated over tropical or sub-tropical waters whose impact includes extremely strong winds, torrential rains, high waves and damaging storm surges, leading to extensive flooding. Several large African cities are at risk from rising sea levels and intense storms, experts warn. Poor neighbourhoods and slums in Bugama and Okrika in Nigeria, Freetown in Sierra Leone, Bathurst in the Gambia and Tanga in Tanzania, are especially vulnerable. In such low-income urban centres, infrastructure is often non-existent or ill-maintained, according to a World Bank report, [Sea level Rise and Storm Surges](#), while storm-water drainage infrastructure is often outdated and inadequate.

According to the Intergovernmental Panel on Climate Change (IPCC), a trend has emerged since the mid-1970s where storms tend to last longer and be more intense, with a strong correlation to the rise in tropical sea surface temperature. In sub-Saharan Africa, storm surge zones are concentrated in Madagascar, Mauritania, Mozambique and Nigeria. These countries alone account for about half (53 percent) of the total increase in the region's surge zones resulting from sea level rise and intensified storms. At least three cyclones struck [Madagascar](#) between January and April 2009, affecting thousands. In Mozambique, one of



Spatial Data Infrastructure – Africa Newsletter



the most vulnerable coastlines in Africa, 15 of the 56 tropical cyclones and tropical storms that entered the Mozambique Channel from 1980 to 2007 made landfall.

At least 2.5 million people live in Mozambique's coastal areas, surviving on rain-fed farming and fishing. But migration to coastal towns is placing more people, infrastructure and services at risk, according to a [study](#) by the Mozambique institute. "Models suggest that for the Indian Ocean there is an overall tendency toward decreasing frequency of tropical cyclones but increasing cyclone intensity," the report stated. "More severe cyclones will pose the biggest threat to the [Mozambique] coast; beyond 2030, the accelerating sea level rise will present the greatest danger, especially when combined with high tides and storm surges," it added. Researchers project a 3-5 percent increase in wind speed per degree Celsius increase of tropical sea surface temperatures. "The current understanding is that ocean warming plays a major role in intensified cyclone activity and heightened storm surges,"

An average 78 million people worldwide are exposed each year to tropical cyclone wind hazard and another 1.6 million to storm surges. In terms of economic exposure, an annual average of \$1,284 billion in GDP is exposed to tropical cyclones, according to the 2009 [Global Assessment Report](#) on Disaster Risk Reduction. "Currently 10 percent of the world's total population (over 600 million people) and 13 percent of its urban population (over 360 million people) live on the 2 percent of the world's land area that is less than 10m above sea level, known as the Low Elevation Coastal Zone," it stated. "In Africa, 12 percent of the urban population lives in the LECZ." Source: Nairobi, 20 May 2009 (IRIN).

[Africa's smallholder farmers risk being excluded from future climate deal](#)



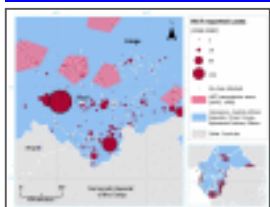
When African Environment Ministers meet in Nairobi in May 2009 to iron out a common position for negotiations for a post-2012 global climate agreement in Copenhagen, Denmark later this year, the fate of millions of Africa's poor farmers is in danger of being left off their agenda. However, the Common Market for East and Southern Africa (COMESA) will be looking for agreement on a climate change strategy that takes into account the key role African agriculture can play in reducing emissions and increasing carbon stocks across the whole continent. COMESA is promoting what it calls a biocarbon approach which would reward

countries that adopt agricultural systems that store carbon, are climate-resilient and increase productivity. It is estimated that 30% of global greenhouse gas emissions come from land-use with agriculture accounting for 14% of these. "Between 70 and 80% of the rural population in Africa depends on agriculture, livestock and forests for their livelihoods. We cannot afford to lock thousands of African farmers out of potential income from carbon markets," Dr. Wamukoya said. "Africa contributes the least to greenhouse gas emissions yet is the most vulnerable to the effects of climate change and has the least capacity to adapt to these changes."

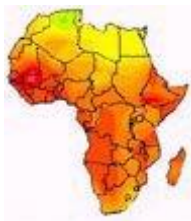
It is expected that during negotiations at a United Nations Framework Convention on Climate Change meeting in Bonn, Germany this June, nations will agree on the details for making payments to tropical forest countries under an initiative called Reduced Emissions from Deforestation and Forest Degradation (REDD). This agreement would be finalized in Copenhagen in December. However, non-tropical forest countries in Africa would have little to gain from a REDD program, and would continue to be excluded from a global climate change agreement.

Biocarbons and climate change in Africa will be further discussed at a major World Congress of Agroforestry to be held in Nairobi, Kenya, 23-28 August 2009. For more information, download: [World Agroforestry Centre Policy Brief 4 – The Case for Investing in Africa's Biocarbon Potential](#), [World Agroforestry Centre Policy Brief 5 – Africa's Biocarbon Interests – Perspectives for a new climate change deal](#).

[Towards the Atlas of human African trypanosomiasis](#)



Updated, accurate and comprehensive information on the distribution of human African trypanosomiasis (HAT), also known as sleeping sickness, is critically important to plan and monitor control activities. In this article, input data, methodology, preliminary results and future prospects of the HAT Atlas initiative is described, which will allow major improvements in the understanding of the spatial distribution of the disease. The use of GIS tools and geo-referenced, village-level epidemiological data allow the production of maps that substantially improve on the spatial quality of previous cartographic products of similar scope. The Atlas of HAT will lay the basis for



Spatial Data Infrastructure – Africa Newsletter



novel, evidence-based methodologies to estimate the population at risk and the burden of disease, ultimately leading to more efficient targeting of interventions. Also, the Atlas will help streamline future field data collection in those parts of Africa that still require it.

At the time of writing, approximately 610 epidemiological reports and files dating from 1985 onwards were collated and included in the data repository. These reports contain information for over 20,000 HAT cases and approximately 7,000 geographical entities. Data from seventeen countries have been included in the repository so far: Angola, Benin, Burkina Faso, Cameroon, Central Africa Republic (CAR), Congo, Côte d'Ivoire, DRC, Equatorial Guinea, Gabon, Ghana, Guinea, Malawi, Mali, Sudan, Togo and Uganda.

For eleven countries, data processing has been initiated and data are being imported into the HAT database. High priority is presently given to the most recent datasets (i.e. reports dating from the year 2000 onwards). For six central African countries, namely Cameroon, CAR, Chad, Congo, Equatorial Guinea, and Gabon, all data available for the period 2000–2008 were processed, thus leading to the first preliminary regional component of the HAT Atlas initiative. Epidemiological data used as input for this map were collected by the NSSCPs of the six countries; for CAR and Congo, data collected by the NGO Médecins Sans Frontières (MSF) were also included. Source: Int J. Health Geogr. 2009: 8: 15.

Arab environment 'under threat'



The fragility of the environment of the Arab region, which suffers from widespread desertification and water scarcity will be exacerbated by climate change unless governments plan for sustainable development and invest in environmental scientific research, says a report. The report, '[Arab Environment: Future Challenges](#)', published by the regional nongovernmental organization the Arab Forum for Environment and Development (AFED), was launched on 3 March 2009 in Beirut, Lebanon. It assesses the current and future state of a range of environmental issues in the region, from water scarcity to urbanization.

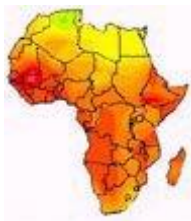
The region faces a temperature increase of 2-5.5 degrees Celsius by the end of the century, coupled with decreased precipitation of up to 20 per cent and sea level rise that could wipe out areas of agricultural land and displace millions. Most Arab countries will face severe water scarcity by 2025. In 2001, average available water supplies per person in the Arab region were 977 cubic metres - below the UN definition of water scarcity, according to the report. Projections put this figure lower still, at 460 cubic metres by 2023. Improved management is essential to ensure better water use and improved allocation of resources between agriculture, industry and domestic use, the report says. Land degradation has also destroyed 34 per cent of irrigated agricultural land in the region and the report says that the Arab region loses US\$5 billion of agricultural revenue per year because of desertification. Long-term environmental management strategies; powerful and effective environmental agencies; clear political and legislative mandates; and environmental research, education and media input are required, the report concludes.

[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.

[Call for Papers: International Conference on leadership values in Africa](#), 1-3 December 2009, University of Nigeria, Nsukka



Spatial Data Infrastructure – Africa Newsletter



The Faculty of Arts, University of Nigeria, is pleased to invite proposals for presentations on the conference on Leadership values in Africa. This theme is the first of five themes in the proposed five-year research project: "Reconstruction of African values in the twenty-First Century." Is it possible to assess African indigenous leadership values given the history of leadership in the continent in the past decades? Could any such findings be authentic in the face of the contact with the outside world and the change of paradigms for looking at social and cultural change? The conference is intended to address these issues and the coterminous linkage between good leadership and development in human society. The dilemmatic and elusive nature of development in Africa after decades of self-rule and experimentation with different versions of governance requires that scholars of the social sciences, humanities and others engage themselves in both re-interrogating and re-assessing the nexus between leadership and development in Africa. A crucial take-off point may be re-examining the whole concept, process and dynamism of leadership and its associated values and development in Africa especially in relation to the prevailing socio-economic and political worldviews and processes ranging, for instance, from globalization, economic liberalization, democracy, and universal human rights to current concerns with energy, the environment and of course the global economic recession. But such introspection should be anchored on the notions and perspectives on leadership and supportive social values in Africa that have been pursued by scholars, development practitioners and leaders. The conference on leadership values in Africa is anchored on the foregoing observations and reconfigured in the following sub-themes:

- Theoretical Issues in Leadership, Western Leadership Theories, African Leadership Issues, Gendered notions of Leadership, Other Theoretical Viewpoints on Leadership
- Leadership Values in Nigeria/Africa, Traditional Leadership Values, Modern Leadership Values, Integrating Modern and Traditional Leadership Values, Sycophancy and Leadership in Africa
- Leadership and Development, Political Leadership, Leadership and Economy, Leadership and Religion, Leadership and Morals, Leadership and Tertiary Education in Africa
- Leadership and Sustainable Development, Social Acceptability of Leaders, Environmental Compatibility, Economic Benefits of Leadership, Leadership and Globalisation in Africa, New models of Leadership for Development in Africa

Send abstracts of not more than 500 words to africanleadershipvalues@yahoo.com. Deadline for submission of abstracts and panel proposals: 30 July 2009.

[2nd Ecological Society for Eastern Africa \(ESEA\) Annual Scientific Conference 2009](#), Makerere, University, Kampala, Uganda.

The Ecological Society for Eastern Africa (ESEA), through support from the British Ecological Society (BES), is planning to hold its 2nd Scientific Conference that will address ecological issues in the Eastern African Region. . ([visit website](#)). Theme: Challenges in Sustainable use of Natural Resource in Eastern Africa - Download [Call for Papers 186KB.pdf](#). Source: [Servir Community Blog](#).



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

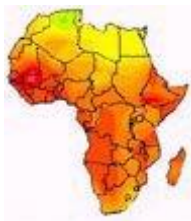
- [SC-2: Operational Monitoring of the African Savannas based on the MOD13Q1 Product](#)
- [SC-3: Processing of Reflected and Occulted Global Navigation Satellite System \(GNSS\) Signals for Earth Remote Sensing](#): 7-10 July, 8:30 - 17:30
- [SC-4: MODIS direct broadcast data for enhanced forecasting 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



Spatial Data Infrastructure – Africa Newsletter



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@africagis2009.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

[Satellite imagery aids management of Brazilian sugar cane plantations](#)

The SPOTCana, a new service tailored to monitoring sugar cane plantations, a crop that is being grown increasingly in Brazil, notably in the State of Sao Paulo where it used to produce ethanol has been launched by Spot Image and Infoterra, affiliates of EADS Astrium. SPOTCana provides information on crop maturity derived from high-resolution satellite imagery. This information is delivered at key stages of the growth cycle to support estimation of available biomass and detection of yield disparities between fields. Online subscription service has been to give the sugar industry - cane growers, distilleries, environmental departments and insurance companies precise, ready-to-use maps throughout the growth cycle. Subscribers can thus acquire information to closely monitor their crops, precisely ascertain growth, maturity and stress for timely decision-making, and manage their priorities. Subscribers are alerted each time new data are available for their region of interest. Each delivery comprises a satellite image and two vegetation maps:

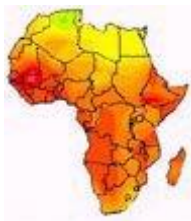
- Green vegetation map showing crop density, an indicator of healthy growth;
- Dry vegetation map pinpointing crop problems and indicating the degree of maturity at the end of the growth cycle.

A link on the portal is provided to retrieve data and view them in Google Earth. Following in the footsteps of the Farmstar online crop monitoring service for cereal growers, SPOTCana confirms the utility of remote-sensing services for agriculture and the know-how and innovative solutions developed in this area.

[GIS Best Practices: GIS in Africa](#)

Making decisions based on geography is basic to human thinking. Where we go, what will it shall be like, and what shall we do when we get there are applied to the simple event of going to the store or to the major event of launching a bathysphere into the ocean's depths. By understanding geography and people's relationship to location, we can make informed decisions about the way we live on our planet. A geographic information system (GIS) is a technological tool for comprehending geography and making intelligent decisions. This article presents a compilation of topics on GIS application in Africa by various authors.

- Global Dialogues: GIScience and Sustainable Development in Africa
- Cape Town's Emphasis on Systems Integration Exemplifies "Smart City" Goals
- Early Warning Planning for Mosquito-Borne Epidemics
- Planning Education Projects in Rural Ethiopia Using GIS
- Nigerian Voting System Modernized
- Helping Elephants Across the African Continent with GIS



Spatial Data Infrastructure – Africa Newsletter



- South African Educators Teach GIS - With or Without Computers
- Ghana Project Leverages GIS-Based Title Registration and Microfinance to Alleviate Poverty

GIS Tools, Software, Data

[2009 World Database on Protected Areas Annual Release](#)

The WDPA is a work in progress, continually being updated once new information becomes available. Each year UNEP-WCMC, under the principles of the [Conservation Commons](#), prepares and releases a [global GIS](#) dataset of protected areas. This static version contains all data improvements made to the WDPA (up to and including February 2009) since the previous annual release in December 2007.

[AMIS – Data Access](#)

The African Marine Information System (AMIS) has been developed to provide the users with an appropriate set of bio-physical information to conduct water quality assessment and resource monitoring in the coastal and marine waters. AMIS main features:

- Open source web-based application that generates in real-time environmental information, by way of geo-referenced maps, and supplies the user community with basic navigation and interrogation tools.
- AMIS is built on *UMN MapServer* 4.0 engine. *PHP* and *Perl* scripts are used to provide a browser/navigation mode to create maps and a query mode for basic statistical analysis on the data
- The bulk of environmental analysis in AMIS relies on Earth Observation data, as derived from optical and infrared satellite sensors.

[Download a tutorial document of the AMIS system](#)

[HarvestChoice Website](#)

The HarvestChoice initiative has launched a comprehensive collection of data products designed to better inform strategic policy and investment decisions aimed at improving farm productivity and profitability, and market development. The data collection focuses on factors relevant to crop production and marketing in Sub-Saharan African (SSA) agriculture, such as climate, soil and pest conditions and constraints, current and future cropping systems geography and performance, and access to markets. Recognizing the site-specific nature of many interventions designed to boost productivity, especially in the rainfed systems common throughout Sub-Sahara Africa. HarvestChoice takes a spatial approach, using interfaces built around open-source platforms such as Google Maps.

[True Marble global dataset](#)

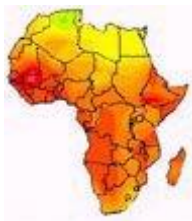
Download and use the 250m True Marble global dataset for free! This is a low resolution version of the full [15m product](#), but it is quite useful. Download to use on your web page or preview a purchase. Two types of files are available for download: [GeoTIFF](#) and [PNG](#). The GeoTIFF files are better suited for GIS programs, but are generally a larger file size. The PNG files are for general image processing programs, but are not geo-referenced. Most of these files are much too large for your web browser to display, so be **sure** to save the file directly to disk.

- [\[GeoTIFF torrent file\]](#)
- [\[PNG torrent file\]](#)

[Free printable USGS topographic maps](#)



You can view and print as many USGS topographic maps as you want for free. You can also switch back and forth between Google Maps and Google satellite images.



Spatial Data Infrastructure – Africa Newsletter



[Kruger National Park - Available data](#)

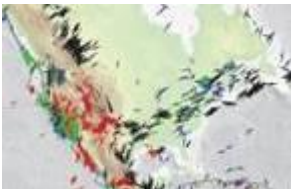
Available data - You can explore visual catalogues of [KNP GIS/RS data](#) as well as download data through the [Kruger Data Repository](#). For further information, contact: [Sandra Mac Fadyen](#) SANParks, GIS/RS Analyst.

[Sahara Desert Map](#)



The Sahara Desert is Earth's largest non-polar desert. Tour the Sahara using the Google map. Click on the red icons to learn more about some of the volcanoes, irrigation, meteor impacts, sand dunes, shrinking lakes and mountains of the Sahara Desert. Use the navigation buttons to zoom and move about.

[World Stress Map](#)



The World Stress Map (WSM) is the global compilation of information on the present-day stress field of the Earth's crust with 21,750 stress data records in its current WSM database release 2008. It is a collaborative project between academia, industry and government that aims to characterize the stress patterns and to understand the stress sources. The WSM project is a task group of the International Association of Seismology and Physics of the Earth's Interior (IASPEI) and is a service within the Federation of Astronomical and Geophysical

Data Analysis Services (FAGS) that was formed by the International Council for Science (ICSU).

The World Stress Map is an open-access database. It can be downloaded through the Stress Data subsection which also provides details about the data, utilities for data plotting, stress maps for specific regions, and other useful information. It's used by various academic and industrial institutions working in a wide range of Earth science disciplines such as geodynamics, hydrocarbon exploitations and engineering. The main operational areas are: Basin modeling, geomechanical modeling, reservoir characterization and management, stability of mines, tunnels and boreholes, fault-slip tendency and seismic hazard assessment.

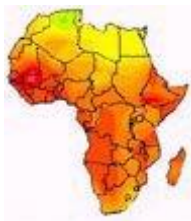
[WWF data download](#)

The Conservation Science Program is developing its capacity to make available more of the data that WWF have created and/or improved. Currently this site only has a few datasets but our plan is to increase the available datasets on a regular basis. These data are available for use for valid scientific, conservation, and educational purposes. Proper citations and any modification of the original data by users should be noted.

- [WildFinder Database](#)
- [Marine Ecoregions of the World](#)
- [Terrestrial Ecoregions Base Global Dataset](#)
- [Terrestrial Ecoregions of the World](#)
- [HydroSHEDS \(global hydrological database\)](#)
- [Global Lakes and Wetlands Database \(GLWD\)](#)
- [Global 200 Ecoregions](#)

[Conservation Group, Universities Unveil Climate Change Web Tool](#)

A web tool for projecting past and future temperature of specific areas of the world was unveiled Friday for use by climate experts and the general public. The tool called ClimateWizard uses computer programming methods, geographic information systems (GIS) and cutting-edge Internet technologies to analyze large databases of climate models located remotely on computer servers, according to the University of Washington (UW), one of the partners that developed the online program. Aside from UW's Evan Givetz, Chris Zganjar from The Nature Conservancy and George Raber from the University of Southern Mississippi developed the tool freely available at www.ClimateWizard.org. Users input annual, seasonal or monthly temperatures and precipitation in any given area from 1901 to 2099 to get the results in map format with shades of colors indicating temperature levels. The maps can be downloaded as graphics files for use in presentations, reports, and publications. Tables, graphs and GIS layers summarizing the climate-change results for each analysis area can also be produced and downloaded for use in environmental and ecological research, management, planning, policy, and advocacy.



Geospatial Research, Applications, Reference Material

[Using participatory methods and geographic information systems \(GIS\) to prepare for an HIV community-based trial in Vulindlela, South Africa](#)

Recent attempts to integrate geographic information systems (GIS) and participatory techniques, have given rise to terminologies such as participatory GIS and community-integrated GIS. Although GIS was initially developed for physical geographic application, it can be used for the management and analysis of health and health care data. Geographic information systems, combined with participatory methodology, have facilitated the analysis of access to health facilities and disease risk indifferent populations. Little has been published about the usefulness of combining participatory methodologies and GIS technology in an effort to understand and inform community-based intervention studies, especially in the context of HIV. This article attempts to address this perceived gap in the literature. The authors describe the application of participatory research methods with GIS in the formative phase of a multisite community-based social mobilization trial, using voluntary counseling and testing and post-test support as the intervention. Source: Journal of Community Psychology, Vol. 37, No. 1, 41–57 (2009)

[Satellites fight malaria in Mali](#)



Research from a savannah area in Mali shows that satellite data can reveal the environmental factors that triggers the biological cycles of both *Plasmodium falciparum* parasite and its host the *Anopheles* mosquito. Remote sensing data of vegetation accurately predicted climate trends affecting both the parasite and the mosquito and could therefore forecast the severity of a malaria outbreak. Satellite data could be used to tailor control programmes such as mosquito spraying, pesticide-impregnated net use or early detection and treatment based on environmental conditions, say the researchers.

[Geographical Information Systems as a Tool for Monitoring Tobacco Industry Advertising](#)

Although the use of Geographical Information Systems (GIS) approach is usually applied to epidemiological disease outbreaks and environmental exposure mapping, it has significant potential as a tobacco control research tool in monitoring POP tobacco advertising. An ecological study design approach was applied so as to primarily evaluate and interpret the spatial density and intensity of POP and tobacco industry advertisements within <300m to high schools in Greece with the application of GIS methodology combining mapping, photographing and global positioning data. The GIS approach identified 133 POP and 44 billboards within 300m of the school gates of Heraklion schools. On average 13 POP (range: 4 - 21) and 4.4 billboards (range: 1 - 9) were located per school, and all had at least one POP within 20m of the school gate. On average 9 ± 6 tobacco advertisements per POP (range: 0 - 25) were noted, and 80% of them were below child's height. The GIS protocol identified that kiosks, that were excepted from the Greek ban on tobacco advertising, in comparison to other POP were found not only to be closer and visible from the school gates (44.1% vs. 10.8%, $p < 0.001$) but were also found to have more external advertisements (8 ± 5 vs. 5 ± 3 , $p < 0.001$). This study demonstrates the effectiveness of a GIS system in monitoring tobacco industry advertising on a large population based scale and implies its use as a standardized method for monitoring tobacco industry strategies and tobacco control efforts. For further information, contact: vardavas@edu.med.uoc.gr.

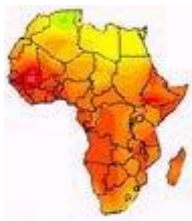
[Call for papers: Fourth Session of the International Congress Geo Tunisia 2009](#), 16 - 20 December 2009, Tunis, Tunisia

Theme: "Survey of the hydraulic resources and of desertification by using the geographic information systems, remote detection and numeric designing "

Groundwater:

- Modelling of groundwater and the problem of over fishing;
- Identification of areas of natural and artificial recharge of groundwater;
- Exploration and research of new groundwater resources;
- The pollution of groundwater;
- The intrusion of seawater into groundwater.

Dams and water collection surface



Spatial Data Infrastructure – Africa Newsletter



- The use of GIS and remote sensing for the optimization of locations of dams;
- Benefits of remote sensing and GIS in the work CES.

Pollution of surface waters and watersheds:

- Study of river basins;
- Pollution of surface waters and river basins;
- Floods in arid and mobilization of flood waters;
- The balance of the river hydro;
- The integrated management of river basins.

Desertification:

- The degradation of farmland;
- Problem of urban sprawl at the expense of agricultural areas;
- Silting and mobile dunes;
- The phenomenon of Lanino and Nino and its impact on the distribution;
- GIS and remote sensing in monitoring and detection of desertification.

Arid and Sustainable Development:

- The role of GIS and remote sensing in the development of Saharan tourism;
- The importance of satellite imagery and digital maps in the management of plant resources in dry lands;
- Agriculture in arid zones;
- The rational use of water resources in arid and semi arid areas;
- Water use by tourism areas in the Sahara.

Abstract submission deadline: 30 June 2009. For further information, contact: the General Secretary at atigeo_num@yahoo.fr.

Call for Papers/Conference Invitation - GWCCN 09

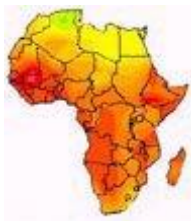
The 3rd Global Warming and Climate Change Conference & Industry Exposition (GWCCN 09) will be held in June 26-30, 2009 at The Hyde Park Hotel, 23-25 Leinster Square, Bayswater, London in line with the UN mission. Conference Theme: "Bringing Sustainable Development Down to Earth". The GWCCN 09 conference will highlight the role of individuals, groups and grassroots efforts in "green-building" initiatives. The conference will explore what we can do as ordinary citizens in addressing the adverse effects of Global Warming and Climate Change. The GWCCN 09 Conference Committee welcomes "green visionaries", the academia, IOs and NGOs, Professionals in relevant fields, Green Organizations, Women and Youth Organizations, Development Groups, Governmental Agencies, Civil Society Organizations, Community Development Organizations and Donor Agencies to submit papers, panel proposals, performances, audio-visual presentation, interactive sessions or workshops broadly exploring the conference theme. Sub-themes could focus on, but are not limited to:

- Global Warming and Climate Change and the Oceans
- Sustainable Environment, Health and Development
- Remote Sensing and Global Surveillance
- Water Resources Management
- Carbon & GHG Management
- Extreme Events and Impacts Assessment.
- Greenhouse Gas & Ecosystems
- Human Health In a Changing Climate
- Agricultural and Forestry Resources Management
- Clean Energy Technology
- Low GHG Transportation
- Education: Global Change & Sustainable Development

The deadline for submission of proposals, abstracts as well as motivation letters requesting for financial assistance: 19 June 2009. For more information contact Dr John Snow at Tel: +44 703 196 2595, +44 703 199 4559, Fax: +44 870 471 8814, email: conference@uku.co.uk.

Spatial Decision Support Systems (SDSS) and Sustainable Development of the Third World

The paper looks at the various meanings given to the concept of development, all in an attempt to understand how to have a better human society. From the fallout of the focus on the concept of development



Spatial Data Infrastructure – Africa Newsletter



is the concept of sustainable development whose focus is on how people can meet the needs of the present without compromising the ability of the future generations to meet their own needs. One of the key principles of the concept of sustainable development is to ensure social justice, particularly in the third world. It is the issue of the social justice that is the focus of this paper – how the present resources can be used in a fair and equitable manner to meet the basic needs of all.

In line with the issue of social justice, the main aim of this paper is to examine how to adopt citizen participation in the planning process and how to incorporate their views in the public facilities provision decision process. The use of a computer based decision aid called the spatial decision support system (SDSS) to resolve conflicts that may arise in the public facilities provision decision process has been discussed and recommended. Source: Journal of Sustainable Development in Africa (Volume 10, No.4, 2009)

Call for project proposals: Climate Change

With assistance from the Government of Denmark, the Frontlines Forum is now calling for community-level projects focusing on local experiences with climate change impacts and adaptation. Despite broad recognition that small island, Arctic, high altitude and other vulnerable communities are on the frontlines of climate change, community voices have remained on the margins of global climate change debates. It is these voices, however, that most need to be heard. They provide first hand evidence, experience and expertise on climate change impacts and adaptation.

What are funded?

- Community-level projects focusing on local experiences with climate change and its impacts. These could involve field research, interviews with community members, workshops, photo projects, film projects etc.
- Proposals made by interested groups or individuals, for example, local and indigenous organizations, research centres, researchers, graduate students with interdisciplinary training, community members (youth groups, women, elders) etc.

Projects could explore any topic relating to climate change and local communities:

- Local observations and understandings of climate change impacts (negative or positive) on communities, livelihoods or local environments;
- Ways that communities are adapting to or dealing with climate change;
- Strategies and practices developed by local communities to cope with changes in the environment;
- Local impacts (positive or negative) of measures to fight climate change. For example, planting trees to reduce greenhouse gases (through carbon sequestration); or building hydroelectric dams or avoiding deforestation (e.g. REDD) to reduce emissions of greenhouse gases.

All kinds of proposals related to climate change and local communities are invited. Proposals are invited from anywhere in the world, as long as they are for local-scale projects involving peoples and places vulnerable to climate change. Between US\$3000 and USD\$5000 per project will be provided. Further funding may subsequently be provided for projects with interesting outcomes. Project grants will be distributed from mid-2009 onwards. Initial results would be expected before October 2010. Proposals should reach UNESCO on or before 15 July 2009. For further information, contact: peoples@climatefrontlines.org. More information: <http://www.climatefrontlines.org/en-GB/node/191>

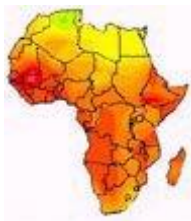
Training Opportunities

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

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

[African Reference Frame \(AFREF\) and GNSS Data Processing Training Course](#), 24 Aug - 4 Sept 2009, RCMRD, Nairobi.

The course contents:



Spatial Data Infrastructure – Africa Newsletter



- Introduction to Global Navigation Satellite System (GNSS)
- Reference systems, datum and coordinate systems
- IGS data and products
- AFREF concepts and progress
- Establishment of Continuously Operating Reference GNSS Stations
- Practical field works on Static GNSS surveys
- GNSS data post processing
- On line GNSS data processing

For further information contact: Muya Kamamia at rcmrd@rcmrd.org or muyack@rcmrd.org. Website: <http://www.rcmrd.org>. Deadline for application: 25 July, 2009.

[CONTRAST GIS course in collaboration with Gnosis GIS Geospatial Health and Environment](#), 1 – 3 October 2009, Kilifi Bay Beach Hotel, Kilifi, Tanzania

This is the second GIS course held within CONTRAST. This year the participants from last year coupled with new people (participants from outside the CONTRAST collaboration are also welcome). Participants should bring their own data, whether it being geo-referenced parasitological, epidemiological or malacological data sets. Each participant will work with their data to make first attempts at geographical modeling and map creation. This event is open for all. Contact person: [Gabriel Mushingi](#), University of Zambia and [Thomas K Kristensen](#), DBL, University of Copenhagen.

[2nd Summer School "Applied Geoinformatics for Society and Environment \(AGSE\)"](#), 13-18 July 2009, Stuttgart, Germany.

The overall scope of this conference is to offer an interdisciplinary, international forum for sharing knowledge about the application of Geoinformatics with focus on developing countries. There will be professional training and workshops about current topics in the fields of Photogrammetry and Geoinformatics as well as reports (presentations) from the participants about applications and developments in their countries. Further information, contact: Franz-Josef Behr at franz-josef.behr@hft-stuttgart.de

[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]

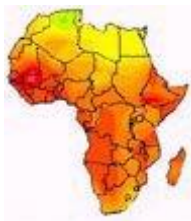
[GEONETcast for Natural & Water Resources Management - Pre-conference workshop Africa GIS2009](#),

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



Spatial Data Infrastructure – Africa Newsletter



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-ihp.org.

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.

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.

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.

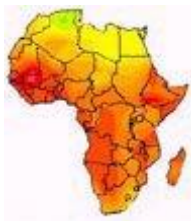


- June 8-19, 2009: Geophysical and Geochemical Data Processing

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



Spatial Data Infrastructure – Africa Newsletter



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.

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](#).

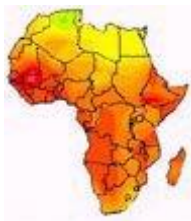
Upcoming ITC distance education courses

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:



Spatial Data Infrastructure – Africa Newsletter



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

[Full Scholarships: Five \(5\) PhD and One \(1\) Post Doctoral Positions Available for Nationals from East Africa](#)

Egerton University in collaboration with International Institute of Geoinformation Science and Earth Observation (ITC, Netherlands) invites applications for the above scholarships in the Academic Year 2009/2010. These scholarships are offered under the research project "EOIA: An Earth Observation- and Integrated Assessment approach to the Governance of Lake Naivasha" is funded by the Netherlands Organization for Scientific Research under the WOTRO - Global Science for Development Programme. The project will be implemented jointly by Egerton University (Kenya), and the International Institute of Geoinformation Science and Earth Observation (ITC, The Netherlands) and the University of Twente (The Netherlands). Collaborating partners are the University of Nairobi (Kenya), University of Leicester (UK) and University of Bournemouth (UK). The main stakeholders in the project are Water Resources Management Authority (WRMA), Lake Naivasha Growers Group (LNGG), Lake Naivasha Riparian Organisation (LNRA), World Agroforestry Center (ICRAF) and the World Wildlife Fund - East Africa Regional Programme Office (WWF-EARPO), all based in Kenya.

In the framework of this project, 5 PhD candidates will be recruited for the following projects.

- Quantifying the effect of land use change in upper catchments of Lake Naivasha on water quantity and quality of the Lake - Tenable at ITC/Twente
- Impact of exogenous and endogenous changes on limnology, fisheries and piscivorous birds - Tenable at Egerton University Kenya
- Hydrological impacts on terrestrial fringe biodiversity-Tenable at ITC/Twente
- Water governance - Tenable at University of Nairobi
- Socio-economic linkages - Tenable at ITC/Twente

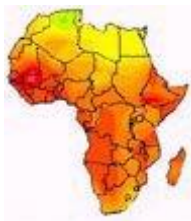
Candidates should be nationals of East Africa and hold a Master of Science/Arts degree from a recognized university. All candidates will spend approximately two years in the Netherlands and two years in Kenya and are co-supervised by the research consortium. Candidates who are below 45 years are preferred. All candidates interested in the announced positions have to apply online at http://www.itc.nl/research/phd/graduate_registration_application.aspx. For a detailed description of the project interested candidates may consult www.itc.nl/EOIA. Further information can be obtained from the Pi's: veen@itc.nl or mathookoj@yahoo.com / Coordinators: becht@itc.nl or jonyanto@yahoo.com. Deadline for application: 15 June 2009.

[AWARD Rapid Mentor Sourcing](#)

African Women in Agricultural Research and Development (AWARD) is inviting you to sign up as a potential mentor for round two fellowships. Deadline: 15 June 2009.

[Rothamsted International - African Fellows Programme \(AFP\)](#)

The RI African Fellows Programme is a scheme that aims to facilitate capacity building and training in agricultural science by providing sub-Saharan African scientists with Fellowships to work with a research group at a European laboratory. The program is open to mid-career scientists from Sub-Saharan African countries to carry-out projects for 4 to 12 months at universities or research institutes across Europe. The programme addresses local agricultural problems and facilitates capacity building and knowledge transfer. The scheme is funded entirely by the Gatsby Charitable Foundation and is administered by Rothamsted International. Deadline for pre-proposal: 19 June 2009. For more information contact: rothamsted.international@bbsrc.ac.uk.



Spatial Data Infrastructure – Africa Newsletter



[RUFORM graduate scholarship announcement](#)

The Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) is a member-based organization of 25 universities in Eastern and Southern Africa whose goal is to strengthen graduate training and agricultural related research. This is done by providing resources and peer support, to generate knowledge, research products and human resources to support agricultural development. RUFORUM is involved in Regional graduate programmes that are responsive to stakeholder needs and national and regional development goals. The programme will be hosted in Kenya by Jomo Kenyatta University of Agriculture and Technology, but resource persons will come from universities and other institutions in the region and beyond. RUFORUM is offering a limited number of scholarships for the regional MSc. programme in Research Methods. Applicants should first apply to Jomo Kenyatta University of Agriculture for admission to the programme. Admission to the programme is a prerequisite for consideration for scholarship. The scholarship will cover application fee, tuition fees, research costs, economy class return air fare(s), medical cover and living expenses. Full details will be given on admission. The scholarship does not cater for family members/dependants of students. Deadline: 30 June 2009. Application Address: secretariat@ruforum.org with copy to ekaya@africaonline.co.ke.

[University of Pavia CICOPS Scholarships 2010](#)

In order to promote international co-operation, particularly with developing countries, the University of Pavia and EDiSU (Institute for the Right of University Studies) are offering, for the year 2010, seven scholarships for visiting scholars for a period of stay of 4 to 10 weeks. Scholarships are designed for both junior and senior members of universities in developing countries and members of major research centres and international organizations or institutions with specific interests in the field of development studies. Applicants must have at least two years of either teaching experience or activity in international organizations and institutions. Deadline: 30 June 2009. For more information contact: Nicoletta Matrone or Alissa Evans at cicops@unipv.it. Web: <http://www.unipv.it/cicops/>

[COMSTECH-TWAS Joint Research Grants](#)

To facilitate young scientists in OIC countries who are involved in indigenous research within the OIC region, COMSTECH-TWAS Program of research grants in science and technology enables to apply for grants of up to US\$15000. The programme aims at encouraging the pursuit of scientific excellence in OIC countries by identifying and supporting the best young scientists in OIC member states; reinforcing and promoting scientific research and strengthening the endogenous capacity in science and technology; and counteracting the brain drain and reducing the exodus of scientific talent from the OIC countries.

The grant is normally provided for a period of 18 months and is renewable once. A grant may be used to purchase scientific equipment, consumables and specialized literature (textbooks and proceedings only). The grant does not cover salaries of researchers and/or students, field expenses, travel expenses and/or participation in international conferences.

The programme provides support for research projects in earth sciences, engineering sciences, information technology and computer sciences, materials science including nanotechnology, pharmaceutical sciences and renewable energy.

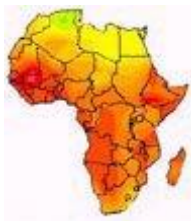
Individual applicants must be nationals of OIC Member States, with a PhD and some research experience, but at the beginning of their careers. They should hold positions at universities or research institutions in one of the OIC countries. As a general rule, the grants are awarded to competent scientists under the age of 40 years. Scientists who submit a satisfactory final report on a previous grant may apply for a renewal. Deadline: 31 August 2009.

[Egypt: Onsi Sawiris Scholarship 2010-2011](#)

The scholarships are for young Egyptians who want to pursue an MA degree in Business Administration or Construction Management at one of the top five universities in the United States. Fellows will start their degree in the early fall of 2010, the start of the academic year. You are expected to return to Egypt upon completion of your 2-year degree.

- You are a resident of Egypt (preference non-dual citizens)
- A minimum 3.5 GPA / very good as the overall grade for your undergraduate studies
- You are active through extra-curricular activities in your community

You have to submit the following documents:



Spatial Data Infrastructure – Africa Newsletter



- Download application [form](#) or apply [online](#)
 - statement of purpose (250-250 words)
 - two recommendation letters
 - TOEFL scores (above 100 iBT / 250 CBT)
 - GMAT scores: 650 or higher (if you want to get an MA degree in Business Administration) or GRE scores: 1000 or higher (if you want a MA in Construction Management)
- Deadline to submit your materials: 14 June 2009. For more information contact Ahmed Naguib at anaguib@amideast.org. Website: www.amideast.org/offices/egypt.

The OPEC Fund for International Development (OFID) Scholarship Award 2009-2010

Khmer Intellectual is very pleased to announce the OFID Scholarship which will be awarded to support an undergraduate student from any developing country, to pursue higher education in a relevant field of development, in any recognized university/college in the world. Through its scholarship scheme, OFID aims to help highly motivated, highly driven individuals overcome one of the biggest challenges to their careers – the cost of advanced professional or graduate training. The winner of the OFID Award will receive a scholarship of up to US\$100,000. The funds will be spread over a maximum of two years, toward the completion of a Master's degree, or its equivalent, at an accredited educational institution, starting in the autumn of the academic year 2009/10. To be eligible the candidate must meet ALL of the following criteria:

- Must be between the ages of 23-32 at the time of submitting his/her application.
- Must be a graduating student with a Baccalaureate from a four-year, accredited college/university, or its equivalent. Must have a minimum cumulative GPA of 3.0 or higher on a 4.0 rating system, or its equivalent.
- Must be matriculated at an accredited university for the upcoming academic year starting September 2009, and must maintain full-time status for the duration of the Masters Degree
- Must be a national of a developing country (please see list of eligible countries)
- Must select a subject of study that pertains to OFID's core mission, such as: economics of development (poverty reduction, energy and sustainable development), environment (desertification), or other related science and technology fields

Scholarship deadline: June 30, 2009.

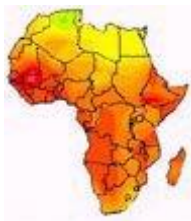
Right Sharing of World Resources (RSWR) Grant Program

Right Sharing of World Resources (RSWR) is a Quaker-organization, which primarily works with newly established and small organizations in the developing world. RSWR's grants support for innovative income-generating projects and environmental regeneration (reforestation, agro-forestry, alternative energy sources). Project grants may be used for: revolving loan for seed money, start-up supplies and equipment essential for the project, training, and salary for persons needed to oversee the project, travel expenses, administrative expenses such as the cost of preparing and mailing reports to RSWR. RSWR has two funding cycles. There is a deadline for each cycle, June 30 and December 31. For more information contact: Right Sharing of World Resources at: rswr@rswr.org.

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.



Spatial Data Infrastructure – Africa Newsletter



- 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
- 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

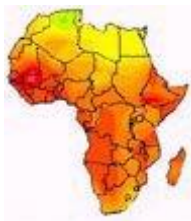
The Zayed Prize, awarded on a biennial basis, recognises and promotes pioneering contributions in the field of environment and sustainable development. The Zayed Prize is classified into three award categories:

- 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.

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



Spatial Data Infrastructure – Africa Newsletter



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.

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

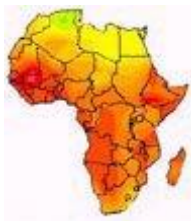
Research Associate/Deputy Principal Investigator, Nairobi, Kenya

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. This position will be based in the Malaria Control Department in Nairobi, Kenya and will require extensive travel (about 40% of time) throughout Africa and Asia. The research associate, will under the supervision of the Principal Investigator:

- Develop model study designs and questionnaires for behavioral tracking studies
- Estimate programmatic effectiveness, cost-effectiveness, and equity of malaria control interventions using repeated cross sectional, control group, and experimental designs
- Develop tools for monitoring impact of malaria control activities on disease indicators using internal and external data sources
- Improve the measurement of the determinants of malaria control behaviors, using multi-item scales and exposure to relevant intervention components
- Develop and apply qualitative techniques to develop multi-item scales, design intervention concepts, and pre-test communications
- Develop model study designs to monitor the market for malaria control products and services using geographic information systems and other techniques that measure service delivery coverage and quality
- Develop model logical frameworks for malaria interventions
- Provide technical assistance to all PSI stakeholders as requested

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:

- 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
- Ability to train, manage, and develop capacity with regional and country-level staff
- Proficiency in French is desirable



Spatial Data Infrastructure – Africa Newsletter



Preference will be given to candidates with work experience in low and middle income countries, knowledge of public health issues, especially malaria, and familiarity with the international donor development community (USAID, DFID, KFW, etc.). Apply online at <http://www.psi.org/>. Deadline: 8 June 2009.

Chief, Client Services Section, Nairobi

In-depth knowledge in systems design, and development, management, implementation and maintenance of complex information systems; conceptual and strategic analytical capacity to understand information system and business operational issues so as to thoroughly analyze and evaluate critical systems matters; thorough familiarity with a range of computer languages and development paradigms, and thorough knowledge of the organization's information infrastructure and IT strategy as it relates to user area(s).

- Advanced university degree (Masters Degree or equivalent) in Computer Science, Information Technology or other closely related engineering/science fields.
- A first-level university degree in combination with qualifying experience may be accepted in lieu of the advanced university degree.
- Advanced knowledge and certification in PRINCE 2, ITIL or COBIT an advantage.

Applicants may apply for vacancies using the Personal History Profile (PHP) of "My UN" account provided. Once the PHP has been completed for a particular vacancy, it can be saved and used for future applications. Contact: Recruitment@unon.org. Deadline: 19 July 2009.

Programme Assistant, Nairobi, Kenya

Good understanding of the results-based management concepts and UN processes related to programme/project monitoring and reporting. Ability to analyze and interpret programme/project performance data and draft high level statements reflecting results achieved. Effective time management and ability to prioritize and plan own work to meet deadlines. Good interpersonal skills and ability to work in a multicultural, multi ethnic environment with sensitivity and respect for diversity, and ability to work harmoniously, as part of the international team. Contact: Recruitment@unon.org. Deadline: 17 June 2009.

Geologists and GIS Specialists, Sudan

Geologists at all levels with some experience in mining are required. Degree and registration with a professional body is an advantage. Must have experience in mining and exposure to various commodities in an underground or open cast mining environment. Deadline: 12 July 2009.

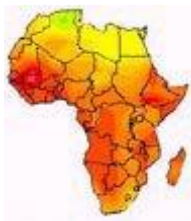
Principal Administrative Officer (DAF), Dar es Salaam, Tanzania

The Tanzania Commission for Science and Technology has a full time vacancy at the Office and Administration category. Holder of postgraduate qualifications in Public Administration and/or Human Resources Management with a working experience of not less than 8 years in a reputable organization can apply. Applications should be made with full particulars of the applicant, an up to date curriculum vitae, copies of academic certificates and testimonials, three names of referees, one of whom must be the current employer. Applicants are requested to indicate their telephone and/or fax numbers and e-mail address for easy contact thereafter. Deadline: 5 June 2009.

Senior Information Technology Officer, Kampala, Uganda

Ultimate Security Limited has vacancy for a Senior Information Technology Officer. She/he will propose and lead implementation of computing and information technology plans, policies, programs, and schedules for business and finance data processing, computer services, network communications, and management information services to accomplish corporate goals and objectives. Direct the information and data integrity of the company and its business units. Evaluate overall operations of computing and information technology functions and recommend enhancements. Advise senior management on strategic systems conversions and integrations in support of business goals and objectives. Ensure the security of the information systems, communication lines, and equipment. Responsible for the development, review, and certification of all back-up and disaster recovery procedures and plans, Identify emerging information technologies to be assimilated, integrated, and introduced within the company, and Establish company infrastructure to support and guide individual departments/branches in computing and information technology efforts. Requirements:

- Experience in IT Project planning and execution.
- Knowledge of IT software and hardware contracting, negotiating, and change management.



Spatial Data Infrastructure – Africa Newsletter



- Knowledge of information technology computer systems and software and the ability to manage the entire spectrum of information technology operations.
- Experience with implementation of information technology integrations in a large division/company.
- Good grasp of professional written and verbal communication and interpersonal skills.
- Ability to motivate teams to take on IT and produce quality materials within tight timeframes and simultaneously manage several projects.

Education and Experience: University Degree in Information Technology and a minimum of 6 years in the Information Technology field. To be considered for the positions above, please send your current resume, a 1 page cover letter, copies of certificates and other relevant documents, current and expected gross pay in PDF format only. Deadline: 5 June 2009.

Land and Soil Management Scientist, Nairobi, Kenya

The World Agroforestry Centre seeks to recruit a senior scientist to conduct research on sustainable land management with emphasis on agroforestry systems in sub-Saharan Africa. The position will contribute to the Centre's Global Research Projects GRP2 on improving on-farm productivity of trees and agroforestry systems, and GRP4 on reducing risks to land health and targeting agroforestry interventions to enhance land productivity.

The successful candidate will report to the leader of GRP2 and will coordinate the work with scientists in GRP4 and other projects. The incumbent shall have:

- PhD in production ecology (agriculture, forestry), soil science, or allied field
- Minimum of 5 years' field research experience
- Solid scientific publication record in land management in the tropics
- Strong conceptual knowledge on sustainable land management; ecology and economics of farm systems; experimental and survey design.
- Experience in developing, testing and/or use of systems modelling approaches
- Good working knowledge/research experience on tropical smallholder farming systems and landscape ecology.
- Interest in pushing forward research frontiers in farm and landscape scale experimentation and scaling-up
- Interest in extended field research
- Excellent working knowledge of English; another language such as French or Portuguese is an advantage
- Willingness to travel extensively in sub-Saharan Africa

Deadline: 30 June 2009.

Climate Change Scientist, Nairobi, Kenya

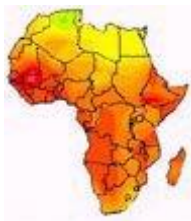
The World Agroforestry Centre seeks to recruit a world-class scientist to conduct research contributing to its Global Research Project (GRP) on Climate Change. Agricultural systems most vulnerable to climate change are those already affected by unsustainable management, and land and resource degradation. Trees have an important role in reducing vulnerability, increasing the stability of farming systems, and buffering households against climate-related risks. Moreover, whole-landscape carbon accounting (combining REDD, A/R CDM and the gaps in between) may provide a basis for investment in trees managed by farmers and rural communities. The incumbent should have:

- PhD or equivalent in forestry, environmental science, soils, ecology, agronomy or another related field
- Minimum of 5 years of research experience in agriculture, forestry, agronomy, development studies, environmental studies or other related fields and relevant experience in developing countries
- Solid publication record in research of mitigation of and adaptation to climate change

Application letters and resumes should be sent to: Helena Brykarz at HBrykarz@GlobalRecruitment.net

Fundraising Officer - PROTA, Nairobi, Kenya

ICRAF/PROTA seeks to recruit an experienced and highly qualified professional to enhance and manage its donor relations and fund raising programme. The Fundraising Officer will report directly to the PROTA Chief Executive Officer in Nairobi but will work closely with all officers within the PROTA Network. She/he will be responsible for developing new strategies for resource mobilization with an ultimate goal of expanding the donor base.



Spatial Data Infrastructure – Africa Newsletter



- Masters or equivalent degree in business management and/or international relations, agriculture, forestry or biological sciences and/or environmental/natural resources sciences, or social sciences.
- At least five (5) years of proven experience in resource mobilization, proposal writing and donor relations with NGO's, international non-profit organizations or other publicly funded organisations.
- Demonstrated record of success in raising substantial funding from multiple donor sources and experience in successfully building and managing relationships with donors.
- Excellent inter-personal skills and demonstrated ability to work in an interdisciplinary environment, both independently and in a team setting.
- Ability to meet deadlines and prioritize workloads.
- Excellent written and oral communication skills, including demonstrated formal and informal presentation skills.
- Fluency in English required. Knowledge of French an added advantage.
- Computer skills are necessary.
- Willingness to travel internationally if necessary.

All correspondence should be addressed to the Human Resources Unit, World Agroforestry Centre (ICRAF) at: icrafhru@cgiar.org. Deadline: 10 June 2009.

[Agricultural Economist](#), Pretoria, South Africa

The International Water Management Institute (IWMI) seeks to recruit a highly qualified scientist in the field of agricultural economics to contribute to on-going projects related to agricultural policy and water use in Africa under the Regional Strategic Analysis and Knowledge Support System for Southern Africa (ReSAKSS-SA) Program and Rockefeller funded project. The geographic foci of the work are Southern and West Africa. Qualifications:

- PhD in Agricultural Economics, Economics Knowledge & Experience:
- Experience in water related issues and analysis or clear ability to apply knowledge of other natural resource economics to water issues.
- Proficiency in quantitative and qualitative methods
- Knowledge of and work experience in Southern Africa and/or West Africa.
- Knowledge of Portuguese and/or French will be an advantage. Skills & Abilities:
- Proven oral and written English
- Ability to do field work and policy analysis

Complete application form http://www.iwmi.cgiar.org/About_IWMI/Vacancies/. Contact: Human Resources Office at work-at-iwmi@cgiar.org or Thushari Dissanayake at t.dissanayake@cgiar.org
Application deadline: 5 June 2009 or until the position is filled.

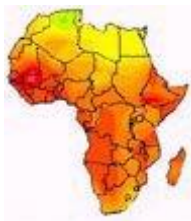
[Research Assistantship](#): Math Department, Humboldt State University, USA

The Department of Mathematics at Humboldt State University (<http://www.humboldt.edu/>) in Arcata, California, seeks a master's-level graduate research assistant to work on a data-driven mathematical model of backcountry visitor use in Yosemite National Park. Financial support consists of a \$1,000 per month stipend during each of academic years 2009-2010 and 2010-2011 and summer salary of \$5,760 during the summer of 2010. The project is directed by Dr. Steve Martin of the Department of Environmental and Natural Resources Sciences and is funded by the National Park Service. The modeling student will work under the advisement of Dr. Rob Van Kirk in the Department of Mathematics and in collaboration with a graduate student in Natural Resource Planning and Interpretation. The research team will work closely with staff at Yosemite National Park. The model will be used by the Park Service to update its backcountry use management plan. Applicants should meet the requirements for admission to the Mathematical Modeling Option of the Environmental Systems master's program (<http://www.humboldt.edu/~envsys/>) and submit an application to the program (<http://www.humboldt.edu/~envsys/prospective/procedure.html>). Knowledge of Geographic Information Systems and an interest in natural resource management are desirable. Deadline: 1 July 2009. For more information, contact Rob Van Kirk at rwv1@humboldt.edu.

Other

[Provide smallholder farmers in Africa access to geospatial data, services, tools, and methodologies](#)

Recognizing the importance of geospatial information to agriculture decision making and the inadequate access to data, tools, and analyses, especially in Africa, a Geospatial Technology Program was initiated. The



Spatial Data Infrastructure – Africa Newsletter



Geospatial Technology Program is under the administrative oversight of the Consultative Group on International Agricultural Research (CGIAR). CGIAR, in partnership with CH2M HILL and ITC, will design and develop a comprehensive program to provide smallholder farmers in sub-Saharan Africa and other agricultural stakeholders with access to geospatial data, services, tools, and methodologies to help them make more informed decisions.

Farmers will have access to higher-quality, location-specific information to make better decisions. They can use this information to decide which crops to raise and when to harvest; receive pest and disease information via cell phone; and apply changing technologies to boost productivity. They will also be able to help other farmers by reporting pest and disease conditions. Developing countries will benefit from collection and dissemination of agricultural data; analysis and communication of geospatial information; and monitoring and evaluation of agricultural development efforts. Related: [AGCommons](#), [African farmers get geospatial info on their phones](#),

[Farm Input Promotions Africa](#), [WhereCamp Africa](#), 4 April 2009 held at ILRI Nairobi was the first gathering of its kind to take place in Africa. WhereCamp is the free unconference for geographers, mobile location experts and social cartographers and all kinds of folks interested in place.

Plant communities changing across the globe



Having studied plant communities across three continents and within widely varied ecosystems - lowland tropics, deciduous forests, grasslands, and enclosed ecosystems on hill-tops, graduate student Sasha Wright has gained a unique understanding of shifts in plant communities worldwide as they respond to pressures from land use and global climate change. "Plant communities are certainly changing," "these changes are undoubtedly affected by an increased occurrence of extreme weather events, temperature fluctuations, atmospheric CO2 concentrations, human land use, and in some cases urbanization of populations." Having studied plant diversity changes due to fire, human land use, and even light human contact, Wright has seen large trends among ecosystems, some playing themselves out on the global scale. One of the most important is a general shift in plant ranges. "It is extremely clear that species ranges are shifting. To be more specific, species ranges

appear to be generally moving in a northerly direction and upward in elevation." A lot more research must be done to understand such global changes. "The problem is that we don't truly understand the implications of these range shifts, we don't know if range shifts will be proportionate to climate shifts, and we don't know what our role should be in continuing to manipulate these systems based on our incomplete understanding."

An increasing number of countries are leasing land abroad to sustain and secure their food production

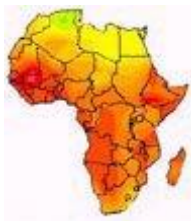


The world regions are sharply divided in terms of their capacity to use science in promoting agricultural productivity in order to achieve food security and reduce poverty and hunger. For every US\$100 of agricultural output, developed countries spend US\$2.16 on public agricultural research and development (R&D), whereas developing countries spend only US\$0.55 (IFPRI, 2008). Total agricultural R&D spending in developing countries increased from US\$3.7 billion (1991) to US\$4.4 billion (2000), or by 1.6% annually (IFPRI, 2008). This spending was

largely driven by Asia, where annual spending increased by 3.3 percent. Today, Asia accounts for 42% of total agricultural R&D spending in developing countries (with China and India accounting for 18 and 10%, respectively). In Africa, agricultural R&D expenditure declined slightly, by 0.4%/year. Although Africa is geographically large, its share in R&D spending is only 13%. Latin America accounts for 33% (with Brazil being responsible for 48% of the region's spending).

Humanitarian Implications of Climate Change: Mapping emerging trends and risk hotspots for humanitarian actors

Human-induced climate change is already modifying patterns of extreme weather such as flooding, cyclones and drought. In many cases, it is making these hazards more intense, more frequent, less predictable and/or longer lasting. This magnifies the risk of disasters everywhere, but especially in those parts of the world



Spatial Data Infrastructure – Africa Newsletter



where there are already high levels of human vulnerability. As a result, OCHA's Policy Development and Studies Branch and CARE's Poverty, Environment and Climate Change Centre commissioned a research project to compare how current high-risk areas for humanitarian disasters might be affected by climate change over the next 20-30 years.

Using a Geographical Information Systems (GIS) mapping approach, the team looked at specific hazards associated with climate change - specifically: floods, cyclones and droughts and placed them in relation to factors influencing human vulnerability. The results identify hotspots of high humanitarian risk under changing climatic conditions. The complexity of climate change science and measurements of human vulnerability means the results should be interpreted as indicative only. Further research and refinement is necessary, particularly at the regional and local levels.

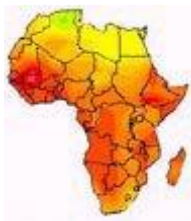
Over the next 20-30 years, the intensity, frequency, duration and extent of weather-related hazards will increase in many parts of the world. However, we are unlikely to see significant changes in the location of these hazards. Humanitarian disasters occur as a result of people's exposure to particular hazards and their degree of vulnerability. Vulnerability can be viewed as the capacity of individuals, communities and societies to cope with the impact of hazards

Even small changes in climate can significantly increase future disaster risk in highly vulnerable, ill-prepared communities. The day-to-day impacts of climate change also amplify existing stresses, and can contribute to the breakdown of livelihood systems, fuelling factors such as chronic hunger, conflict and displacement. Integrating disaster risk reduction into development strategies in highly vulnerable areas break a potentially vicious cycle, in which more intense disasters reinforce vulnerability and make communities more prone to future shocks.

Conferences, Events

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

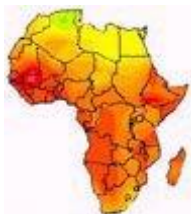
Date	Location	Event
June 2009		
2-5 June 2009	Cologne, Germany	Global Change in Africa: Projections, Mitigation and Adaption Send abstracts to africa-conference@uni-koeln.de . Abstract deadline: 31 March 2009. For further information: www.impetus.uni-koeln.de/africa
5-9 June 2009	Providence, RI, USA	Conference on putting health in place with GIS Abstract submission deadline: 31 October 2008.
14-19 June 2009	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"



Spatial Data Infrastructure – Africa Newsletter



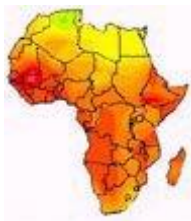
3-6 July 2009	Ghent, Belgium	INTERCARTO-INTERGIS 15 Abstract deadline: February 2, 2009 .
5-8 July 2009	Newfoundland, Canada	6th International Symposium on Spatial Data Quality (ISSDQ 2009) "Quality: From Process to Decisions" Contact: Rodolphe Devillers, issdq2009@mun.ca .
6-8 July 2009	St. John's, Newfoundland, Canada	6th International Symposium on Spatial Data Quality (ISSDQ 2009) Contact: Dr. Rodolphe Devillers
5-8 July 2009 * NEW *	Utrecht, The Netherlands	15th Annual International Sustainable Development Research Conference
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	Hyderabad, India	Third International Conference on healthGIS 2009 Contact: Dr. Nitin K Tripathi
27-31 July 2009	Vancouver, BC, Canada	GeoWeb 2009
August 2009		
2-5 August 2009	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 .



Spatial Data Infrastructure – Africa Newsletter



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	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	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		
9-11 October 2009	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.
18-25 October 2009 <i>* NEW *</i>	Buenos Aires, Argentina	XIII World Forestry Congress
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	Seattle, WA, USA	17th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACM GIS 2009) . Abstract submission deadline: June 18, 2009.
9-12 November 2009	Manama, Bahrain	2009 ESRI Middle East and North Africa User Conference (MEAUC) Contact meauc2009@esri.com .



Spatial Data Infrastructure – Africa Newsletter



11-12 November 2009	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@edicttech.com .
16-20 December 2009 * NEW *	Tunis, Tunisia	The Fourth Session of the International Congress Geo Tunisia 2009 Abstract Deadline: <u>30 June 2009</u> .
2010		
1-5 February 2010	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 .

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

Global Spatial Data Infrastructure Association

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