

Spatial Data Infrastructure – Africa Newsletter



SDI-Africa Newsletter

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

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



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

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

Back issues of the newsletter are at the GSDI website: <http://www.gsdi.org/newsletters.php>
Best regards, Gordon Ojwang, Editor, [SDI-Africa AT gsdi.org](mailto:SDI-Africa_AT_gsdi.org) or sdiafrica@rcmr.org or gojwang@rcmr.org



Input to this Issue

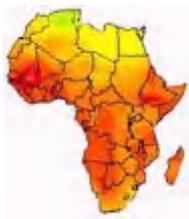
Thank you to Kate Lance, NASA/SERVIR-Africa (USA); Hussein Farah, RCMRD (Kenya); Aster Gebremariam, ECA (Ethiopia); Ashley Moran, Climate Change and African Political Stability Program (USA); Kevin Musungu, Cape Peninsula University of Technology (South Africa); Imogen Jubb, Australian Climate Change Science Program (Australia); Ragnvald Larsen, Tanzania Conservation Resource Centre (Tanzania); Flore Devriendt and Josefien Delrue, University of Ghent (Belgium); M. Hagai, Ardhi University (Tanzania) and Valérie Thebault, Geosystem (France) for their contributions to this issue of the newsletter.

SDI News, Links, Papers, Presentations

[GSDI 12 World Conference: Proceedings](#)

The GSDI 12 World Conference took place in the garden city of Singapore from 19 to 22 October 2010. The theme for the conference was Realizing Spatially Enabled Societies. The Partners in organizing this conference include the [GSDI Association](#), [Permanent Committee on GIS Infrastructure for Asia & the Pacific \(PCGIAP\)](#) and [Singapore Land Authority \(SLA\)](#). The three major components in this conference were:

- The 12th edition of the GSDI Conference;
- The 16th annual meeting of the Permanent Committee on GIS Infrastructure for Asia & the Pacific (PCGIAP); and
- Trade Exhibition.

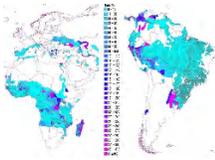


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Geographic information technologies and spatial data infrastructure play critical roles in allowing governments, local communities, non-government organizations, the commercial sector, the academic community and common people to make progress in addressing many of the world's most pressing problems. Further, use of spatial data in conjunction with mobile technologies is becoming pervasive within many nations. While mapping and spatial data infrastructure development was previously roles accomplished only by governments, this is no longer the case. All sectors of society are becoming spatially enabled and contributing to the development of the global spatial data infrastructure. Whether using hand-held devices incorporating phones, cameras, GPS, maps and location services or using sensors and wireless communications embedded within our homes, offices, stores, vehicles and along our travel paths, citizens are helping to build the next generations of spatial data infrastructure through their contributions of location and descriptive data. This conference explored the complementary roles of government, private industry and the academic community in realizing better means for sharing geographic data and technologies and developing improved location-based services for meeting real world needs.

Mapping the global supply and demand structure of rice



Rice plays a major role in the global supply and demand for sustainable food production. The constraints of maintaining sustainable rice production are closely linked to the relationship between the distribution patterns of human activity on the planet and economic growth. Global patterns of rice production can be mapped by using various criteria linked to domestic income, population patterns, and associated satellite brightness data of rice-producing regions. Prosperous regions have more electric

lighting, and there are documented correlations between gross domestic product (GDP) and nighttime light. We chose to examine global rice production patterns on a geographical basis. For the purposes of this study, each country is considered to be made up of regions, and rice production is discussed in terms of regional distribution. A region is delineated by its administrative boundaries; the number of regions where rice is produced is about 13,839. We used gridded spatial population distribution data overlain by nocturnal light imagery derived from satellite imagery. The resultant relationship revealed a correlation between regional income (nominal values of GDP were used) and rice production in the world. The following criteria were used to examine the supply and demand structure of rice. Global rice consumption = "caloric rice consumption per capita per day" multiplied by "regional population values". Regional rice yields = "country-based production" divided by "harvested area" (multiple harvests are taken into account). Regional rice production = "regional harvested areas" multiplied by "rice yield values". We compared regional rice consumption and production values according to these methods. Analysis of the data sets generated a map of rice supply and demand. Inter-regional shipping costs were not accounted for. This map can contribute to the understanding of food security issues in rice-producing regions and to estimating potential population values in such regions."

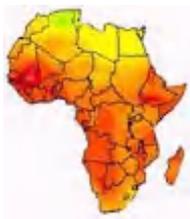
Africa to think big on climate change modeling



If African countries had had the capacity to do climate change projections, their data could have been fed into the Intergovernmental Panel on Climate Change's (IPCC) assessments for the continent, said Richard Odingo, former vice-chair of the IPCC at one of the discussions ahead of the [Seventh African Development Forum](#). The IPCC is still recovering from its controversial warning about the impact of climate change on food production in Africa, cited in its synthesis report. The warning turned out to have

been based on a non-peer reviewed academic paper for [three North African countries](#). The warning said that since most agriculture in Africa is rain-fed, climate change, which is affecting vital rainfall patterns and pushing up temperatures, could halve crop yields in some countries by 2020. "Africa should think big and do their own climates change modeling to forecast projections," said Odingo, as climatologists and meteorologists brainstormed on measuring climate change at the Forum being organized by the UN Economic Commission for Africa (UNECA).

Better climate data will help countries prepare for soaring temperatures and natural events such as droughts, floods and storms set to become more intense and frequent as the impact of climate change unfolds. "There are gaps in our information collection," he said. Climate modeling initiatives launched in Africa in collaboration with universities in the West were not "good enough", Odingo told IRIN. To assess the impact of climate change, climatological data spanning at least 60 years is required. But countries in Africa have often had to shut down weather stations because of a lack of funds or political strife. It would be easier for



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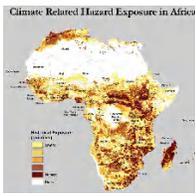


Africa to do climate projections on a large scale than prepare country-specific models. However some obstacles noted include:

- Lack of funds to build capacity to collect and analyse climate data.
- Quality of climate data varies across Africa for sound climate change model development.
- Government departments often unwilling to share information.
- Any modeling needs to be validated by. "But again
- Few government agencies involved in data collection are open-up for scrutiny required in model validation by an authoritative body to make improvements. South Africa is the exception in the continent.

The continent needs to look towards the Climate Information for Development Needs: An Action Plan for Africa (ClimDev Africa) started in 2005 and aims at improving the weather data analysis. The programme, has already put US\$30 million into the regional climate forecasting centres in Africa, and was officially launched on 13 October. The programme spreads over 10 years and will support efforts to establish or upgrade weather observing systems to fill data gaps, expand the capacity for analysing and interpreting data, and strengthen existing African climate institutions.

Locating Climate Insecurity: Where are the most vulnerable places in Africa?



The Climate Change and African Political Stability program at the Robert S. Strauss Center for International Security and Law (USA) has released a new publication on climate change in Africa. Africa is widely recognized as one of the continents most vulnerable to climate change. The continent's vulnerability is partly driven by geography, but also by its low adaptive capacity resulting from dysfunctions in countries' economies, health, education, infrastructure, and governance. This study is intended to be a proof of concept of a methodology for identifying which areas in Africa (at the most detailed scale possible)

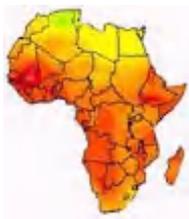
are most vulnerable to climate change and why?. The study combines existing data on physical, socio-economic, and political insecurities to develop a holistic model of vulnerability, and then uses geographic information systems (GIS) to locate the confluence of these various types of vulnerability. The study identified four main processes that encompass different aspects of vulnerability: (1) *physical exposure to climate-related disasters*, (2) *household and community vulnerability*, (3) *governance and political violence*, and (4) *population density*. Each of these areas of vulnerability was given equal weight in the final vulnerability analysis. Within three of the four areas, several different indicators were identified that contribute to that dimension of vulnerability. Indicators within each area were assigned equal weight unless there were missing data for an indicator.

Climate model gives early warning of malaria outbreaks



The war on malaria in East Africa has been stepped up with the launch of a computer model that predicts disease outbreaks in the region 90 days in advance. The model combines data on environmental factors, such as weather predictions and geography, with information on the mating mechanisms of mosquitoes, and has been tested in Kenya, Tanzania and Uganda over the last nine years. It was officially launched in Kisumu, Kenya on 3 September 2010 alongside the 26th Climate Outlook Forum for the Greater Horn of Africa.

Dr. Andrew Githeko, head of the climate and human health unit at the Kenya Medical Research Institute (KEMRI), which developed the model with the Kenya Meteorological Department and the International Centre of Insect Physiology and Ecology in Nairobi, said it can alert officials of impending outbreaks two to three months ahead. With that warning, governments will be able to take steps such as deploying treated bed nets, he said. "We are now moving from epidemic detection and management to early epidemic prediction and prevention," Githeko said. The model has predicted epidemics with an accuracy of at least 75 per cent, he added. Work on the model began in 2000 with a grant from the United States National Oceanic and Atmospheric Administration. Further funding was provided by the United Kingdom's Department for International Development and Canada's International Development Research Institute to fine tune it at several sites, and train end users and country experts. All of the regions' meteorological services departments and national malaria control programmes have been given access to the model and are planning to adopt it. Speaking at the launch, KEMRI director, Solomon Mpoke, said that epidemics were unpredictable in the past, resulting in late or no response to an outbreak. "The tool has been automated to make it user friendly for health and meteorological experts from Uganda, Tanzania and Kenya," he said. The National Malaria Strategy (2009–2017), launched by Kenya's Ministry of Public Health and Sanitation, identifies epidemic preparedness and response as a key approach to the containment of epidemics in



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Kenya. The WHO's Roll Back Malaria initiative notes that forecasting and early warning can reinforce local preparedness and allow authorities and communities to use cost-effective and timely control options to prevent excessive deaths. Elizabeth Juma, head of the malaria control programme at Kenya's Ministry of Health, said that the model will help in reducing malaria deaths. "The collaborative effort with the metrological department is timely and will be vital in fighting malaria, and we hope that it will be rolled out in areas that are affected," she said.

[Conference Downloads: Kenya's International Conference on Biodiversity, Land use and Climate Change](#), 15-17 September, 2010, Nairobi, Kenya



Recognizing the importance of Kenya's natural capital, the Ministry of Environment and the Ministry of Forestry and Wildlife, together with a coalition of conservation bodies, businesses, donors and local communities organized a conference on Biodiversity, Land Use and Climate Change: Towards a Comprehensive Conservation Framework, which was held on 15-17 September at the Intercontinental Hotel, Nairobi. The conference [agenda](#), [conference downloads](#) (PowerPoint presentations), [posters](#), [abstracts](#), [pre-conference public lectures](#), list of [participants](#), [partners](#), and [press release](#) has been posted on the website.

Although Kenya ranks among the world's top wildlife tourism spots, little is known about the country's richness for its biodiversity in Africa - the sheer wealth of its animals, plants and habitats. The "natural capital" provided by Kenya's biodiversity is the engine of her farming, ranching, fisheries, forestry, wildlife and tourism industries. Wood fuels supplies over half of the country's domestic energy. Despite its importance, biodiversity has barely featured in Kenya's gross domestic production. It took the destruction of one of her water towers (the Mau Forest) to raise public alarm over the loss of river flows, erosion and the downstream costs to farmers, ranchers, national parks and the economy. Each year, billions of shillings worth of natural capital is destroyed far faster than it's being replaced. The destruction of Kenya rangelands has halved the wildlife populations in the last 30 years and intensified droughts, resulting in a 70 percent loss of pastoral livestock in 2009.

The conference marked Kenya's participation in the United Nations International Year of Biodiversity 2010. The conference concluded with discussions on a new national biodiversity framework and policy that reflects Vision 2030 and Kenya's far-reaching constitutional changes.

[Mapping a Better Future: Spatial analysis and pro-poor livestock strategies in Uganda](#)

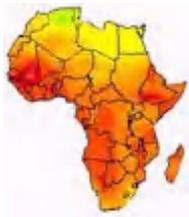


This report ([Full Report](#) - PDF, 48 pages, 2.3 Mb; [High Resolution Version](#) - 26.7 Mb lets you print the maps at the highest available resolution) uses mapping data to examine the spatial relationships between poverty, livestock production systems, the location of livestock services, in order to ensure that government investments in the livestock sector benefit smallholders and high-poverty locations. Livestock are particularly important to the subsistence agriculture on which seven out of ten Ugandans rely for their livelihood. While income from livestock provides only one of many sources of income for rural households, people typically rank livestock as their second or third most important means of livelihood. It

is not surprising then that over 70 percent of all households in Uganda owned livestock in 2008. Indeed, smallholders and pastoralists dominate the livestock sector. Farming households with mixed crop and livestock production and pastoralists together own 90 percent of Uganda's cattle and almost all of the country's poultry, pigs, sheep, and goats.

This report is intended for a variety of audiences, including analysts and decision-makers in the livestock and dairy sectors, personnel involved in livestock research and advisory services, officials involved in national planning and budgeting, and civil society and nongovernmental organizations. The spatial analysis approach suggests that by integrating more detailed information on livestock distribution, animal husbandry and veterinary service provision, disease incidence, and poverty, planners can more effectively design and target livestock management interventions and policies so that the benefits reach a greater proportion of poor communities and the costs associated with land-use changes or new restrictions on livestock use do not disproportionately affect the poor. While the maps and analyses are primarily designed to demonstrate the value to decision-makers of combining social and livestock-related information, they also support the following conclusions:

- Maps showing milk surplus and deficit areas can highlight geographic differences in market opportunities for poor dairy farmers and help target knowledge dissemination, market infrastructure investments, and service delivery to dairy farmers.



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- Maps showing animal (and human) disease risk by livestock production system can help target and prioritize areas for intervention. The impact of disease on livestock and their owners differs geographically because the role of livestock in peoples' livelihoods varies among production systems.
- Mapping poverty, livestock production systems, and distribution of disease vectors such as tsetse allows a better understanding of how the disease affects livestock owners in terms of livelihoods, welfare, and food security.

Additional Resources: [Mapping a Better Future: How spatial analysis can benefit wetlands and reduce poverty in Uganda](#) and [Mapping a Healthier Future: How spatial analysis can guide pro-poor water and sanitation planning in Uganda](#)

Towards Implementation of SDI in Tanzania: Private Sector more inspired than Government institutions

This research project was supported by the Global Spatial Data Infrastructure Association (GSDI) Small Grants Program - 2009/10 and conducted in Dar-es-Salaam City (commercial Capital of Tanzania). The research focused on determining SDI Readiness Index for Dar-es-Salaam in a bid to identify problems that undermine the implementation of SDI and fostering a fast socio-economic development in Tanzania. Until 1975, Dar-es-Salaam - the largest commercial centre with business contributing almost 75% of the national GDP was the capital city of Tanzania, but was replaced by Dodoma, a central town in country.

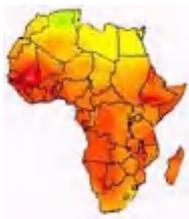
The study research targeted geospatial technology stakeholders including municipal councils, private companies, NGO's and individuals with vested interests in spatial data generation and derived product use in Dar-es-Salaam. The study reveals that more than 64% of the institutions/organizations/companies surveyed in Dar-es-Salaam are ready to implement SDI. However, a general apathy exists among government institutions to share/exchange geospatial data, mainly due to unclear cost benefits of SDI investment, in addition to lack of SDI training capacity. The private sector is most inspired relatively more willing to implement SDI than government institutions. The problems hindering the implementing SDI in Tanzania were identified as:

- Lack of a National SDI Policy
- Limited knowledge on SDI and the general lack of awareness
- Limited funds to sustain SDI
- Lack of institutional leadership to coordinate SDI development activities
- Lack of political commitment

Tanzania has a long way to reach the implementation of SDI. In the mean time, there is need to intensify awareness amongst the stakeholders and decision makers on importance of SDI in national socio-economic development. Efforts to develop a National SDI Policy should be equally intensified. The implementation of SDI in Tanzania can therefore be achieved through a knowledge based economy, development of evidence based decision-support-systems as well as the promotion of collective resources management strategies for sustainable development. A similar study can be extended to other major towns to identify constraints to policy development and future implementation of SDI in the country. For further information, contact Dr. M. Hagai, Ardh University - School of Geospatial Sciences, Department of Geoinformatics and Geodetic Sciences, P.O. Box 35176, Dar es salaam, Tanzania at hagai@aru.ac.tz.

GIS solutions and land management in urban Ethiopia: Perspectives on capacity, utilization and transformative possibilities

For strategic, operational and financial reasons, GIS solutions are becoming an increasingly important area for realizing effective land management systems for many municipal governments across the globe. Despite the obvious gains, many local authorities in Africa have not yet taken advantage of the new developments within this sector. The paper gives an anatomy of realities and challenges of using GIS solutions for improved land management in a sample of Ethiopian cities. Empirical evidence was gathered from a panel of experts drawn from at least 22 cities and towns through the Delphi method. The analysis was done within the context of the Capacity, Usage and Transformation (CUT) framework. The reality is that the status of GIS for land management in most cities is that of constrained capacity, usage and transformation. The analysis also reveals that access to GIS system software does not automatically translate to the attainment of organizational value. Instead, it enables the formulation and realization of organizational strategy that will direct organizational change and subsequently lead to increased organizational value. This however requires the fixing of challenges relating to finance, technical expertise, institutional arrangements and the implementation process. [Source: [Management Research and Practice](#), 2010, vol. 2, issue 2, pages 200-



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New atlas sheds light on inequality in Nigeria



For the first time, members of the public can now go to a website and online atlas (www.nigerianlgaclassification.com) and find out for instance to what extent students in their area are likely to be dissatisfied with the quality of teaching at school; in which areas private, public or even religious hospitals are more or less likely to be used; the extent to which people fear crime in different areas and lots more. In addition, users can unlock greater insight from their own data by coding their own user or client database with the corresponding geodemographic typologies (like Conventional Green Towns,

Labouring Diluted Societies or Affluent Urban Nodes) of the residential Local Government Areas (LGAs) of their clients and service users.

A researcher at the University of Sheffield has created a new online atlas which depicts Nigeria by its socio-demographic, economic and environmental information on a local level in the country. The new website aims to provide spatial dimensions of local level inequality in the country, and will be particularly useful for tracking and tackling the Millennium Development Goals (MDGs) and other important policy programmes. The atlas includes over 100 maps, charts and visuals, which will, for the first time, make it possible to view at a glance areas in which students are likely to be dissatisfied with the quality of teaching in school, the extent to which people fear crime in different areas, and which areas provide satisfactory health service. Compiled by Dr Adegbola Ojo, while studying for a PhD at the University's Department of Geography, the atlas was launched on 1 October 2010 to commemorate the 50th anniversary of Nigeria's independence from British Colonial rule. Since the country emerged as a sovereign state in 1960, the task of providing the public with timely and relevant socio-demographic, economic and environmental information about their residential areas at the Local Government Area (LGA) level has been very challenging. This lack of local spatial information reinforces the perpetuation of longstanding inequalities and uneven development in the country.

The main findings from the atlas include:

- More than 70% of children within Toiling Country Dwellings and Middle-class Country Dwellings are unlikely to be enrolled in school
- Out of every 100 households in most areas, there are less than 10 where females own land or home.
- The pattern of inequality among women who receive assistance from doctors during child birth suggests that almost half of the country's potential mothers will have to relocate from their current residences to other areas for a state of national equilibrium to be attained.

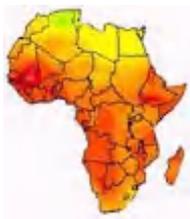
Further information, contact: Dr Adegbola Ojo at A.ojo@adegbolaojo.co.uk, website: <http://www.adegbolaojo.co.uk/>. NIGECS website: <http://www.nigerianlgaclassification.com>.

Senegal to benefit from climate change adaptation fund

Senegal is to benefit from one of two projects, worth US\$14 million, launched by the Adaptation Fund - set up to finance adaptation programmes in developing countries. Senegal's project, awarded to the country's National Implementing Entity Centre de Suivi Ecologique (CSE), will focus on combating coastal erosion that has been worsened by climate change and rising sea levels. "Going through this flexible although rigorous process was challenging and will certainly constitute an unequivocal source of motivation for all African countries," said the centre's general manager Assize Touré. The Adaptation Fund Board also endorsed three project concepts put forward by multilateral implementing entities including Madagascar in addition to those it endorsed in June 2010.

In order to better communicate to the world at large of its role and processes and to help encourage countries to apply for accreditation of their national implementing entities, the Board also agreed to launch a communication strategy. The Board also focused on enhancing its interaction with the observers and civil society, and in this regard, it agreed to initiate a regular open session of limited duration during its future meetings. The first such open session will take place at its 12th meeting scheduled to take place in Cancun following the 16th Conference of Parties to the UNFCCC.

The Adaptation Fund is a self-standing fund established under the Kyoto Protocol of the UN Framework Convention on Climate Change, which gets the main part of its funding from a two percent share of proceeds of all Certified Emission Reductions issued under the Protocol's Clean Development Mechanism projects. The Fund is designed to finance concrete climate change adaptation projects and programs based on the



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needs, views and priorities of developing countries. The Global Environment Facility provides secretariat services to the Adaptation Fund and the World Bank serves as its trustee, both on an interim basis.

Implementation of Angosat project to start in October 2010



The construction of the Angolan satellite, named Angosat, might start in October, assured the Russian ambassador to Angola, Serguey Nenáchev, speaking to Angop, under the visit facilitated by the Angolan parliament speaker, António Paulo Kassoma, to that European country. According to the diplomat, the implementation of the project, to be fully supported by the government of Russia, will start as soon as the Angolan Cabinet Council analyse it. At the moment, he said, both sides are finishing the discussion of the issues related to financial support and training of staff.

The Project Angosat is estimated at USD 327 million and will be built in four years, assured the diplomat. The construction, assembly in orbital and operation of the satellite is under the responsibility of a Russian company. Serguey Nenáchev explained that there will be created two management points of the satellite, the main to be installed in Angola and another of reserve in Moscow, Russia.

Zimbabwe set for major Internet penetration

One of the country's biggest internet service providers, Africom last month unveiled its mobile broadband platform after investing US\$30 million into the project in a development that would improve the country's mobile penetration. The development follows the deregulation of the telecommunications sector last year after the Postal and Telecommunications Regulatory Authority of Zimbabwe (Potraz) said licensed operators with the infrastructure can do both data and voice in a bid to improve on the country's tele-density. It would give fierce competition to other mobile players, Econet, Net One and Telecel who have of late been struggling to offer quality service to subscribers. Kwanayi Kashangura, Africom founder and chief executive officer told Standardbusiness the company is not competing directly with mobile operators but "enhancing the service". Kashangura said mobile operators were offering other services which Africom had and the converged license meant that it could now participate in voice, data, internet and other services. "Mobile operators are now offering internet services on their platforms and there is need to offer a full bouquet of communication services," the Africom founder said.

With its existing infrastructure, there is a capacity of three million subscribers. The services had been tested for over two months. He said government's vision was that before the end of the year people "must be connected". Government has identified ICTs as the fuel for economic growth. In the 2010 national budget Finance Minister Tendai Biti allocated US\$5 million through the Vote of Credit aimed at establishing a fibre optic link between Harare and Mutare and Harare to Beitbridge.

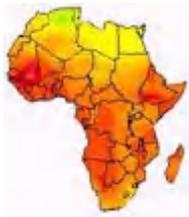
Poor infrastructure stifles South African telemedicine



Less than half of South Africa's telemedicine sites - set up partly to bring medical services to remote parts of the country are functional, a government review has found. Of 86 sites, just 32 were operational at the beginning of this year, according to the study, carried out by the country's department of health. The failures are the result of a lack of coordination and leadership, inadequate budgets and inefficient use of available funds - factors that have crippled the sites - Aaron Motsoaledi, South Africa's health minister, told the inaugural Southern Africa Telemedicine conference, in Cape Town (16–17 September 2010).

"Weak ICT [information and communications technology] infrastructure; inadequate and unreliable connectivity; and problems with the coordination and management of work [have] added to the challenges," he told the meeting. Telemedicine uses ICT to allow patients to 'visit' physicians live over the Internet for immediate care or diagnosis and follow-up treatment. It also enables long-distance medical training. South Africa piloted many such projects more than a decade ago, which led to 28 telemedicine sites being established between March 1999 and September 2000. This has expanded to 86 sites offering a range of services such as tele-radiology and tele-education. But the country and the region lack a telemedicine strategy, speakers told the meeting, hosted by South Africa's Medical Research Council. "The vision is to grow efficient telemedicine in the Southern Africa Development Community and then rest of Africa," Jill Fortuin, acting director of the council's Telemedicine Platform, told SciDev.Net. Fortuin said a policy would bring affordable and timely treatment for patients and closer supervision of numerous HIV/AIDS patients.

"Telemedicine is an instrument through which the socially vulnerable sections of the population can enjoy the freedom that comes with being a citizen in democratic state," said Derek Hanekom, deputy minister of



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science and technology, highlighting South Africa's lack of trained medical specialists and the problems in getting health care to remote areas. Any national telemedicine strategy should aim to contribute directly towards increasing life expectancy, reducing maternal and child mortality, combating HIV/AIDS and tuberculosis, and strengthening the effectiveness of health systems, said Motsosedi. The meeting attended by healthcare practitioners, trainers, medical device developers, ICT infrastructure providers, academics, researchers and policymakers was also told that such a strategy should include a standard operating procedure, guidelines, and rules on data security.

[South Africa satellite preparing scientists for new space industry](#)

Though practically invisible to the naked eye, a uniquely South African satellite has been orbiting the earth for the past year, creating an archive of images and jumpstarting what its creators hope will be a space revolution in the country. Dubbed SumbandilaSat, meaning "Pathfinder" in Venda, the satellite was designed to be an introduction to what will be an expanding South African space programme. To date, South Africa's forays into space have been modest and experimental. But scientists hope the country's growing space agency can revitalize science, propel South Africa into the space race and empower the country as a whole.

In its 5,600 orbits around Earth since being launched in September 2009, SumbandilaSat has created 186 usable images. These images are processed and compiled into an archive by the Satellite Applications Centre (SAC) in Hartbeesthoek, which controls the satellite. Dr. Corné Eloff, SAC Earth Observation Centre manager, said that though limited in their quality, these images can be used with imagery from other earth observation satellites to better monitor everything from the growth of informal settlements to the levels of South Africa's dams. SumbandilaSat is controlled by the SAC, but soon will fall under the supervision of the South African National Space Agency (SANSA), which will be launched before the end of the year, while SAC will merge into the organisation on April 1, 2011. The larger goal of invigorating the space program is for it to act as a catalyst for scientific progress in the country, trickling research and development down to students at institutions of higher learning and creating jobs. Shortly after the launch of SumbandilaSat, the Cape Peninsula University of Technology inaugurated its Satellite Systems Engineering Programme to train scientists in the emerging space field. SANSA hopes to have two more satellites running by 2018. Currently, the center is surveying the scientific community to determine what capabilities these satellites should have, Hodges said. An expanded space program would allow new industries to benefit from the proliferation of detailed satellite imagery. "(Enterprises) linked to agriculture, landscape and urbanisation will be allowed to grow, which should prove to increase productivity," Chris Engelbrecht said.

SumbandilaSat is experimental, primarily an opportunity for SAC to take full control of a satellite and guide it through its launch and maintenance while in space, an essential task that SAC has not undertaken before, Eloff said. Still, the satellite is not without its flaws. Three of the colour sensors on the satellite's cameras failed after about two months in space, and all of the pictures the camera sends back - which typically encompass a 45 by 45 square kilometre of earth are tinted red. [Source: IPS News].

[Call for Abstracts: 2011 URISA GIS in Public Health Conference](#)

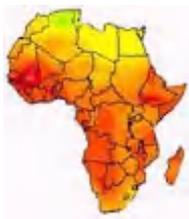


URISA is accepting abstract submissions for the 2011 URISA GIS in Public Health Conference. The conference will take place in Atlanta, Georgia, 27-30 June 2011. The conference was established to provide an open and participatory forum for advancing the effective use of spatial information and geographic information system technologies across the domains of public health, health care, and community health preparedness. The educational program is developed through a review of submissions received through the Call for Presentations. The range of focal areas for the URISA GIS in Public Health Conference is broad, reflecting the varied areas of interest those engaged in both research and practice in public health. Submissions from individual papers, sessions, and posters in any area that meets the general criteria: Has a spatial component, Related to public health, and Holds interest due to its novelty or information content. Individuals who submit abstracts should indicate the Thematic Area(s); Methods and Data Sources; and Programs, Policy and Practice Area(s) which apply to their topic. Abstract submissions deadline: 11 January 2011.

[Call for Papers: African scholars on environmental security](#)



The Climate Change and African Political Stability (CCAPS) program at the Robert S. Strauss Center for International Security and Law has issued its first call for papers on its project theme, open exclusively to scholars from and based in Africa. The Call for Papers is co-sponsored by the Strauss Center, the Institute for Security Studies, and the Pew Center



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on Global Climate Change.

The Call for Papers is open to submissions from all disciplines, can have a continental focus, a regional focus, a country focus, a local sub-national focus, or a mix of these. The review committee prefers submissions that will be supported by case study research.

- Up to three papers will receive a research stipend for case study or other field research, as well as travel support to attend an international conference.
- The author of the first-place paper will receive a \$5,000 research stipend and up to \$3,000 to attend an international conference.
- Authors of the second- and third-place papers will each receive a \$2,500 research stipend and up to \$3,000 to attend an international conference. In the event of a co-authored paper, the stipend will be split equally among authors, and the lead author will be eligible for the conference travel support.

Contributors must be from Africa and be currently based in Africa to be eligible. Contributors are not required to have a PhD to submit a paper. Preference will be given to authors from economically disadvantaged institutions and countries within Africa. The submitted paper cannot be previously published. The paper can be under review elsewhere, but cannot appear in print elsewhere prior to August 31, 2011. Deadline for submission: January 1, 2011.

ENDELEO Workshop, 30 Nov - 2 Dec 2010, Nairobi, Kenya

The last ENDELEO newsletter (October 2010, Number 6) has been posted to data users. The Belgian funding will end in 2011, however the [ENDELEO](#) monitoring website will remain operational, updated and helpdesk available. The final ENDELEO workshop will be held on 30 November - 2 December, 2010 in Nairobi, Kenya. An official invitation and the program will be distributed.

On the request of users, part of the workshop will consist of training. The remaining time will be dedicated to the demonstration of local applications for which the ENDELEO tools have been a valuable source of information. All users are encouraged to be engaged in the workshop by presenting case studies for which the ENDELEO data or tools have been used. For further information and contribution, contact Flore Devriendt at Flore.Devriendt@UGent.be or Josefien Delrue at Josefien.Delrue@Vito.be.

Conference and Call for Abstracts: Greenhouse 2011

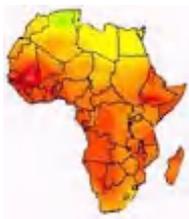
The program committee will consider all abstracts submitted that are in line with the conference theme, 'the latest science' and with the application of the science. Topics covered at the conference include: Oceans, Atmosphere, Biosphere, Climate modeling, Climate change projections, Climate variability, Extreme events and community resilience, Pacific nations and climate change, Impacts and adaptation, Biodiversity, Policy and economics, and communicating climate change. Abstracts should be submitted at <http://www.greenhouse2011.com/submissions>. Submission deadline: 19 November 2010. Successful authors will be notified in mid-December. For more details on the program, abstract submission and registration: www.greenhouse2011.com.

Practical SDI implementation materials from within and outside of Africa

Crop production and road connectivity in sub-Saharan Africa: A spatial analysis



This study examines the relationship between transport infrastructure and agriculture in Sub-Saharan Africa using new data obtained from geographic information systems (GIS). First, the authors analyze the impact of road connectivity on crop production and choice of technology. Second, they explore the impact of investments that reduce road travel times. Finally, they show how this type of analysis can be used to compare cost-benefit ratios for alternative road investments in terms of agricultural output per dollar invested. The authors find that agricultural production is highly correlated with proximity (as measured by travel time) to urban markets. Likewise, adoption of high-productive/high-input technology is negatively correlated with travel time to urban centers. There is therefore substantial scope for increasing agricultural production in Sub-Saharan Africa, particularly in more remote areas. Total crop production relative to potential production is 45 percent for areas within four hours' travel time from a city of 100,000 people. In contrast, it is just 5 percent for areas more than eight hours away. Low population densities and long travel times to urban centers sharply constrain production. Reducing transport costs and travel times to these areas would expand the feasible market size for these regions. Compared to West Africa, East Africa has lower population density, smaller local markets, lower road connectivity, and lower average crop production per unit area. Unlike in East Africa, reducing travel time does not significantly



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increase the adoption of high-input/high-yield technology in West Africa. This may be because West Africa already has a relatively well-connected road network.” [World Bank Policy Research Working Paper](#) No. WPS 5385, July 2010.

[SERVIR supports forest management in Belize](#)



A recent study conducted in the context of SERVIR demonstrates the utility of Earth observation technologies for monitoring the forest resources of Belize. The [Regional Visualization & Monitoring System](#) (SERVIR) is a joint initiative of the regional organizations [CATHALAC](#), [RCMRD](#), and [ICIMOD](#) and is supported by the US Agency for International Development ([USAID](#)) and [NASA](#). Recognized in 2007 as one of the “100 steps toward the Global Earth Observation System of Systems (GEOSS),” it has provided key decision-support information for monitoring the land surface, oceans, and atmosphere of regions such as Mesoamerica and the Caribbean, Africa, and, soon, the Himalayas.

With an increased global focus on the capacity of the world’s forests to mitigate climate change, one relevant recent development from SERVIR has been the completion of a 30-year study of forest cover change and deforestation in Belize, a GEO Member and Central America’s northernmost nation. The study, “[Forest Cover and Deforestation in Belize: 1980-2010](#),” was done at the request of the Government of Belize’s Ministry of Natural Resources and the Environment, the federal entity responsible for managing forests and public lands in the nation recognized as having the highest percentage of forest cover in Mesoamerica. The Ministry of Natural Resources and the Environment is also the focal point for GEO.

Based on analysis of imagery for 1980, 1989, 1994, 2000, 2004, and 2010 from the Landsat series of satellites managed by NASA and the US Geological Survey, the validated, national-level assessment indicates that Belize’s forest cover has declined from 75.9% in 1980 to 62.7% as of late February 2010. Average annual deforestation was estimated at 0.6%, equaling the clearing of almost 10,000 hectares of forest per year. The assessment fills an important information gap, since the only previous evaluation of deforestation in Belize was a 1996 USAID-funded study. The study demonstrates SERVIR’s capacities for rapidly converting satellite data into information and holds lessons for the ongoing implementation of GEOSS. It is the first time in Belize’s history that such an assessment has been completed in the same year the imagery was acquired. The study fully elaborates the methodology used, as well as providing access to the “spectral signature” libraries developed. It has many synergies with the ongoing [Forest Carbon Tracking Task](#) work being coordinated by GEO as well as makes use of the estimated Belize’s current stock of forest carbon from TROPICARMS 2.0 system implemented by CATHALAC - an important requirement of REDD+.

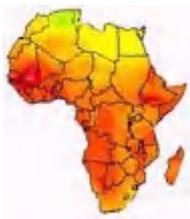
[SERVIR - Decision-support System for Himalayas](#)

NASA and the US Agency for International Development (USAID) have launched an innovative, web-based environmental management system for the Himalayan region. SERVIR-Himalaya was inaugurated at the International Centre for Integrated Mountain Development in Kathmandu, Nepal by NASA Administrator Charles Bolden. SERVIR was developed by researchers at NASA’s Marshall Space Flight Center in Huntsville, Ala., and its name comes from the Spanish verb ‘to serve’. SERVIR features web-based access to satellite imagery, decision-support tools and interactive visualisation capabilities and puts previously inaccessible information into the hands of scientists, environmental managers and decision-makers. The Earth observation information is used to address threats related to climate change, biodiversity and extreme events such as flooding, forest fires and storms. Related website: <http://www.nasa.gov/servir>.

[ESA's TalkingFields guides European farmers from space](#)

Farmers traditionally keep a close eye on their fields, but a new ESA-led project seeks to build on their vigilance with monitoring from space. The TalkingFields initiative is now showing how to combine satellite observation with satellite navigation to benefit European farmers.

Sustainable food production and food security are critical challenges. TalkingFields will help by using precision farming methods to produce crops more efficiently. For instance, by optimising farmers’ use of fertiliser and giving early warning of plant disease risks, both costs and environmental impacts can be reduced. How does it work? The farmer requests the service for an area defined using satnav. Satellites gather information on the land’s potential - observations over several years can reveal variations in crop growth through soil changes - as well as current crop status. These results are combined with information from field sensors such as weather conditions and soil moisture. The farmer adds in his own knowledge, and in return receives detailed satnav instructions on where and how much fertiliser to spray, for example. A

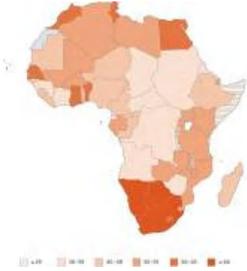


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variety of satellites can be employed, although priority will be given to free data sources such as Landsat and ESA's forthcoming Sentinel-2 satellites, due for launch in 2012. TalkingFields is being supported through the Integrated Applications Promotion (IAP) programme of ESA's Telecommunications and Integrated Applications Directorate.

2010 Ibrahim Index of African Governance: Quality of governance in Africa



The Index assesses governance in Africa against 88 criteria, enabling the quality of governance in each country to be ranked. These maps show the performance by main categories which make up the overall index.

- [Africa's nations rated by their safety and the degree to which the rule of law is respected](#).
 - [Quality of governance across the continent](#), measured by human rights and the level of people's participation in government.
 - Countries ranked by "[sustainable economic opportunity](#)", or the freedom to participate in creating economic wealth.
- The index's human development indicators rank countries by [the outcomes of investments in talent](#), with a particular focus on education, health and social safety nets.

FGDC US address standard nears completion



The project to develop the [United States Thoroughfare, Landmark, and Postal Address Data Standard](#) and sponsored by the [Subcommittee on Cultural and Demographic Data](#), [URISA](#) and [NENA](#) is on schedule for completion and formal sign-off by the FGDC on 15 January, 2011 (see [Draft review copy](#)). The URISA Address Standard Working Group gave an update on the development of the standard, which have already taken five year effort at the URISA conference last month. The standard has been built on previous [FGDC](#) work with extensive consultation with NENA, USPS, ISO, and FGDC subcommittees and other interested organizations and individuals. Two profiles of the standard have been developed: USPS - to support [USPS Publication 28](#) and [UPU Standards](#), and NENA - to manage emergency address uses.

Already a number of jurisdictions in North America have adopted the address standard including Massachusetts, Oregon, and British Columbia. The development of this standard was a community process entirely done by volunteers, Martha Wells, Ed Wells, Carl Anderson, Sara Yurman, and Hilary Perkins. The Federal contribution is a \$20,000 grant at the start of the project to cover expenses such as conference calls.

GIS Tools, Software, Data

African Water Resource Database



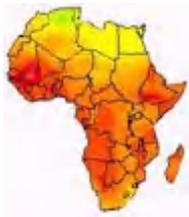
The Food and Agriculture Organization (FAO) of the United Nations used GIS to create a new tool for helping Africa cope with hunger and malnutrition. The African Water Resource Database (AWRD) includes an extensive archive and GIS tools designed to facilitate responsible inland aquatic resource management with an overarching goal of food security. Information stored in the data archive includes surface water bodies, watersheds, aquatic species, rivers, political boundaries, population density, soils, satellite imagery, and physiographic and climatological data. AWRD was designed for use by administrators, technical professionals,

spatial analysts, teachers, and students.

To display and analyze the archival data, AWRD contains custom applications and tools programmed to run under ArcView. The database allows integration of different types of information into a cohesive program that, because of its visual nature, is easy to understand and interpret. For more information, contact José Aguilar-Manjarrez, fishery resource officer, Food and Agriculture Organization of the United Nations (e-mail: jose.aguilarmanjarrez@fao.org), or visit GISFish online at www.fao.org/fi/gisfish or the GeoNetwork at www.fao.org/geonetwork/srv/en/main.home.

Elshayal Smart GIS - Last FREE version 4.35 new features

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



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

[Africa Open Street Map updates](#)



SpatialDev has compiled some recent updates to roads data across sub-Saharan Africa using the [Open Street Map](#) and [FME](#) from Safe Software and working from a variety of sources including [Google Map Maker](#) roads data, [gRoads](#) and [GRIP](#). While each data set has its own set of advantages, it was found that an amazing number of updates have been done for Open Street Map in Africa. The team dug a little deeper to understand what has changed and how many of those changes could be attributed to [Map Kibera](#). From February to October 2010, there were 85,926 new line segments added to Open Street Map in 59 African countries. The most active was South Africa and least active was Liberia. The top include: South Africa - 25,081, Algeria - 6,603, Madagascar - 5,522, Cameroon - 5,205, Morocco - 3,998, Egypt - 3,992, DRC - 3,585, and Angola - 2,327. South Africa has been the busiest (perhaps due in part to hosting the World Cup). Since last February, the “publicly” available data on the Google Map Maker roads has not been updated and therefore a similar analysis using this data was not done.

Geospatial Research, Applications, Reference Material

[Geographic boundaries of endemic malaria getting progressively smaller](#)

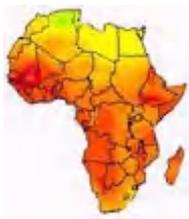
For the last 150 years the geographic boundaries of endemic [malaria](#) have been steadily getting smaller, what experts call "The Shrinking Malaria Map". In the medical journal The Lancet's "Series on Malaria Elimination", Professor Richard Feachem, The Minister of Health for Ethiopia and team say that the Shrinking Map continues and there is every reason to be hopeful for the short- and long-term future. Professor Feachem, Director of the Global Health Group (GHG) and Chair of the MEG (Malaria Elimination Group), said: The UCSF Global Health Group and the Malaria Elimination Group are proud to join with The Lancet to launch this synthesis of the best information and research available on malaria elimination today. We hope that this Series raises awareness of the great progress that has been made in elimination, illuminates the many challenges that remain, and mobilizes the malaria community and malaria-endemic countries to continue shrinking the malaria map.

The authors explain that elimination has occurred when endemic transmission has been stopped and the risk of a return of the disease is minimal. To ensure that elimination prevails there needs to be serious, ongoing commitment. Otherwise the best that can be achieved is a state of "controlled low-endemic malaria", in which the malaria public health burden is no longer a major problem, but where transmission still happens, even if it does not come in from abroad.

Up to 1945, about 178 nations had endemic malaria. Since then 79 countries have eradicated the disease, including: UK, 1952, USA, 1952, Australia, 1970, Morocco, 2005 and Turkmenistan, 2010. Malaria is still endemic in 99 nations. 32 of them are expected to become controlled low-endemic countries with the aim of eventual elimination, while 67 are controlling the disease. The Malaria Map has been steadily shrinking over the last 150 years. Every single malaria eliminating country, 32 of them with a total population of over 2 billion people, are on the outer margins of the map. They consist of nations with all types of economies and climates, including Turkey, South Africa, Malaysia, Mexico, Iraq, China and Argentina. There are 66 nations that are still controlling malaria. They are all either in the tropics or very near to it, and include the majority of countries in sub-Saharan Africa, some parts of South America and a large chunk of Southeast Asia.

[Ushahidi and ESRI team to improve crisis mapping services](#)

ESRI has announced a partnership with [Ushahidi](#) that will improve the collection and use of crowd-sourced information during large-scale emergencies. The partnership enhances Ushahidi web platform with extensive GIS data and advanced analytic tools to provide access to humanitarian information for relief and response organizations that use GIS analysis and modeling. Ushahidi is a nonprofit organization that allows local



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observers to submit reports to the Ushahidi web platform using their mobile phones or the Internet during a crisis. ESRI is providing software, services, and training to support Ushahidi's web platform. The result is better information more readily accessible by decision makers and the public.

Both victims and witnesses of a crisis or disaster can request assistance or report conditions using text messaging capabilities from their personal phone or Internet-enabled device. These reports are collected, geo-referenced and then mapped on Ushahidi's web-based map. "Ushahidi has provided an invaluable information service during crisis events by supplying a social media platform to capture and communicate critical information for response and relief services," says Russ Johnson, director of [public safety solutions](#), ESRI. "ESRI wants to support these efforts by making available GIS tools that assist in analyzing, displaying, and publishing critical information on the Ushahidi platform." "Our strategic relationship with ESRI represents an important step forward for our combined user base," says Patrick Meier, director of crisis mapping at Ushahidi. "ESRI's technology will provide Ushahidi users with access to extensive GIS data and advanced analytical tools. ESRI users will also have the ability to contribute to Ushahidi mapping efforts in more seamless ways and use this data for further analysis."

Ushahidi, which is Swahili for "testimony" or "witness," first established itself by developing a website created in the aftermath of Kenya's disputed 2007 presidential election to collect eyewitness reports of violence sent in by e-mail and text messages to make maps. The free and open-source software platform developed for the site has since been improved and used for a number of events.

[Smart phones speed up Burundi food aid surveys](#)



UN WFP is piloting the use of smart phones in food assessment data collection. The smart phones are being introduced to help assess food needs in Burundi and other African states, speeding up data-collection and improving accuracy. Whereas World Food Programme monitors used to conduct surveys with paper forms, answers to key questions such as "How many meals a day are you eating?" "What do you use to cook?" and "How many people live in your household?" are now entered into Hewlett Packard iPAQ smartphones loaded with a specially

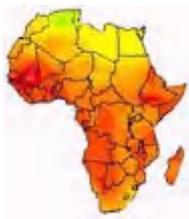
developed application. Each PDA (smart phone) costs about US\$200. With two devices in each of the 15 provinces, the cost of the initiative is about \$6,000, excluding the cost of training personnel. WFP helps more than 600,000 people in Burundi.

WFP Burundi is in the first phase of the project with information collected on a memory card and sent to the main office in Bujumbura by WFP or Burundian government vehicles. To make sure the devices are working properly, some staffers send the entire device. Other WFP staffers have started plugging the memory cards into their computers and sending the data by e-mail. Soon, staff in the field will begin transmitting their findings wirelessly with the country's new hi-speed 3G network. Neilson said the info can be sent using the older general packet radio service (GPRS). However, the 3G network makes it quicker and "easier to send larger files," WFP has also started putting the devices to use elsewhere in Africa, including in the Democratic Republic of the Congo and Mozambique.

[2010 Biodiversity indicators partnership](#)

This report presents many of the results, lessons learnt and recommendations from the *Biodiversity Indicators Capacity Strengthening in Africa* project, which assisted countries in eastern and southern Africa to develop national biodiversity indicators on a sustainable basis, utilizing existing data to address national priority issues. The project used a broad definition of biodiversity indicators as information tools to help summarize and simplify information on the status and threats to biodiversity, and to evaluate progress towards its conservation and sustainable use. Indicators are needed to help design and monitor national policies on biodiversity, the environment and sustainable development, as well as for reporting on international agreements such as the Convention on Biological Diversity and the Millennium Development Goals. The project worked with thirteen countries from the eastern and southern Africa regions, with the development of partnerships between government agencies, NGOs and academic bodies a key part of its strategy. National teams or task forces were formed to produce a small number of indicators. These national partnerships greatly improved access to data, analysis and communication. Through this practical work they built their technical and organizational capacity.

The implementation of the project was built around a series of three capacity building workshops over a twelve month period in each region. The formation of national teams and selection of priority topics requiring indicators were started at the first workshop in each region. The results of stakeholder consultations and



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initial data gathering were reported at the second workshops, and final results and lessons learnt were shared at the final regional workshops. UNEP-WCMC provided guidance and technical support during and between the workshops. The document provide examples of the indicators produced as a result of the project and designed as a means for sharing experiences and lessons learnt with biodiversity indicator developers across the globe. It concludes with key challenges and needs for future national indicator development identified by the project partners.

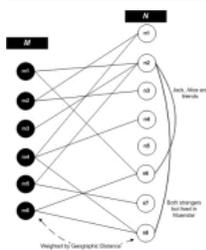
[Open Access Online Articles: Journal of Spatial Information Science \(JOSIS\)](#)

The Journal of Spatial Information Science (JOSIS) is an international, interdisciplinary, open-access journal dedicated to publishing high-quality, original research articles in spatial information science. The journal aims to publish research spanning the theoretical foundations of spatial and geographical information science, through computation with geospatial information, to technologies for geographical information use. JOSIS is run as a service to the geographic information science community, supported entirely through the efforts of volunteers, and does not aim to profit from the articles published in the journal, which are open access.

[Open Access Online Articles: Journal of Applied Meteorology and Climatology](#)

Applied meteorological research related to physical meteorology, weather modification, satellite meteorology, radar meteorology, boundary layer processes, air pollution meteorology (including dispersion and chemical processes), agricultural and forest meteorology, and applied meteorological numerical models. Also, applied climatology research related to the use of climate information in decision making, impact assessments, seasonal climate forecast applications and verification, climate risk and vulnerability, development of climate monitoring tools, urban and local climates, and climate as it relates to the environment and society.

[Can we trust information? - The case of volunteered geographic information](#)



Proceedings of the Workshop “Towards Digital Earth: Search, Discover and Share Geospatial Data 2010” at Future Internet Symposium, Berlin, Germany, September 20, 2010. “In this paper, the authors - Mohamed Bishr and Krzysztof Janowicz take a fresh look at the problem of information quality for user contributed content. They assert that the traditional quality criteria for assessing the quality of geographic information are difficult to apply to Volunteered Geographic Information. The notion of informational trust is introduced and linked to the established notion of interpersonal trust. They propose to use informational trust and reputation as proxy measures for information quality and outline the spatial and temporal dimensions of trust that have to be considered.”

Training Opportunities

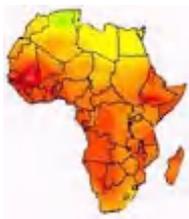
Have you signed up to receive [SDI-Africa Newsletter](#) notices? It only takes a minute, and then the GSDI Association can notify you when a new issue of the SDI-Africa newsletter is available, plus alert you to particular GSDI announcements (like a call for GSDI grants, or a call for papers for a GSDI 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.gsd.org.

[Skills Conference in Arusha - GIS and Distance](#), 29 Nov - 11 Dec 2010, Arusha, Tanzania

Registration is now open for a workshop in practical skills for ecologists to be held in Arusha, Tanzania.

- 29 Nov-1 Dec: Introduction to GIS (Paul Bessels, Uni. of Glasgow). Elements of GIS, creation of maps & integration of GPS data, spatial analysis. Focusing on QGIS (a free GIS package), this 3 day course will give practical skills in creating maps, understanding cartographic concepts, and basic analysis. Cost - \$100 for sponsored attendees, \$30 for unfunded students.
- 2 - 4 Dec: Repeat of above
- 6 - 8 Dec: Primer on Distance sampling (Len Thomas, Uni. of St. Andrews). Target audience: Any wildlife biologist who wants to design, collect or analyze distance sampling survey data. The emphasis of the workshop will be on how to design a good survey, how to collect good data and how to do preliminary



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analyses using pen and paper, a calculator and a computer spreadsheet. Complete beginners are very welcome. Cost - \$150

- 9 - 11 Dec: Distance sampling survey design and analysis (Len Thomas). Target audience: People who are familiar with the concepts covered on the previous workshop, and who want to analyze survey data using the program Distance.

Pre-requisites: Attendance at workshop 1 or familiarity with all of the concepts covered on that workshop - cost: \$150. The Course costs include: handouts; use of computer labs (though attendees are encouraged to bring laptops); and field trips, but not accommodation; meals; and travel expenses. Direct questions to ArushaSkillsConference@gmail.com or find more details at <http://www.tzcr.org/skills/> or contact Dassa Nkini, Managing Director, Tanzania Conservation Resource Centre, Arusha, Tanzania at crc.tanzania@gmail.com.

Formation Télédétection avec ERDAS IMAGINE, Dakar, du 13 au 17 Décembre 2010

Le Centre de Suivi Ecologique de Dakar en partenariat avec GEOSYSTEMS France, distributeur officiel des produits ERDAS en France et en Afrique francophone, sont heureux d'annoncer l'organisation d'une semaine de formation Télédétection avec ERDAS IMAGINE à Dakar du 13 au 17 Décembre 2010. L'objectif de cette formation est d'amener les participants à maîtriser les concepts théoriques de télédétection et les outils de traitements disponibles dans ERDAS IMAGINE Professional. Les principales fonctionnalités d'ERDAS IMAGINE seront abordées, telles que la manipulation d'images, les prétraitements, les corrections géométriques, le mosaïquage ainsi que des fonctions avancées de classification et d'analyse diachronique. La formation, d'une durée de 5 jours, sera délivrée en français par un formateur professionnel de GEOSYSTEMS France, agréé pour les formations ERDAS IMAGINE. Le formateur GEOSYSTEMS France sera assisté, pendant toute la durée de la formation, d'un expert en télédétection du CSE. Grâce à la présence de ces deux personnes hautement qualifiées en télédétection, les participants bénéficieront d'un encadrement personnalisé de haut niveau.

Le coût de la formation est de 550 000 CFA par personne. Les pauses café et le repas du midi, sont inclus dans le tarif. Les repas du soir et l'hébergement ne sont pas inclus (le CSE se propose cependant d'assister les personnes qui le souhaitent pour trouver un hébergement).

La formation aura lieu dans les locaux du CSE à Dakar (Sénégal), dans une salle climatisée et équipée de PC. Les participants qui le souhaitent pourront travailler sur leurs propres ordinateurs portables. Une version complète d'ERDAS IMAGINE 2010, valable 30 jours, sera fournie ainsi que des documents de formation. La date limite d'inscription est fixée au **26 Novembre 2010**.

Renseignements & Inscriptions: Centre de Suivi Ecologique (Dakar, Sénégal): M. Ousmane Bathiery - ousmane.bathiery@cse.sn, Tel: 221 33 825 80 66 (www.cse.sn); GEOSYSTEMS France (Montigny le Bretonneux, France): Mme Valérie Thebault - thebault@geosystems.fr, Tel: 33 1 78 94 76 85 (www.geosystems.fr).

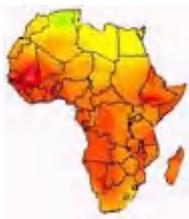
Sida's International Training Programme Sustainable Urban Water and Sanitation – Integrated Processes, Feb 2011 - Aug 2012, Sweden

The overall objective of the programme is to provide the participants with understanding and knowledge about the need for integrated approaches and the organisational and institutional changes that are necessary for a sustainable provision of water supply and sanitation services in urban areas.

Implementation of the various recommendations on water supply and sanitation that have come out of international conferences and meetings over the last 20 years has been extremely slow. Thus, there is an urgent need for change, and the training programme aims to provide the participants with tools for change management. Thereby, the programme will generate change processes that contribute to the development of sustainable systems for urban water supply and sanitation in the home countries of the participants. Contact: Deana Nannskog (email: Deana.Nannskog@education.lu.se). Closing date for application: 24 November, 2010.

Training Course: Climate change adaptation in agriculture and natural resources management, 28 February - 11 March 2011, in East Africa

The course is designed for mid-career professionals who are engaged at higher levels and deal with policy making either from the research side (as advisor), government side, or from civil society who aim to have a full understanding of climate change adaptation concepts, be able to effectively and meaningfully contribute to the debate on climate change adaptation, either in the policy process and/or in providing knowledge to the



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policy process. For details, contact: Terwisscha van Scheltinga (Catharien), Wageningen University at Catharien.Terwisscha@wur.nl or www.ess.wur.nl/UK/People/Catharien+Terwisscha+van+Scheltinga/, <http://portals.wi.wur.nl/climatechange>, www.genderandwater.org.

Free ESRI Courses

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

ESRI Eastern Africa Hands-on Training for GIS Professionals



The following courses are offered at the ESRI Authorized Learning Centre in Upper Hill, Nairobi, Kenya.

Fundamentals of ArcGIS Desktop

	Duration (Days)
• ArcGIS Desktop 1: Getting Started with GIS	3
• ArcGIS Desktop 2: Tools and Functionality	4
• ArcGIS Desktop 3: Workflows and Analysis	3
• Data Production and Editing with ArcGIS	
• Field Data Collection Using ArcPad and ArcGIS Desktop	3
• Building Geodatabases	4
• Data Production and Editing Techniques	4

Analysis with ArcGIS

• Performing Analysis with ArcGIS Desktop	4
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Cartography with ArcGIS

• Creating and Publishing Maps with ArcGIS	4
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Enterprise GIS

• Introduction to ArcGIS Server	3
• Introduction to the Multiuser Geodatabase	3
• Managing Editing Workflows in a Multiuser Geodatabase	4

Programming with ArcGIS

• Introduction to Programming ArcObjects using .NET	4
• Introduction to Geo-processing using Python	3

Added new courses focusing on ENVI: the Image Processing Software for processing and analyzing geospatial imagery.

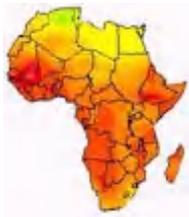
• Introduction to Remote Sensing with ENVI	3
• ENVI for GIS	3
• Exploring ENVI	5
• ENVI for Defense and Intelligence	4

Contact: ESRI Eastern Africa at: training@esri.co.ke, telephone: +254 20 2713630/1/2 or fax: +254 20 2713633.

ESRI South Africa course schedule for November – December 2010

Contact: Midrand: Queen Mofokeng, qmofokeng@esri-southafrica.com; Durban: Patricia van Schalkwyk, pvanschalkwyk@esri-southafrica.com; Port Elizabeth: Queen Mofokeng, qmofokeng@esri-southafrica.com; Cape Town: Kathi Wöhl, kwohl@esri-southafrica.com.

L'Ecole Régionale post-universitaire d'Aménagement et de gestion Intégrés des Forêts et Territoires tropicaux (ERAIFT) [Regional School on Integrated Management of Tropical Forests and Territories] – **Promotion : inscriptions ouvertes**, Kinshasa, République Démocratique du Congo. Le **cursus de l'ERAIFT** aboutit à l'obtention d'un Diplôme d'Etudes Supérieures Spécialisées (DESS). Ce diplôme est l'équivalent d'un Master du système « LMD » (Licence, Master, Doctorat) des Accords de Bologne. Il est reconnu par le Conseil Africain et Malgache pour l'Enseignement Supérieur (le CAMES). Le programme du DESS comprend 16 chaires dont l'enseignement s'étend sur une période de 12 mois. L'étudiant dispose ensuite de 6 mois pour rédiger son mémoire. Le contenu de ce dernier repose sur l'approche systémique, et s'inscrit dans le cadre de l'aménagement intégré du territoire, du développement humain, durable et écologiquement viable, de la lutte contre la pauvreté et de la gestion rationnelle de l'environnement. L'autre grade décerné



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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 2010, Ile-Ife, Nigeria



The [Regional Centre for Training in Aerospace Surveys \(RECTAS\)](http://www.rectas.org) 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.

ITC Education Brochure 2011-2012 online

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

Programme de Formation au CRTS 2010, Maroc

Le Centre Royal de Teledetection Spatiale est l'Institution Nationale responsable de l'utilisation, de la promotion et du développement de la teledetection spatiale au Maroc. Il est chargé de coordonner et de gérer les programmes nationaux de teledetection spatiale en partenariat avec les ministères, les universités et les opérateurs privés.

Funding Opportunities, Awards, Support

Scholarship Opportunities: Erasmus Mundus GEM (Geoinformation for Environmental Management and Modeling) course 2011

There will be EU Erasmus Mundus scholarships available for both non-EU and EU students for the academic year starting in September 2011. For exceptional EU candidates, there is limited number of scholarships available that pay full-fees.

Candidates who wish to apply for scholarships (Netherlands Fellowship Program, Erasmus Mundus External Windows, and Worldbank etc) may have to observe early deadlines and early application is recommended. The following documents are required to support your application and must be uploaded on your personal homepage:

- Certified photocopies of diplomas, certificates, degrees and course records
- A copy of the results of an English language test
- Motivation for applying for the programme
- Description of (provisional) research topic.

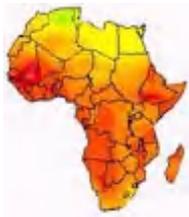
Applications are submitted through the [registration database](#) or [online registration](#). Applications from full-fee paying students must be received before 1 June 2011. For further information, contact: info@gem-msc.org.

World Wide Fund for Nature (WWF) - Prince Bernhard Study Grants 2011

WWF announces the 2011 Prince Bernhard Scholarships to fund mid-career training of individuals working in conservation or disciplines directly relevant to conservation. Eligibility extends to nationals from Africa (including Madagascar); Asia and Pacific; Latin America and Caribbean; Eastern Europe; and the Middle East. WWF gives preference to applicants seeking support for studies in their own country or region. Maximum grant amount is CHF 10 thousand. Applications (English, French, and Spanish) are due before 11 January 2011.

Danish Ministry of Foreign Affairs with the Danida Fellowship Center - Development Research 2011

The Government of Denmark invites research proposals for development research in three thematic areas. The themes include climate, energy, and sustainable natural resources. They also include economic growth related to property rights, agricultural productivity, and other factors. Priority is for research projects submitted by Danish institutions in partnership with organizations in the South, particularly in Denmark's partner countries (in 2011: Burkina Faso, Ethiopia, Kenya, Somalia, Sudan, Tanzania, Uganda, Zambia, Zimbabwe, Afghanistan, Bhutan, Myanmar, Pakistan, Palestinian Authority, Vietnam). Pre-applications for larger strategic projects are due 8 December 2010; applications from PhDs and post-docs are due 11 February 2011.



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[UNESCO - Research Grants for Development](#)

With funding from the Government of Japan (Keizo Obuchi Research Fellowships Program), UNESCO offers 20 fellowships for post-graduate research to deserving candidates from developing countries. The four thematic areas include Environment - with particular attention to water sciences, Intercultural Dialogue; Information and Communication Technologies; and Peaceful conflict resolution. No other research topics will be considered. Applicants must be under age 40 and hold a masters degree.

Applicants, a maximum of two from each applying National Commission, must meet the criteria:

- Candidates under this programme must be post-graduate researchers, already holding either an M.A. or MSc. degree (or equivalent) and wishing to pursue research work abroad (preferably in their own region) with a view to enhancing knowledge in one of the four specific fields. Thus, those who are in the process of completing their Master's degree must have completed it PRIOR to taking up their Fellowship.
- Candidates must be persons of high intellectual promise who may be expected to make significant contributions to their country on return.
- Candidates must be no more than 40 years of age. Thus, applicants born before 1 January 1971 will not be considered under the Programme.
- The selected Fellow must carry out the research under the auspices of an academic supervisor in a host institution. Confirmation of acceptance from the academic supervisor is imperative.

Applications are particularly welcomed from women, the least-developed countries, and Palestinian researchers. See the announcement letter in: [English](#), [French](#), [Spanish](#) and [Arabic](#)). Deadline for application submission: 7 January 2011.

[Call for applications for 2011 MAB Young Scientists Awards, including special awards supported by the Austrian Committee](#)

UNESCO's Man and the Biosphere (MAB) program invite applications for its 2011 Young Scientists Awards. In 2011, MAB will make ten regular awards and two special awards supported by MAB-Austria. Priority is for projects carried out in the world's biosphere reserves. Grants are up to US\$5 thousand. Please read the related [circular letter](#). Applications can be submitted in French ([Word](#) / [Pdf](#)) or English ([Word](#) / [Pdf](#)) before 15 December 2010.

[Acumen Fund - Fellows Program 2012](#)

The Acumen Global Fellows Program aims to support next-generation leaders to help create solutions to global poverty. During the past five years, Acumen has funded 44 individuals from 18 countries. Several have focused on agriculture, renewable energy, and water supply. Fellows are assigned with Acumen's partner organizations in India, Pakistan, Kenya, Uganda, Tanzania, and China. Applications for the Class of 2012 are open through 15 November 2010.

[Action for Nature - Young Eco-Hero Awards 2011](#)

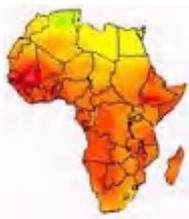
This program honors the work of young people between the ages of 8 and 16 who have completed successful projects in environmental advocacy, environmental health, research, or protection of the natural world. The selected individuals are awarded a cash prize and certificate, as well as public recognition. The annual competition is open internationally. Application deadline: 28 February 2011.

[Schlumberger Foundation - Funding for Women in PhD and Post-Doctoral Studies 2011](#)

Schlumberger Foundation's Faculty of the Future program supports women in developing and emerging economies to pursue PhD and post-doctoral studies at the international level. Grants range from US\$25 thousand to US\$50 thousand per year, with a maximum of US\$40 thousand for postdoctoral studies. Grants are in the physical sciences, engineering, and related fields - including past grants in subjects such as ecology and environment. Closing date for submissions: 30 November 2010.

[Ecosystem Services for Poverty Alleviation \(ESPA\) - Call for Expressions of Interest](#)

ESPA is a program of the UK government to ensure that ecosystems in developing countries contribute to poverty reduction and promote inclusive and sustainable growth. ESPA announces a call for research projects of between £500 thousand and £4 million (exceptionally larger) for project duration of three to five years. The geographical scope includes Amazonia, China, South Asia, and Sub-Saharan Africa. Themes are water, forests, coasts, ecosystem health services, biodiversity, and political economy. ESPA encourages



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applications from consortia of North-South and South-South partners. Expressions of interest are due: 8 December 2010.

Danone - Proposals on "Wet Carbon"

The Danone wet carbon partnership is an initiative of the Ramsar Secretariat, World Conservation Union (IUCN), and Danone Company. The partners seek "wet carbon" projects that can deliver large-scale carbon offsets. Projects should combine wetlands conservation or restoration, local socio-economic benefits, and carbon credits. Applicants send a project idea note to Danone. Download the [Guidance for wet carbon project proposals](#) and supporting materials:

- [Climate, community & biodiversity standards \(2nd edition\)](#)
- [Guidelines for completing the CDM A/R forms](#)
- [Voluntary carbon standard 2007.1](#)
- [Ramsar principles and guidelines for wetland restoration](#)
- [Expert workshop on wet carbon \(Nov 2009\)](#)
- [The management of natural coastal carbon sinks](#)
- [Side-event at CBD COP10 \(Oct 2010\)](#)

Manual for social impact assessment of land-based carbon projects:

- [Part I - Core guidance for project proponents](#)
- [Part II - Toolbox of methods and support materials](#)

Deadline for submissions: 31 December 2010.

French Global Environment Facility (FFEM) - Conservation in Africa

The Small-Scale Initiatives Program makes grants for conservation in West Africa, Central Africa, Madagascar, and Mozambique. The eligible countries are Benin, Burkina Faso, Cape Verde, Côte d'Ivoire, The Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, Chad, Togo, Cameroon, Central African Republic, Republic of The Congo, DRC, Gabon, Equatorial Guinea, Sao Tome-and-Principe, Rwanda and Burundi. Grants are up to 50 thousand euros per project. Priority will be given to French speaking countries. About 50 projects are expected to be funded during the 2 years of the program, 8 of which could be implemented in non French-speaking countries.

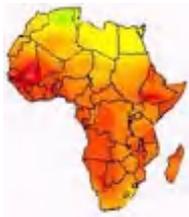
The eligible themes concern biodiversity protection and fight against climate change, along with the improvement of local populations living standards:

- Ecosystems and habitats protection and restoration; Rare or endangered endemic species protection, inside or outside protected areas;
- Rare resources sustainable management and valorisation with an easy-to-check impact on the protection of biodiversity, in particular local and national resources governance, marketing channels, non-timber forest production, ecotourism, game reserves, firewood, valorisation of peripheral zones of protected areas, etc;
- Activities improving the population rights concerning management of natural resources;
- Ecological and fair trade certification in favour of biodiversity ;
- Management and control on fisheries, based or not on traditional rules, implemented by groups of fishermen in areas they can control;
- The "Clean Development Mechanism" applied to small projects and innovative devices for Reducing Emissions from Deforestation and Degradation (REDD) aiming at improving the small organizations access to carbon credit;
- Empowerment and the structuration of small and medium-sized companies working on the electrification of isolated areas using alternative methods (biogas, valorisation of farm wastes waste);
- Valorisation of wastes from energy production or the sale of carbon credits ;
- Natural forest regeneration without tree planting could also be supported in some case ;
- Training/empowerment of NGOs and local populations on climate change issues in the framework of projects funded by other donors.

Download the application forms at www.ffem.fr. Submit documents by email to ppi@iucn.fr. For Western Africa countries applications must also be sent to ppi@iucn.org. Application deadline: 5 February 2011.

Conservation Leadership Program (CLP) -2011 Conservation Awards

The CLP makes grants to young conservationists in Africa, Asia, Eastern and South-eastern Europe, the Middle East, the Pacific, Latin America, and the Caribbean. For the 2011 funding cycle, the CLP offers:



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- [Future Conservationist Awards](#) (up to US \$12,500 each)
- [Conservation Follow-up Awards](#) (up to US \$25,000 each) - available only to previous CLP Future Conservationist Award winners
- [Conservation Leadership Awards](#) (up to US \$50,000 each) - available only to previous CLP Follow-up Award winners

Successful applicants will: 1) Develop the knowledge, skills and abilities of team members; 2) Implement high-priority conservation projects combining research and action; and 3) Contribute to the long-term success of local conservation efforts. The deadline for applications: 15 November 2010.

[German Government - International Climate Initiative 2011](#)

Germany's BMU (Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety) funds the International Climate Initiative (ICI) to support international projects on climate change mitigation, adaptation, and biodiversity projects with climate relevance. Funding in the ICI is €120 million per year, and the average multi-year grant is €2 million. Projects that target carbon sinks with high levels of biodiversity (e.g., Amazon region, Congo Basin and South-East Asia) will receive support. Project outlines are invited from implementing organizations of German development cooperation; non-governmental and governmental organizations; universities and research institutes; private-sector companies; multilateral development banks; and organizations and programs of the United Nations. Closing date for project outlines: 31 December 2010.

[Alexander von Humboldt Foundation - Climate Change Research](#)

The Alexander von Humboldt Foundation supports International Climate Protection Fellowships for one-year research projects in Germany on climate protection and resource conservation. The program is open to prospective future leaders in academia, business, and administration in non-European threshold and developing countries. The Foundation aims to make 20 grants per year. Deadline for applications in this current cycle: 15 December 2010.

Employment Opportunities

[L'élaboration d'une cartographie et analyse retrospective des partenariats et de la mobilisation des ressources des agences du Systeme des Nations Unies dans le cadre "Unis dans l'Action" au Mali, Bamako](#)

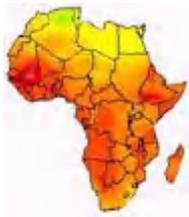
L'objectif global est de créer un partenariat plus stratégique du SNU autour des plans nationaux de réduction de la pauvreté et à l'atteinte des OMD afin d'atteindre de meilleurs résultats en faveur des populations les plus défavorisés au Mali.

Objectifs spécifiques:

- Créer une meilleure compréhension et une vue d'ensemble des partenariats et de la mobilisation des ressources des différentes agences du SNU au Mali vis-à-vis des nouveaux défis de l'efficacité et l'efficacité globale de l'Aide Public au Mali.
- Renforcer le positionnement stratégique, et faire ressortir la valeur ajoutée et les avantages comparatifs de chacune des agences en vue d'une meilleure cohérence des actions du SNU dans le cadre de la SCAP et du processus
- Développer une vision commune sur les partenariats stratégiques et la mobilisation des ressources dans le cadre
- Taches du consultant National : Sous la supervision directe du Consultant International:
- Elaborer la méthodologie, les outils et le plan de travail;
- Collecter, traiter et analyser les données recueillies auprès des agences du SNU;
- Assurer une cohérence dans les données reçues et les statistiques au niveau de la SCAP et des Services Techniques;
- Rédiger l'étude sur la base des informations recueillies et de leur analyse, en conformité avec les attentes exprimées dans les présents Termes de Référence;
- Organiser un atelier de validation de l'étude et de réflexion stratégique sur la vision commune des partenariats et de la mobilisation des ressources dans le cadre avec le Secrétariat pour l'Harmonisation de l'Aide (SHA) et le Ministère des Affaires Etrangères et de la Coopération International (DGCI).

Compétences

- Excellentes capacités rédactionnelles en français;
- Connaissance en informatique particulièrement en Word, Excel et Power point;



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- Required Skills and Experience
- Formation supérieure, de préférence en sciences sociales ou équivalent;
- Au moins cinq ans d'expérience dans des organismes de développement. Une expérience de travail avec le SNU sera un atout;
- Très bonne connaissance de l'architecture de l'aide au développement au Mali;
- Connaissance significative et expérience des concepts et approches d'évaluation et de planification (gestion axée sur les résultats) ;
- Excellentes capacités rédactionnelles en français;
- Connaissance en informatique particulièrement en Word, Excel et Power point;

UNDP is committed to achieving workforce diversity in terms of gender, nationality and culture. Individuals from minority groups, indigenous groups and persons with disabilities are equally encouraged to apply. Application closing date: 15 November 2010.

[ILRI vacancy: Research assistant](#), Nairobi, Kenya

ILRI seeks to recruit a Research Assistant to join a small team of professionals working on the Regional Strategic Analysis and Knowledge Support System (ReSAKSS) initiative. The objective of ReSAKSS is to provide data, information and knowledge to stakeholders in order to improve the formulation, implementation, and monitoring and evaluation of agricultural and rural development strategies in Africa. The successful candidate will work with the ReSAKSS node based at ILRI-Nairobi which is set up to serve the COMESA region in the implementation of the Comprehensive African Agriculture Development Program (CAADP).

Key Responsibilities:

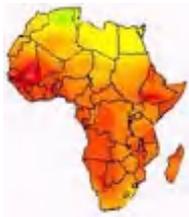
- Contribute to ReSAKSS' analytical work based on regional priorities in agriculture and rural development. Areas of research may include regional trade analysis, food security research, agricultural investment analysis, agricultural investment modeling and other related areas
- Synthesis of studies and literature around topical issues affecting agriculture and rural development in the region to generate policy relevant messages.
- Participate in the communication of ReSAKSS' work, e.g. through preparation of ReSAKSS publications such as: working papers, policy briefs, technical reports, journal publications, conference papers, posters, brochures and presentations at policy conferences.
- Contributing to the capacity building component of ReSAKSS including organizing and implementing policy relevant training for ReSAKSS' stakeholders.
- Contribution to the Monitoring and Evaluation of the CAADP indicators in the COMESA region especially tracking changes in volume and value of intra-regional trade in staple commodities in the COMESA region.

Requirements: A Master's degree in Agricultural Economics, Economics or other related field with application to Agriculture and Development; Minimum 3 years relevant post Masters' work experience; Experience in econometrics and other forms of quantitative analysis, demonstrated in appropriate written outputs; conducting literature searches and writing professional papers; working in multi-disciplinary and multi-cultural teams in a developing country setting; Knowledge and experience in agricultural and rural development issues in Sub Saharan Africa; Applied knowledge of quantitative analytical methods; proven experience in database management and analyzing large datasets to answer analytical questions. Submit application to: recruit-ilri-Ken@cgiar.org by 16 November 2010.

[Research Technician](#), Nairobi, Kenya

ILRI seeks to recruit a Research Technician specialized in monitoring and evaluation and impact assessment to work on a range of Research for Development (R4D) projects.

- Under the supervision of the M&E scientist, design and implement monitoring and evaluation systems /protocols for major R4D projects, together with partners within and outside of ILRI.
- Organize, manage and train project teams to collect, clean, manage and analyze monitoring and evaluation data.
- Contribute to the analysis of baseline, M&E and impact assessment data in ILRI projects using qualitative and quantitative methods.
- Develop, test and implement participatory approaches for monitoring and evaluation at community, project and organizational level.
- Work with and strengthen the capacity of partners in research, development and extension organizations in Participatory Monitoring and Evaluation, using both formal and experiential learning methods.



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- Contribute to the development and use of livestock, poverty and gender indicators for evaluating the outcomes and impacts of livestock related interventions, technologies and policies.
- Contribute to the production of publications including M&E reports, annual reports, policy briefs, journal papers and other scientific publications in collaboration with scientists and other Research staff in ILRI.

Requirements

- A Masters degree in the social sciences such as agriculture, economics, rural sociology, development studies, project management, or other relevant field
- Minimum 3 years experience working on monitoring and evaluation in a research or development organization
- Knowledge and experience with qualitative and quantitative monitoring and evaluation and impact assessment methods,
- Experience in data collection, management and analysis

This is a Nationally Recruited Staff (NRS) position based at ILRI's Nairobi campus and is open to Kenyan nationals only. The position is on a 2 year contract renewable, based on performance and availability of funds. Applications addressed to the Human Resources Director, a cover letter, curriculum vitae and the names and addresses (including telephone and email) of three referees to: recruit-ilri-Ken@cgiar.org. Deadline: 4 November 2010.

[MDGs and Water Management Intern- FSD](#), Uganda - International

As an FSD Intern you will:

- Work side-by-side with a Community-Based Organization specializing in one more of the following development sectors: health, youth and education, women's empowerment, microfinance, human rights, community development and/or environmental issues.
- Receive intensive training in skills essential to sustainable development, such as: community asset mapping, needs assessments, collaborative project design, grant writing, and project monitoring and evaluation.
- Gain grant writing and project management experience through designing and implementing a community-driven development project in partnership with your host organization.
- Access the FSD Alumni Network upon your return home to connect with like-minded individuals who help one another to reach their academic and professional goals through networking and regional events. FSD Alumni have won internationally renowned scholarships, studied at prestigious graduate schools, worked for prominent international development organizations, and have even started their own grassroots organizations.

Recent interns in have worked to ensure environmental sustainability in Uganda. Closing date: 1 Dec 2010.

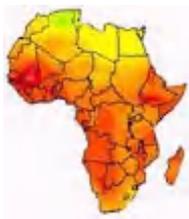
[Information & Analysis Manager NSP](#), Nairobi, Kenya

The Information and Analysis Manager at [Danish Refugee Council \(DRC\)](#) in Kenya is a senior and key person who will be responsible for the Information and Analysis component part of the response component of NSP. The position manages the Information and Analysis team (2 Regional Operation Specialist Analysts, 8 Field Operation Specialist, and 1 Database Specialist). The purpose of this position is to organize relevant collection of information and propose high quality and added value security and geopolitical analysis and briefs to NGOs operating in Somalia; Support NGOs operating in Somalia during crisis management.

The incumbent shall be responsible for the management of the Information and Analysis team, with a clear understanding of the pressures associated with operating in hostile environments (recruitment, appraisal, work plan, authorization of movement, missions' orders, leave request disciplinary measures etc.), capacity building of the Information and Analysis team, logistics and financial needs of the Information and Analysis team in link with the Senior Administration and Finance Officer.

Qualifications & Experience

- University degree, preferably Masters in Journalism, Human Rights, International Law, Political Sciences or related field;
- Minimum of 5 years of working experience in an senior position within NGOs / UN, particularly within the field of security, information management, editing, and analyzing context; * Minimum of 2 years of working experience in a management position
- Minimum of 3 years of living, working and operating in hostile environments.
- Proven experience in high quality production of reports and analysis
- Proven experience in development and maintenance of multi-stakeholders networks



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- Proven in depth knowledge of the Somali context

Contact NSP Program Manager Emmanuel Rinck at: emmanuel@npsomalia.org for further information on the programme and the position. Submit updated CV and cover letter explaining the motivation and suitability for the post via the online-application form on www.drc.dk. Application Deadline: 6. November, 2010.

Other

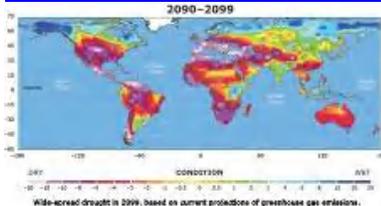
[What is the Geospatial Community doing to put clean water in more places around the world?](#)

Water is valuable, but clean water that people can drink has greater value. Some regions have an abundance of clean water, and others do not have a geographic factor. In other places pressure on natural ecosystems that generate water are placing great stress on ecosystems, often overwhelming them. The production of clean water is a result of the protection and stewardship of natural ecosystems, but also the result of efficient and effective management. And, on that basis geospatial technologies have a role to play.

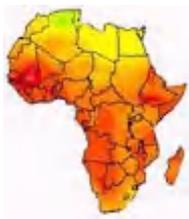
The basic water cycle leads directly to our understanding of water supply and the development of geospatial technologies for ascertaining its process locations, size and extents, and the frequency and durations at which water phenomena take place. Satellite imagery plays a vital role in locating and observing the changing environments where water is found. Support has been provided to a wide variety of earth-system research that often includes water related understanding. The idea behind such support is to evaluate natural environments with a view to conservation and better management of water resources. Alternatively, the establishment of new forested environments (or conservation of existing ones) that evolves from the work of REDD also seeks to create and maintain consistent water supplies. The [Concept and Reality of Ecosystem Services](#) is also based upon establishing economic values that are derived from ecosystems. These are not mere whims for assigning values to environments, they establish realistic appraisals of what ecosystems contribute toward the fabric of communities, nourishing the places people live and work without having to resort to more expensive alternatives – often at deteriorating accessibility.

Geospatial professionals hold the key to uncovering these values through the use and application of geospatial technologies that establish a better understanding and management of the basic water cycle. Field technologies involving GNSS are also used to monitor [atmospheric water](#) as well as [onsite water management system](#) in utility maintenance and management. Other technologies connected to geospatial applications may include [climate and meteorological systems, data loggers and sensors](#) and [connected, standardized servers](#). The geospatial community is highly connected to the production, maintenance and distribution of clean water. This does not start at the water tap, but extends all the way back to the natural landscape and a wide and varied understanding of the water cycle throughout the environment. It is important that the geospatial community begin to understand the concept of ecological services. Through evaluation of natural systems for economic benefits comes the realisation that emergency response, disaster and relief (and costs) are the flipside of failing or ineffective infrastructure that does not deliver.

[Drought under global warming: a review](#)



This article reviews recent literature on drought of the last millennium, followed by an update on global aridity changes from 1950 to 2008. Projected future aridity is presented based on recent studies and our analysis of model simulations. Dry periods lasting for years to decades have occurred many times during the last millennium, for example, North America, West Africa, and East Asia. These droughts were likely triggered by anomalous tropical sea surface temperatures (SSTs), with La Niña-like SST anomalies leading to drought in North America, and El-Niño-like SSTs causing drought in East China. Over Africa, the southward shift of the warmest SSTs in the Atlantic and warming in the Indian Ocean are responsible for the recent Sahel droughts. Local feedbacks may enhance and prolong drought. Global aridity has increased substantially since the 1970s due to recent drying over Africa, southern Europe, East and South Asia, and eastern Australia. Although El Niño-Southern Oscillation (ENSO), tropical Atlantic SSTs, and Asian monsoons have played a large role in the recent drying, recent warming has increased atmospheric moisture demand and likely altered atmospheric circulation patterns, both contributing to the drying. Climate models project increased aridity in the 21st century over most of Africa, southern Europe and the Middle East, most of the Americas, Australia, and Southeast Asia. Regions like the United States have avoided prolonged droughts during the last 50 years due to natural climate variations, but might see persistent

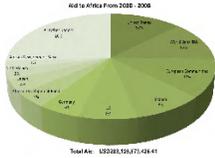


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droughts in the next 20–50 years. Future efforts to predict drought will depend on models' ability to predict tropical SSTs. Further resources: [Drought May Threaten Much of Globe within Decades](#).

Environmental Security - [International Development Assistance for Climate Change Adaptation in Africa: The Aid Scramble](#)



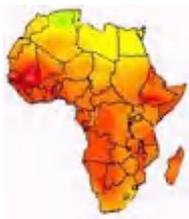
In the past several years there has been a great deal of energy devoted to mobilizing aid agencies to address climate change challenges in the developing world. Predominant multilateral development organizations, such as the World Bank and even the International Monetary Fund (IMF), have aggressively positioned themselves to manage a growing number of special adaptation and mitigation funds, such as the Climate Investment Funds and the proposed Copenhagen Green Fund. Simultaneously, there

has been a proliferation of reports and strategy papers drawing attention to the complex relationship between development and climate change, the need for better climate change screening and costing tools, and the need for adaptation mainstreaming in existing aid policies and projects.

The increased focus on climate change and development is matched by widely espoused commitments to ratchet up overall levels of official development assistance for climate change adaptation, and to enhance donor coordination and harmonization in all areas of climate change financing. In the run-up to the Copenhagen Conference in December 2009, the leading multilateral banks and the IMF issued a joint statement, pledging to fast-track USD30 billion in climate change financing to the developing world in 2010-2012. At the same time, the advanced industrialized countries promised in the resulting Copenhagen Accords to mobilize USD100 billion per year by 2020. Whether or not these new climate finance promises are sufficient to meet needs is a widely disputed issue, subject to scientific uncertainty and political ambiguity.

[UNESCO introduces astronomy in Ugandan's schools](#)

The United Nations Educational, Scientific and Cultural Organisation (UNESCO) have launched the distribution of 100 telescopes to schools in Uganda. The telescopes codenamed 'Galileoscope' are being distributed as a way of promoting scientific innovation and making astronomy one of the science subjects in secondary schools and higher institutions of learning. "This small easy to use instrument enables us to see the celestial wonders that Galileo saw over 400 years ago," Augustine Omare-Okurut, the UNESCO secretary general said, while handing them over to the representatives of the schools, Unyama National Teachers College and Gulu University. The distribution was launched during the opening of the science and technology week at Kaunda grounds in Gulu recently. Okurut noted that one of the outputs of the International Year of Astronomy was the collaboration between UNESCO and the International Astronomy Union under the theme 'the universe, yours to discover'. In 2009, this collaboration led to astronomers, optical engineers and science educators to develop high quality low cost telescopes called 'Galileoscope' Astronomy is one of oldest natural sciences that deal with the study of celestial objects (such as stars, planets, comets, nebulae, star clusters and galaxies). This phenomenon originates outside the Earth's atmosphere. It is concerned with evolution, physics, chemistry, meteorology, and motion of celestial objects, as well as the formation and development of the universe. In Uganda, astronomy is a new subject that UNESCO is supporting through Mbarara University and some selected secondary schools in its pursuit to promote science in its member states. Connie Kateba, the director of the National Curriculum Development Centre (NCDC), said astronomy is not an independent subject among those examinable by the Uganda National Examinations Board (UNEB) at the moment. "It is introduced as a foundation of astronomy within the physics subject, taught from S.2 to S.4 at O' level as well as within the physics subject at A' level". Kateba noted that NCDC has to sit with UNESCO and see how they can develop astronomy as an independent subject. "We develop the curriculum basing on information from the society," she said.



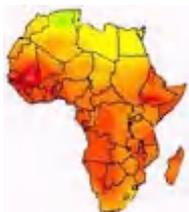
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Items newly added to this listing of events since the last SDI-Africa issue are marked * **NEW** *

Conferences, Events

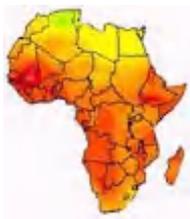
Date	Location	Event
November 2010		
1-7 November 2010	Hamburg University	3rd worldwide online climate conference CLIMATE 2010/KLIMA 2010 Contact: info@klima2010.net .
2-3 November 2010	Cairo, Egypt	Fifth ITU Symposium on ICTs and the Environment and Climate Change Contact: Cristina Bueti at info@igf2010.it .
3-5 November 2010	Cape Town, South Africa	4th International Development Informatics Association Conference: IDIA 2010
8-11 November 2010	Sede Boqer Campus, Israel	3rd International Conference on Drylands, Deserts and Desertification Contact: Dorit Korine, desertification@bgu.ac.il .
8-11 November 2010	Anchorage, Alaska	Ecosystems 2010: Global Progress on Ecosystem-based Fisheries Management
8-11 November 2010	Sede Boqer Campus, Israel	Third International Conference on Drylands, Deserts and Desertification Contact: Dorit at desertification@bgu.ac.il .
8-12 November 2010	Hulshort, The Netherlands	Dynamic Interlinkages between Social and Ecosystem Changes: Towards a Europe Africa Partnership
10-12 November 2010	Wageningen, Netherlands	Scaling and Governance Conference 2010 "Towards a New Knowledge for Scale Sensitive Governance of Complex Systems."
11-12 November 2010	Mombasa, Kenya	FIG Africa Task Force Workshop . Organised by FIG Africa Task Force.
11-12 November 2010	Groningen, The Netherlands	1st International UrbanFlood Workshop on Dike Monitoring and Flood Safety 2010 - Safer dikes are not only stronger but also smarter dikes: Sensing; ICT; Modelling; Trials.
19-21 November 2010	Munyonyo, Kampala Uganda	2010 Pilot International Conference on Global Sustainable Development . Theme: Climate Change, A challenge to Businesses in the 21 st Century. Abstract deadline: 30 May 2010.
22-25 November 2010	Djibouti, Republic of Djibouti	3rd East African Rift GeoThermal Conference (ARGE-C3 2010) - Exploring and Harnessing Renewable and Promising GeoThermal Energy.
22-26 November, 2010 * NEW *	Addis Ababa, Ethiopia	3rd Africa Water Week
23-25 November 2010	Cape Town, South Africa	Map Africa 2010
24 November 2010	Venice, Italy	ICGSE 2010: International Conference on Geological Sciences and Engineering
24-26 November 2010	London, UK,	Invitation: expressions of interest to attend the "Commonwealth Climate Change Communication Conference" (C5) ,
29 November - 3 December 2010	Tunis, Tunisia	5th Session of the International Conference Geotunis 2010 Theme: The use of GIS and remote sensing for sustainable development. Contact: atigeo_num@yahoo.fr .
22-24 November 2010	Cape Town, South Africa	Leadership & Management Studies in Sub-Sahara Africa 2010 Conference
30 Nov - 2 Dec 2010 * NEW *	Nairobi, Kenya	ENDELEO Workshop . Contact Flore Devriendt at Flore.Devriendt@UGent.be or Josefien Delrue at Josefien.Delrue@Vito.be .
December 2010		



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4-5 December 2010	Cancun, Mexico	World Climate Summit
5-7 December 2010	Riyadh, Saudi Arabia	4th International Conference on Water Resources and Arid Environments (ICWRAE 2010) - Water Resources; Water Conservation; Arid Environments; Utilization of New Technologies.
5-9 December 2010	Bielefeld, Germany	Environmental Degradation and Conflict: From Vulnerabilities to Capabilities , Deadline for application: 15 August 2010.
13-16 December 2010	Abu Dhabi	Eye on Earth Summit
14-16 December 2010	Benghazi, Libya	International Arab Conference on Information Technology (ACIT 2000) , Deadline for paper submission: 30 June 2010.
2011		
1 January-31 December 2011	TBA	International Year of Forests, 2011
8-14 January 2011	Johannesburg, South Africa	23rd Colloquium of African Geology
10-14 January 2011	Hyderabad, India	International Forestry Resources and Institutions panels for the 13th Biennial Conference of the International Association for the Study of the Commons (IASC)
1 January - 31 December 2011	Worldwide	International Year of Forests 2011
18-21 January 2011	Hyderabad, India	Map World Forum 2011
21-25 February 2011	Nairobi, Kenya	26th Session of the UNEP Governing Council/Global Ministerial Environment Forum
26- 28 February 2011	Singapore, Singapore	2010 3rd IEEE International Conference on Signal Acquisition and Processing (ICSAP 2011)
6- 8 April 2011	Stellenbosch, South Africa	4th IUPAP International Conference on Women in Physics
10-15 April 2011	Sydney, Australia	34th International Symposium on Remote Sensing of Environment (ISRSE2011) Contact: Ian Dowman, idowman@cege.ucl.ac.uk.
18- 21 April 2011	Exeter, UK	8th International Symposium on Weather Radar and Hydrology (WRaH 2011) - User applications of weather radar for flood forecasting and water management
9-13 May 2011	Sun City, South Africa	5th International Wildland Fire Conference (WildFire 2011) Contact: info@wildfire2011.org.
18-22 May 2011	Marrakech, Morocco	FIG Working Week & XXXIV General Assembly Contact: FIG Office, fig@fig.net.
20 - 22 May 2011	Agadir	Climate Change, Agri-Food, Fisheries, and Ecosystems: Reinventing Research, Innovation, and Policy Agendas for an Environmentally and Socially-Balanced Growth , Deadline for abstract/proposal: October 15, 2010. Contact: Dr. Mohamed Behnassi at behnassi@gmail.com.
31 May - 2 June 2011 * NEW *	Capetown, South Africa	AfricaGEO2011
20- 25 March 2011	Cape Town, South Africa	2011 African Conference on Software Engineering and Applied Computing
18-22 May 2011	Marrakech, Morocco	Bridging the Gap between Cultures . FIG Working Week and General Assembly.
22- 26 May 2011	California, United States	World Environmental and Water Resources Congress , Deadline for abstracts/proposals: 7 September 2010.
3-8 July 2011	Paris, France	25th International Cartography Conference (ICC 2011)



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22-26 August 2011	Wellington, New Zealand	5th International Symposium on GIS/Spatial Analyses in Fishery and Aquatic Sciences.
4 - 8 September 2011	Cape Town, South Africa	The 6th Science Centre World Congress
10-21 October 2011	Changwon, Korea	UNCCD COP 10 , Contact: UNCCD Secretariat at secretariat@unccd.int .
October 2011	Cairo, Egypt	AfricaGIS2011 Conference
28 November - 9 December 2011	South Africa	17th Conference of the Parties to the UNFCCC and 7th Meeting of the Parties to the Kyoto Protocol Contact: UNFCCC Secretariat, secretariat@unfccc.int .
May 2012 * NEW *	Quebec City, Canada	The GSDI 13 Conference
8-12 July 2012	San Diego, California USA	ESRI User Conference
8-12 July 2013	San Diego, USA	ESRI International User Conference

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