Spatial Data Infrastructure – Africa Newsletter

GSDI
Global Spatial Data Infrastructure

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

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

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

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

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

Input to this Issue

Thank you to Kate Lance, NASA/SERVIR-Africa (USA), Hussein Farah, RCMRD (Kenya); Andy Tatem, University of Florida (USA); Agebremariam, UNECA (Ethiopia); Monica Ebele Idinoba, African Union Commission (Ethiopia); Karen Levoleger, Kadastre (Netherlands) and Richard Munang, United Nations Environment Programme (Kenya) for their contributions to this issue of the newsletter.

SDI News, Links, Papers, Presentations

Free membership by the GSDI Association
The GSDI Association is offering free organisation memberships to government agencies in developing nations. Benefits of membership are available at http://memberservices.gsdi.org/files/?artifact_id=846. Qualifications for the GSDI Association free full membership include:
- Determine whether the national mapping, land administration, natural resource, or similar agency that is developing SDI capabilities is in a low or very-low income nation (http://www.gsdi.org/RankingTable).
- An authorised individual for the agency should register in the Geographic Information Knowledge Network at http://giknet.org.

After establishing an account, login and create an agency profile (See My Submissions and click on Enter Profile for Government Agency) After the agency profile exists, click Report SDI Implementation Experience and answer the questions. After completing the forms, fill out the GSDI Full Membership Application for the agency at http://www.gsdi.org/fullmemshp#D. Upon acceptance, the agency will be listed at
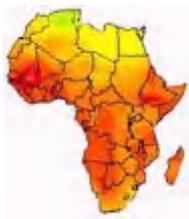
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African statisticians resolve to improve record

African countries and development partners are advocating for the improvement of the systems that capture births, deaths and causes of death among their populations, especially the causes of death among women and children, to improve human rights and assist in proper planning and allocation of resources. Statisticians representing all African countries met in Cape Town last at the 7th Africa Symposium on Statistical Development (ASSD) and the meeting of the Statistical Commission for Africa (STATCOM), and resolved to strengthen Civil Registration and Vital Statistics (CRVS) systems during the next five years across Africa. "We want to register children," said Statistician-General of South Africa and ASSD Chair Pali Lehohla at the meeting. "Knowing that you exist is a basic human right," he added.

Presently, only three of the 32 reporting countries in Africa have achieved complete civil registration to date: Egypt, Mali and Morocco. Improving this performance is a critical need in improving accountability and advancing Millennium Development Goals (MDGs) 4 and 5, relating to child and maternal mortality, as highlighted in Keeping Promises, Measuring Results, a recent report by the Commission on Information and Accountability for Women's and Children's Health. Keeping Promises identifies the establishment of strong national information systems as a critical component of accountability. The report calls on countries to establish a system for registering births, deaths and causes of deaths, and to have well-functioning health information systems that combine data from facilities, administrative sources and surveys. The Commission on Information and Accountability was mandated by the Global Strategy on Women's and Children's Health, launched by UN Secretary-General Ban Ki-moon in September 2010. Accountability is an essential element of the Global Strategy, which aims at saving the lives of 16 million women and children under five years of age by 2015.

The Africa Union Commission is also finalizing an MNCH Task Force as directed by the AU Heads of State Summit in July 2010 to promote accountability of African governments on their commitments to maternal, newborn and child health. Strengthening civil registration systems is complex and requires the active cooperation of the statistical and health systems. "There are exciting developments and innovations in CRVS systems happening already in Africa," said Jane Thomason, Adviser to the Board of the Health Metrics Network, a global health partnership based at the World Health Organization in Geneva. "The outcomes of these country-led innovations will help other countries wanting to accelerate improvement of their CRVS systems."

Analysis: Getting early warning right in the Sahel

While severely high food prices and lower-than-average cereal outputs are already forcing some vulnerable Sahelians into distress responses, the US Agency for International Development (USAID) food security website FEWSNET says messaging on the situation needs to be more nuanced. It says the links between cereal production and malnutrition have been exaggerated, the complexities of regional market conditions inadequately conveyed, and the need for long-term structural solutions under-emphasized.

IRIN discussed with aid agencies and Sahel food security analysts, the subtleties of getting early warning messages right in such situations. Food security in the Sahel this year is part of a "persistent and predictable reservoir of chronic acute food insecurity" they say," in a predictable portion of the region's population", and requires long-term structural aid not short-term fixes.

Countries in the Sahelian zone produced a lower-than-average harvest this year , leading UN agencies and analysts to predict 2.5 million ton cereal deficits in the region, some of which should be met by market flows. But predicted cereal deficits should not be conflated with malnutrition, says FEWSNET. While harvest outputs and malnutrition rates are linked, they are not inextricable: "Even unlimited amounts of food assistance would not be able to eliminate a substantial (probably more than half) part of this [malnutrition] caseload," they estimate. This is because much of the malnutrition in the region is caused by other factors: poor water quality, low-quality health care, poor sanitation and poor feeding practices, which were recently stressed in the Sahel Working Group and Oxfam's report, entitled Escaping the Hunger Cycle; Pathways to Resilience in the Sahel.
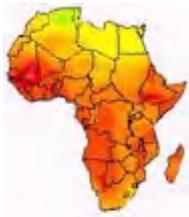
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Food aid is thus a blunt tool to address this problem - as well as the myriad other problems that poor pastoralists, poor urban communities, and others are currently dealing with. Oxfam's food security head Al Hassan Cissé agrees: "Given a still-growing population, chronic malnutrition, indebtedness, and loss of remittances, among other factors. Any relevant response must take into account the chronic, structural vulnerability of the Sahel, say aid agencies and analysts. For instance, the UN Children's Fund (UNICEF) has estimated over one million children in the Sahel region may face "severe and life-threatening malnutrition" in 2012, over one third of them in Niger. It is important to note that in 2011, with one of the best harvests on-record, just under 900,000 under-fives were in the same scenario. "And these needs will probably be there in 2013," said the analyst. "This context is important." Read more…

Health benefit of Nigeria communications satellite

THE newly re-launched communication satellite code-named NigcomSat-1R is said to be revitalize the health sector by bringing accessibility to early medicine in Nigeria. Former president, Nigeria Internet Group, Engineer Lanre Ajayi told National Daily's Science and Health that with the new communication satellite, the health sector will have a boost especially in the remote areas. "It will aid communication accessibility in the health sector; it will aid treatment especially for people in the remote areas who don't have the prerequisite for modern day treatment." Illustrating, Ajayi said, NigcomSat-1R will provide information to the nurse or doctor in the rural area to communicate with any medical expert in the urban area "who are essentially with the modern equipment to know the latest means of treatment and apply it in treating the people."

Meanwhile, Nigeria's Minister of Communication Technology, Omobola Johnson, said the new satellite would complement the efforts of the ministry in rolling out assisting infrastructure both in rural, semi-urban and urban areas. "We are rolling out infrastructure that includes fibre optic, satellite and also microwave technology enabling us to hopefully increasing our march or direction towards building a knowledge economy that is less dependent on resources in the ground and more on our human capital knowledge," she said.

Sierra Leone launches web portal to enhance transparency and accountability of governance

Sierra Leone President Ernest Bai Koroma has launched a web portal known as Transparency Sierra Leone Portal (http://www.transparency.gov.sl/) aimed at enhancing the transparency and accountability of his government. The portal, established by the Commonwealth Secretariat for the Government of Sierra Leone, was unveiled in Freetown, Sierra Leone, on 24 January 2012. It aims to build on the Open Government Initiative in promoting good governance and democracy. President Koroma commended the Commonwealth for its support of the project, saying it was important for the government to effectively communicate its programmes to all citizens. "We advocate an open and transparent government in which we are accountable for the delivery of service," said Mr Koroma. "This portal is a gigantic step in ensuring that our people have adequate information about all government projects across the country." He added that real progress can be achieved only through innovative solutions borne of open collaboration and dialogue with citizens.

The portal provides a gateway to information on government development projects and data that will be made public. It is managed by the Strategy and Policy Unit (SPU) in the Office of the President. Anthony Ming, Informatics Adviser at the Commonwealth Secretariat, expressed confidence in the portal's success. "Democracy and transparency are key elements in the core values of the Commonwealth, and this web portal is an initiative that embodies those values. The government of Sierra Leone should be applauded for its efforts at greater openness by promoting interactive communications between the citizens and the government as their opinions is valued in the formulation of public policy," said Mr Ming.

The portal offers access to three key sites: Government Project Registry for data on poverty reduction projects; Development Partner Registry for information on funding and disbursements for various sectors; and Join the Transformation which is an interactive platform for debate on the government's poverty reduction strategy. The President's Chief of Staff, Dr Kaifala Marah said: "Transformation requires the aggressive collaboration and co-operation of many individuals, so as citizens, we all share the duty to transform Sierra Leone. This web portal will help foster public trust while establishing a system of accountability, engagement and collaboration."

Farmers in Zimbabwe turn back to tradition as rainfall changes

Subsistence farmers in Zimbabwe are reverting to traditional farming knowledge and local experimentation to cope with the challenges of poor and unpredictable rainfall, which experts believe is linked to climate change.
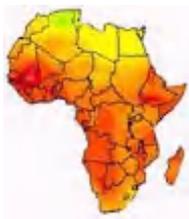
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That is producing mixed results and considerable frustration for government agricultural experts, who believe traditional knowledge alone, will not be sufficient to protect farmers against changing rainfall conditions. "We have always known that our grandparents kept seed from the previous harvest for planting in the new season, but... some people were instead advising us to buy what they termed drought-resistant varieties," Gama said from the small plot of land where she grows maize and groundnuts in Esigodini, 43 km (27 miles) from Bulawayo.

But Gama said that the newer varieties have not consistently produced a good crop on her community's land, apparently because of very poor rains. So she and other local farmers are conducting their own experiments on what seed works best in poor rain conditions. "What we do is mix our planting and combine the harvested seed from the previous year and what we buy from the shops and compare outcomes," she said. According to villagers, this mixing of seeds has helped improve the harvests. Where Gama's plot previously produced 50 bags of maize at 90 kg each, last season she harvested 70 bags, spurring others in this small farming community to experiment with her method.

Zimbabwe's Meteorological Services Department had predicted that this season's rains would peak in late December 2011. But while heavy rains came in December and January to the provinces of Midlands, Harare, Manicaland and the three Mashonaland provinces, areas such as Matebeleland, where Gama lives, are threatened with drought. While the government's Civil Protection Unit announced in early January that it was placing some parts of the country on a flood alert, the continued absence of rain in other areas serves to highlight the climate-linked problems that are impoverishing rural communities.

Read more at AlertNet Climate, the Thomson Reuters Foundation's daily news website on the human impacts of climate change.

DRC launches new national forest monitoring system

The Democratic Republic of the Congo has taken the lead in developing a revolutionary tool for managing tropical forests, capable of meeting the required standards for REDD+ monitoring and reporting. Danae Maniatis, Stefano Giaccio, Bruno Guay and Inge Jonckheere analyses the potency of the tool. The Democratic Republic of the Congo (DRC) officially launched its National Forest Monitoring System (NFMS) at a COP17 side event in Durban, South Africa in December 2011, demonstrating live how it works and inviting users to provide feedback.

This monitoring system was developed by the DRC government in collaboration with the Food and Agriculture Organization of the United Nations (FAO) and the Brazilian National Institute for Space Research (INPE) in response to the relevant decisions of the United Nations Framework Convention on Climate Change (UNFCCC) made at COP16 in Cancun in December 2010. One of those decisions (paragraph 71 of Decision 1/CP.16) requests developing country Parties that undertake REDD+ activities to develop a robust and transparent national forest monitoring system for the monitoring and reporting of the five REDD+ activities. The aim of the DRC NFMS is to address domestic and international monitoring needs and international MRV reporting requirements.

The DRC NFMS can be regarded as a gold standard forest monitoring tool for countries to sustainably and transparently manage forests far beyond the realm of REDD+. It is a simple, yet revolutionary tool to monitor the DRC's forests on a national level for REDD+ that will allow the government to make informed, transparent decisions on how to monitor, manage and protect its forest and biodiversity resources and can easily be developed for, and together with, other interested countries.

Congo Basin countries get sustainable forest management training
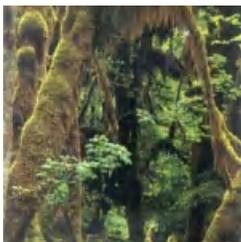
Five Congo Basin countries are to benefit from an international agreement that would provide them training on sustainable forest management and biodiversity. The International Tropical Timber Organization (ITTO) and the Government of Japan signed a letter of understanding for funding of 278 million Japanese yen (US$ 3.6 million) to implement a large capacity-building project to support five Congo Basin countries. The contribution from the Government of Japan makes up 82 per cent of the total project budget of US$ 4.4 million at current exchange rates. Implementation will commence within the next few months.

The project, to be implemented by the Network of Central African Forestry and Environmental Training Institutions (RIFFEAC), focuses on improved training in SFM and biodiversity conservation in Central Africa. It will be implemented through seven RIFFEAC training institutions, in
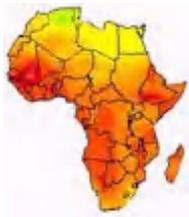
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Cameroon, the Central African Republic, the Democratic Republic of the Congo, Gabon and the Republic of Congo. In addition to the development of training materials and training of trainers, the project will provide much needed support for the construction of required training infrastructure. The project will strengthen capacity for the implementation of the ITTO/IUCN guidelines for the conservation and sustainable use of biodiversity in tropical timber production forests, which were elaborated in 2009.

In 2016, at the end of the five-year project, it is expected that more than 250 SFM trainers in the region will be skilled in teaching and demonstrating biodiversity-friendly SFM planning and techniques. This will relieve the estimated annual shortage of 620 qualified forestry executives in the region. The project will also improve communication flows between the five countries, and within other member countries of the Central African Forests Commission (COMIFAC), which has endorsed the important role of RIFFEAC in promoting the conservation and sustainable use of forest resources in the region.

The project forms part of a collaborative initiative on sustainable management and conservation of tropical forest biodiversity between ITTO and the Convention on Biological Diversity (CBD). This initiative, which is also supporting a project on transboundary conservation in the Emerald Triangle area between Thailand and Cambodia, grew out of a memorandum of understanding signed between these organizations in 2010 to foster collaborative work and fund-raising towards their common objectives.

Satellites help track pirate loot in Somalia

A satellite study has shown for the first time where Somali pirates are putting the proceeds of crime – and suggests where strategies against their banditry might and might not work. Warships from 30 nations patrol the waters off Somalia but still piracy continues, costing $12 billion a year. The naval threat just makes pirates squeeze more out of every ship they manage to capture: top ransoms trebled from $3 million to $9 million between 2008 and 2010.

One solution could be to give Somalis something better to do on shore. To target that assistance, though, we have to know who profits from piracy and who does not. With no effective government and no government statistics in Somalia, that's hard to find out. Anja Shortland of Brunel University in London thinks she has a solution. In a report for the international affairs think tank Chatham House in London, she reports that two major inland towns in Puntland, the pirates' home region, have started lighting up more at night.

In the world's poorest places, the movements and prosperity of people can be traced by the appearance of electric lights, which is recorded by US weather satellites. Such images have been used to track population clusters in West Africa that are likely to harbor measles outbreaks. Shortland averaged a year of light readings from Puntland to exclude transitory lights such as campfires. She found that night-time glow of the pirate home towns of Garoowe and Boosaaso has been climbing since 2008 (see photo) – even as piracy took off and higher food prices forced other towns in the region to cut their electricity bills.

Meanwhile, local prices for food and cattle reveal increased spending locally, coinciding with pirate activity in the Arabian Sea. All this suggests Garoowe and Boosaaso are doing quite well. Somali custom means the pirates spend their loot on their extended families and clans rather than stashing it abroad – or in buried chests. Pirates are known for their expensive cars, weddings and drug habits, says Shortland.

By contrast, the coastal towns the pirates sail from are getting very little: they don't emit even enough light to show up in the night-time images. Higher-resolution satellite photos show new roads, houses and mosques in the larger towns (see photo), but very little in the isolated, impoverished coastal villages (see photo). Coastal disappointment with the gains of piracy suggests that foreign governments trying to end piracy should consider offering port towns alternative industries or jobs that could be more attractive than hosting pirates.

Malawi, Zambia to benefit from climate-smart farming project

Malawi and Zambia are to benefit from a Food Agricultural Organisation (FAO) and the European Commission €5.3 million new project which aim to help adapt a "climate-smart" approach to agriculture. Agriculture and the communities who depend on it for their livelihoods and food security are highly vulnerable to climate change impacts. At the same time agriculture, as a significant producer of greenhouse gases, contributes to global warming. "Climate-smart agriculture" is an approach that seeks to position the agricultural sector as a solution to these major challenges.
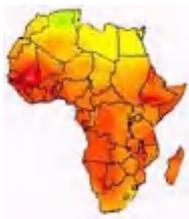
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It involves making changes in farming systems that achieve multiple goals: improving their contribution to the fight against hunger and poverty; rendering them more resilient to climate change; reducing emissions; and increasing agriculture's potential to capture and sequester atmospheric carbon. "We need to start putting climate-smart agriculture into practice, working closely with farmers and their communities," said FAO Assistant Director-General for the Economic and Social Development Department, Hafez Ghanem. "But there are no one-size-fits-all solutions - better climate-smart farming practices need to respond to different local conditions, to geography, weather and the natural resource base," he added. "This project will look closely at three countries and identify challenges and opportunities for climate-smart agriculture and produce strategic plans tailored to each country's own reality," Ghanem said. "While not all solutions identified will be universally applicable, we can learn a lot about how countries could take similar steps and begin shifting to this approach to agriculture."

The EU is providing €3.3 million to support the effort; FAO's contribution is €2 million. Working closely with agriculture and other ministries in each of the partner countries, and collaborating with local and international organizations, the three-year project will identify country-specific opportunities for expansion of existing climate-smart practices or implementation of new ones. FAO will take the overall lead on the project, working in partnership with national policy and research institutions, as well as global organizations such as the Global Crop Diversity Trust.

By tackling the urgent need to incorporate climate change concerns into agricultural development planning, this new project represents a concrete step forward, said Ghanem. "The problems of climate change are increasingly being felt on the ground, and thus early actions to address the problem are needed, even as international negotiations continue in the search for a global climate agreement," he said.

Map making, made easy - Web platform developed by Harvard lowers barrier to collaboration

This map shows reported casualties caused by the Sendai Earthquake of 2011, based on CATDAT (global database of damaging earthquakes) and the radioactive fallout evacuation zones that surround the Fukushima Daiichi nuclear plant. Japanmap is edited by Ray Kameda for the Daishinsai Archive, a project under the direction of the Reischauer Institute for Japanese Studies. Soon, scholars worldwide will have an easier time creating, publishing, and sharing maps and other geospatial data, thanks to the release of WorldMap, an open source software platform that fills the growing niche between desktop mapping applications and more lightweight, nimble Web solutions.

Developed by Harvard's Center for Geographic Analysis, WorldMap allows scholars to share access to view and edit geospatial information. Unlike similar tools, WorldMap allows the use of large, detailed datasets, and supports a number of formats. First released in beta last July, the software already boasts 1,250 users from more than 100 countries. Users have contributed more than 1,700 mapping layers and created more than 500 map collections to support their research.

The bulk of the best geographic data resides outside any single institution. WorldMap takes a unique approach to this challenge by providing the global community with a platform to meet its needs. By so doing, the system increases the amount of high-quality spatial data in the public sphere. WorldMap allows scholars to integrate information from diverse sources by making it possible to overlay data in users' own computers with materials on the Web. The system also lets users incorporate paper maps, perform online digitizing, and link locations to other media.

The system allows for collaborations that can range from small groups in which all participants have editorial rights to interactive publications for large audiences. The system is also designed to support the research process, by allowing information to initially be made private, before being opened to larger groups for refinement, and finally to be published or released to the public. Free and open to the public, WorldMap is cloud-hosted as well as open source, meaning new functions can be added to the system. A handful of new features are under development, including the ability to visualize change over time, searching place names for current and historic locations, and creating and editing online map layers.

Kenya's Kenyatta Hospital records set to go digital

The ICT Board is planning a Sh34 million project to digitise records at the Kenyatta National Hospital, to increase efficiency and improve service delivery. Commencing in April, the project will see 4 million documents scanned and stored in digital format. "We want to improve back office operations such as finance and accounting at the hospital," said ICT Board CEO, Paul Kukubo.
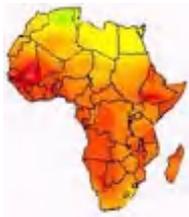
A tender invitation was issued by the board on Thursday for bids to supply and install software and hardware for the project. The move comes at time when the technology community is fraught with anxiety over cyber security after 103 government websites were hacked and defaced on Tuesday. However, the hospital remains confident that sensitive medical data will remain protected with concerted efforts from various government authorities. "The paper-based data is no safer than electronic data. We plan on restricting access to the information and adhering to e-security guidelines that are being developed by the ministry of communication," said Mr Ambrose Kwale, the hospital's ICT manager. The digitisation is part of a master plan to automate processes not only at Kenya's main referral hospital, but across the country's health sector.

Firm accuses Google over data access

A company has claimed that Google illegally accessed its data. If proved to be true, the claim will negatively impact the business and reputation of the American giant search engine company. The OpenGeoData organisation, based in the UK and which runs OpenStreetMap (OSM), posted on its blog on January 16 that, "Preliminary results show users from Google IP address ranges in India deleting, moving and abusing OSM data including subtle edits like reversing one-way streets."

Early this month Mocality, a Kenyan-based company, revealed that one of the world's most valued technology companies had illegally mined data from its website and used it to lure customers by misrepresenting that it had business relations with Mocality. Google has since apologized, saying it was embarrassed to learn about the activities. Locally, OSM ran the MapKibera project, which involved mapping Kibera slums in 2009. The project won global recognition on TedX, a forum for leading world visionaries. "... OSM in London, New York and elsewhere is being vandalised from Google's IP address, the same address in India reported by Mocality," the blog read.

Founder member of OSM, Steve Coast, board member Mikel Maron, and system administrator Grant Slater defended the claims, and posted an update a day later on January 17 5:30pm. "We felt on balance that making the minimum facts public was the right thing to do," a part of the post read. They shared evidence of the alleged vandalism acts, including examples of malicious data found on the OpenStreetMap project. When contacted by the Nation, Google's local office in Kenya through its communications manager Dorothy Ooko referred the matter to the update on OSM's blog, which published Google's response. "The two people who made these changes were contractors acting on their own behalf while on the Google network. They are no longer working on Google projects," reported CNET, a leading technology news website in the US, as the response from Google.

Connected planet - Preventing the end of the world's wildlife migrations through ecological networks

Through the air, over land and in water, over ten thousand species numbering millions of animals travel around the world in a network of migratory pathways. The very foundation of these migratory species is their connection to places and corridors across the planet. The loss of a single point in their migration can jeopardize the entire population, while their concentrations make them highly vulnerable to over-harvesting and poaching.

In the northern regions of the world, the V-shaped formation of loudly honking geese in spring and in autumn symbolize that a new season is coming. In the 1900s people in northern Norway marveled at the abundance of lesser white-fronted geese, which then numbered in the thousands. Today the Norwegian stock of these geese is so small that researchers are on first-name terms with each and every bird. Iconic animals such as wildebeest and antelopes have declined by 35–90 per cent in a matter of decades, due to fences, roads and other infrastructure blocking their migration routes, and from over-harvesting. Indeed, the current rise in poaching calls for renewed international efforts for controlling illegal hunting and creating alternative livelihoods, against the backdrop of increasing trade in endangered animals for their fur, meat, horns or tusks.

We are only just beginning to grasp the consequences that climate change is having on migratory animals and how important it is to have functional networks of habitats to allow species to adapt. A number of long-distance migrants are already declining as a result of a changing climate, including narwhals and marine turtles. In the ocean underwater noise caused by offshore energy production, naval sonars and shipping, for example, is further disrupting the lives of whales and dolphins. Available online: Download PDF (15mb) | Interactive e-book | Maps & Graphics

UNEP Policy Series on Ecosystem Management: "Putting Ecosystem Management in the Vision of Africa's Development - Towards a sustainable Green Economy"

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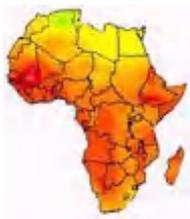
![GSDI - Global Spatial Data Infrastructure]

This paper demonstrates the foundational significance of ecosystems for human well-being in the African region. It highlights some of the key policy challenges and opportunities in ecosystem management; and makes some recommendations for enhancing capacity of policy makers in the region. It is hoped that this paper will stimulate discussion and debate on how in the effort to prevent and reverse degradation of ecosystems and the services they provide, the continent can promote and utilize healthy ecosystems to support a sustainable and more climate-resilient development path.

Coming just before RIO+20 in June 2012, this policy brief will also contribute to the discourse on managing Africa's ecosystems whilst fostering a better understanding and appreciation of their importance.

AARSE 2012 International Conference, 29 October- 2 November 2012, El Jadida, Morocco.

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

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

Paper selection is based on abstract and full paper peer review following the guidelines provided in the "Call for Paper" document downloadable from the conference website: www.aarse2012.org. Abstract submission opens on 2 January to 30 April 2012. Questions regarding abstracts should be e-mailed to abstracts@aarse2012.org.

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

Practical SDI implementation materials from within and outside of Africa

George Clooney's Satellites found Sudanese tanks readying for battle

A new report released by the Satellite Sentinel Project, a human rights campaign started by George Clooney, states that there is strong evidence of the buildup of infrastructural and logistical capabilities with the potential to restrain civilian mobility or to provoke aggression against the civilian population in the Nuba Mountains region of South Kordofan in Sudan, and is issuing a human security alert for that region.

Military actions like this are unfortunately being carried out all the time worldwide. What makes this case interesting is that the story is being broken, not by government agencies or from hazy reports on the ground, but by a group of private analysts using the wealth of satellite imagery now available to build awareness for a human rights campaign.

The report, using images collected by DigitalGlobe, and analyzed by the Harvard Humanitarian Initiative shows the building up of roads and the deployment of military vehicles around the Nuba Mountains region in a pattern that closely mimics the Sudan Armed Forces (SAF) invasion of Abyei in May of last year. SSP's report, thanks to advanced photographic technology may be useful in detecting human rights violations before they occur, but there's still something extremely disquieting about seeing calculated conflict unfold through satellite imagery. Try your hand at analyzing some of the choice images at website: http://motherboard.vice.com/2012/1/25/george-clooney-s-satellites-found-sudanese-tanks-readying-for-battle, and check out the rest at the Enough Project's Flickr page.
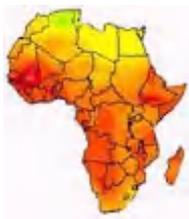
Spatial Data Infrastructure – Africa Newsletter

Crops' nitrogen need assessment using geospatial tools

Scientists from DPI Horsham joined others from the University of Melbourne and Queensland University of Technology as well as Michigan State University and Italy's University of Basilicata in developing a tool that uses satellites or airborne imagery to provide a precise analysis of crops' nitrogen needs. It aims to enable farmers to boost yields and lower costs by providing them with an accurate picture of where and how much nitrogen they need to apply.DPI Senior Research Scientist Dr Glenn Fitzgerald said rain-fed wheat plots at Horsham and in southern Italy were studied, with their "greenness" and nitrogen status measured using the remote sensing index. "When this model was tested on the indepe ndent dataset it yielded good results for the estimation of greenness," he said. Fitzgerald added, "This research creates the potential for developing a whole paddock analysis of nitrogen levels rather than taking tissue samples at selected points in the crop and waiting several days for the results. In addition, the method provides an assessment of nitrogen throughout a paddock, unlike the limited spatial assessment from tissue samples." "Real time in-crop assessment will help farmers determine where to increase or decrease nitrogen across the whole crop," continued Fitzgerald.

Satellite image shows heat from Chevron Drill Rig fire, offshore Nigeria

Following reports of a drill rig on fire off the coast of Nigeria, the team working for Chevron in the Funiwa field have been collecting satellite imagery of the site. NASA's MODIS sensor on the Terra satellite captured the fire from space. Clouds and haze, all too common in this part of Africa, obscure most of the area, and there was little sign of a big problem down below in the standard "true color" rendering.

With the 7-2-1 rendering that includes the mid-infrared wavelengths the exact location of the fire was visible. A bright red dot located approximately where the rig was working was noticed (we could use a more precise location if anyone has it). Geek alert: this indicates strong emission from the middle-infrared part of the spectrum (band 7). At high temperatures the Planck emission function is shifted toward shorter wavelengths. This fire must have been at least 1000 degrees Kelvin (1340 degrees Fahrenheit), hot enough to soften steel.

GIS Tools, Software, Data

AfriPop:demography

The new alpha version AfriPop:demography Africa-wide population datasets are now freely available from the AfriPop project website. These new datasets provide estimates of the distribution of children under 5 years old and women of child-bearing age for each 1km grid square across Africa for the years 2000, 2005, 2010 and 2015. Just click on the 'Project details/Methods' link below the AfriPop:demography logo to read about the datasets, then the 'Data' link to download them - choose your dataset of interest, then complete the simple download form. The data are available in ESRI float format at present (unzip, then import to ArcGIS using the 'Float to Raster' tool) and represent estimated persons per 1x1km grid square.

Also upcoming this year:

- Full 100m resolution country datasets providing population distributions by 5-year age groupings and sex
- AfriPop finalized total population distribution datasets with metadata and documentation.
- Similar datasets for Asia: www.asiapop.org

Regional Centre for Mapping of Resources for Development data centre

The RCMRD Data Centre has a large LandSat Data Archive, dating back to 1972, for all African Countries. It is also a Reseller Agent in Africa for Digital Globe for QuickBird and WorldView 1/2 High-Resoultion Satellite imagery. The Centre also supplies data from GeoEye (GeoEye 1/2, Ikonos & Orbview Imagery), SPOT Image (SPOT 2.5m, SPOT 5m & SPOT 10m), USGS (Landsat MSS, Landsat TM & Landsat ETM+) amongst other active and passive satellite imagery products Datasets for Africa archived at the Centre are available at subsidized rates. Other low resolution imagery datasets (90m SRTM, NOAA, MERIS, MODIS), scanned maps and vector data for Africa are also available.

The center in collaboration with European Space Agency (ESA) and EUMESAT has established a facility for direct satellite reception for MERIS, MODIS, NOAA and EUMESAT Second Generation Meteosat data.These datasets amongst others can be accessed online via: http://www.rcmrd.org/geonetwork or via email to remote sensing(at)rcmrd.org.
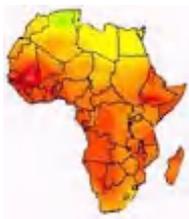
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DEWA/GRID GeoPortal

DEWA/GRID-Nairobi is one of UNEP's major centers for data and information management, with a unique, "value-adding" mandate in the handling of national, sub-regional and regional environmental statistics and data, which in turn supports the environment assessment and early warning activities of UNEP and its partners. Located at UNEP's Headquarters based in Nairobi, Kenya, GRID-Nairobi occupies an important niche in the global GRID Network. The center also functions as a support provider to the DEWA-Africa Programme in the area of capacity building for African countries using environmental information for decision-making and action.

Wildlife observation mapping tool

The Miistakis Institute has released the Wildlife Observation Mapping Tool. Built on experiences with "Road Watch in the Pass" (http://www.rockies.ca/roadwatch), this prepackaged web mapping application is designed for rapid deployment of local citizen science projects to capture user observations of wildlife related events on a highway, trail, within communities or any landscape where a group wants to monitor wildlife.

The mapping application uses OpenLayers as a front end with Google Services providing the default base map data. The application can be setup on most web servers, with no special requirements, with the exception of needing PHP and the ability to set file permissions for write/execute. Basic setup is fairly easy with the provided setup guide. Organization specific customization is unlimited, but would require some technical effort. The Wildlife Observation Mapping Tool is provided free of charge in an 'as is' state with permission to edit and change for your own personal or organizational needs. It may not be used to generate revenue or re-distributed without permission.

Training Opportunities

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

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

Short courses by Continued Education

Courses presented in 2012 by Continued Education at UP (www.ceatup.com) and the Centre for Geoinformation Science (www.up.ac.za/cgis) on the main campus of the University of Pretoria, in Pretoria, South Africa. Enquiries and registration: Mickaele Jenkins mickaele.ce@up.ac.za.

- Certificate Programme in Introductory GIS - 8 February to 8 June 2012
- Certificate Course in Advanced GIS - 8 February to 26 October 2012
- Introduction to Remote Sensing - 8 -10 February 2012
- Short course in Spatial databases with PostGIS - 12, 19, 20 and 26 March and 2 April 2012
- Introduction to GIS Standards - 10 and 17 September

Call for application for postgraduate diploma in applied Geo-Information

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

Institute for Capacity Development: 2012 Training Workshops
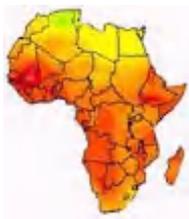
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The training courses are held in Namibia (Head Office); South Africa and Zimbabwe. For the past years, ICD has been conducting international capacity building workshops for national, provincial and local officials, elected representatives, members of boards, personnel of projects as well as bilateral & multilateral agencies. A large number of high profile persons have participated in the programmes in the past and you are welcomed to one or more of the upcoming programmes in 2012.

For the full 2012 training calendars or check out the website on www.icdtraining.com. Institutions sending at least 5 participants qualify for group discounts. Contact Mr. Kenias on coordinator@icdtraining.com.

ESRI Technical Certification

ESRI has set the industry standard for GIS technology and is now establishing benchmark standards for individuals who use Esri software with the recently launched Esri Technical Certification Program. The ESRI Technical Certification Program recognizes qualified individuals who are proficient in best practices for using Esri software and are awarded in different areas of expertise at both an Associate and Professional level. The program is open to ESRI users worldwide and consists of 13 certifications recognizing expertise in desktop, developer, or enterprise use of ArcGIS. Users achieve certification by successfully completing computer-based examinations, which are offered in more than 5,000 testing locations in 165 countries. Beginning in January 2011, users will be able to test for five certifications. The remaining eight are still in development and will be available later in the year. Establishing an industry recognized benchmark of expertise in using ESRI software will:

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

The ESRI Technical Certification Web site lists specific skills that will be assessed in each exam, as well as training courses that aid in acquiring and improving these skills. ESRI is available to advice you on the best training for a particular certification and also offer you the training that you need to prepare for your certification. Read more..

ESRI South Africa presents a full spectrum of GIS courses: January and February 2012

The course covers GIS theory and functionality: The desktop products (ArcView, ArcEditor, and ArcInfo; Server products (ArcGIS server and ArcSDE); Programming to enable customization of the product, ArcGIS extensions, as well as Introductory and advanced courses in ERDAS Imagine Remote Sensing Software'

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

GIS and Remote Sensing courses at Esri Eastern Africa

ESRI Eastern Africa is now offering update courses to conform to improvements in ArcGIS 10 and ENVI 4.8, conducted with skilled and experiences instructors together with conducive and state-of-the-art training facilities. Courses in the following tracks are offered:

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

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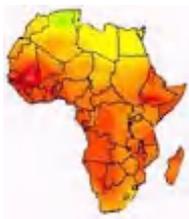
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Training at Oakar Services

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

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

GPS based courses

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

Remote Sensing based

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

Specialist Course

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

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

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

UNIVERSITY OF TWENTE.

Apply online for courses starting in the academic year 2012-2013. Browse by programme (degree, diploma, and certificate), course domain (disaster management, earth sciences, geoinformatics, governance, land administration, natural resources, urban planning and water resources) or location in the course finder at www.itc.nl/CourseFinder. For printed copy of the study brochure, email: (alumni@itc.nl).

ITC Distance Course: Systems analysis and modeling

The certificate course will start from 13 February 2012 for 6 weeks. Systems analysis and systems thinking present a way to treat the complexities of modern world and understand how systems evolve and what can be expected from the future. This course is an introduction to simulation modeling of dynamic systems that will familiarize participants with basic principles of systems analysis and modeling. Applications and case studies are drawn primarily from ecology and economics. Participants can consider different modeling strategies and learn how to formulate, build and analyze models.

The course will teach you to think in terms of systems, to deal with complexity, to build conceptual and simulation models to analyze your systems. It is an essential introduction to such applications as Environmental Impact Assessment and Strategic Environmental Assessment, it is essential for decision making, environmental management and sustainability science. The course bridges the gap between static spatial maps and dynamic spatial processes. Several modeling software packages are introduced, including Stella, Madonna, and Simile. Investigation of alternative modeling software packages is encouraged.

The course is relevant for everyone interested in systems, complexity, and modeling. The course is designed for a broad audience, including those with little or no modeling expertise. Some basic knowledge of calculus is an advantage, although most of the needed concepts will be introduced during the course. The major skill that is sought and fostered is the ability to think logically and make connections between processes, events and actors. The tuition fee is 1000 / 500 Euro. Registration deadline: 7 February 2012.
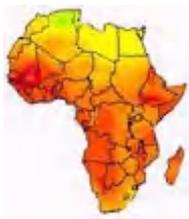
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ITC Distance Course: GIS Data Quality

The certificate course will start from 12 March for 7 weeks. This course aims to cover the basic principles of spatial data quality. This subject is of central importance in GIS and related fields since the quality of the data used and produced impacts on the quality of decisions made. The term "spatial data quality" is widely used in academic, governmental and industrial contexts but often remains undefined. In this course, participants are required to give critical attention to the meaning of spatial data quality. Greatest attention will be given to quantitative and statistical aspects of the subject. To do this, we will revise and develop some fundamental statistical concepts and computational tools that will be of more general value for data analysis and modeling.

The course is relevant for a wide range of geospatial data users and producers. The tuition fee is 1000 / 500 Euro. Registration deadline: 20 February 2012.

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

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

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

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

- Introduction to Remote Sensing & Image Processing
- Introduction to Geographic Information Systems (GIS)
- Introduction to Global Positioning Systems (GPS)
- Application of Remote Sensing & GIS in natural resources management.
- Application of Remote Sensing & GIS in Early Warning Systems for Food Security Application of RS & GIS in Disaster Risk Management
- Geospatial database development and management for use in planning process and decision making
- Principles of Digital Cartography
- Application of GPS technology in resource surveys and mapping
- Integrated Water Management
- Application of GIS in poverty mapping, health care & good governance
- Land Information Management Systems
- Service and Repair of Survey equipment

Funding Opportunities, Awards, Support

2012 Climate Advocacy Small Grants Fund

Population Action International (PAI), a Washington, D.C. based non-profit organization that advocates for women and families to have access to contraception in order to improve their health, reduce poverty and protect their environment, is soliciting proposals for our 2012 Climate Advocacy Small Grants Program: Drawing Linkages between Population, Reproductive Health, Gender and Climate Change Adaptation. Only organizations based in Bangladesh, Ethiopia, Ghana, Kenya, Malawi, Nepal, the Philippines, and Tanzania are eligible to apply.

Several grants of up to $20,000 USD will assist civil society organizations in identifying opportunities to promote the integration of reproductive health and gender considerations into national strategies and plans to address climate change. These one-year grants will support organizations in their efforts to document entry points for advocacy at the national and regional levels; strengthen cross-sectoral research, communication and collaboration; and build national-level support for the integration of reproductive health, gender, and climate change in national policies.

The deadline for proposals is 6 February, 2012. For further information and to receive application materials, please contact Roger-Mark De Souza at rmdesouza@popact.org.

Open Call for Proposals: 2012 African Union Research Grants
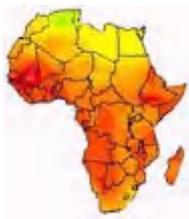
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The African Union Commission is seeking proposals for research focusing on the following thematic priorities articulated in Africa's Science and Technology Consolidated Plan of Action (CPA) and it's Lighthouse Projects:
a. Post-harvest and Agriculture,
b. Renewable and Sustainable Energy, and
c. Water and Sanitation in Africa.
The programme is financed through the Financing Agreement between the European Commission and the ACP Group of States under the ACP Research for Sustainable Development Program of the 10th EDF Intra-ACP Envelop. The full Guidelines for Applicants, Application form and other supporting documents are available for downloading from the following Internet sites: http://www.africahrst.org/stict/rgp, http://www.au.int/researchgrant and http://webgate.ec.europa.eu/europeaid/online-services/index.cfm?do=publi.welcome
The deadline for submission of proposals is April 20, 2012.

Congo Basin Forest Partnership - Grants for Protected Areas in Central Africa
With funding through the European Commission, the Congo Basin Forest Partnership announces a call for proposals to strengthen 16 protected areas and their peripheries in Central Africa. The program works through the Central Africa Protected Areas Network (RAPAC) to make grants for conservation in high-priority protected areas in Cameroon, Central African Republic, Chad, Congo, DRC, Gabon, and Sao Tome & Principe. Applications are invited from national and international NGOs, as well as from private actors for nonprofit activities, in countries of the EU and ACP (i.e., all countries in RAPAC). The maximum grant is €200 thousand. The closing date for applications is 1 March 2012. Français

European Commission (EC) - Improved Livelihoods in Madagascar
The EC will fund projects to offset deforestation and resource degradation in northeastern Madagascar in a region of four national parks and forest reserves. Projects should aim to provide agricultural alternatives, water and sanitation, and new livelihood activities for the area's subsistence populations. The program is open to nonprofit NGOs in EU and ACP countries (including Madagascar). Reference EuropeAid/132173/L/ACT/MG. The application deadline is 6 March 2012.

European Commission (EC) - Local Natural Resources Management in Chad
The EC calls for proposals to expand and improve the productivity of agro-sylvo-pastoral systems at a decentralized level in Chad. The program is open to local organizations, producers associations, NGOs, and public research and support organizations in countries of the EU and ACP (e.g., Chad). International inter-governmental organizations are also eligible. Reference EuropeAid/132171/M/ACT/TD. The application deadline is 8 March 2012.

International Tropical Timber Organization -- First Round of Fellowships 2012
ITTO makes grants of up to US$10 thousand through the Freezailah Fellowship Fund for training opportunities, demonstration tours, participation in conferences and workshops, preparation of technical papers, and post-graduate degrees. Grants are in support of sustainable tropical forest management. Applicants are young and mid-career professionals in ITTO's member countries; most grants are to individuals in the developing countries. ITTO normally invites fellowship applications (in English, French, or Spanish) twice a year, and the next deadline is 9 March 2012.

French Global Environment Facility (FFEM) - Small Grants, Phase 3
Phase 3 (2011-2013) of FFEM's Small-Scale Initiatives makes grants for biodiversity conservation in West and Central Africa, Madagascar, and Mozambique. Grants are a maximum of €50 thousand subject to co-financing requirements - for NGO conservation organizations in eligible countries. For NGOs meeting the relevant criteria, pre-proposals can be submitted at any time before 31 December 2012.

2012 Leverhulme-Royal Society Africa Award in UK, Ghana and Tanzania
Scholarship open for international students from the following countries: UK applicant and the Ghanaian/Tanzanian. It aims to help develop and maintain excellence in science in both countries and to strengthen the research and training capacity of the African institution. The scheme provides 3 years funding towards research expenses and costs for mobility and equipment.
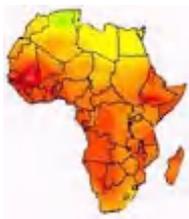
The scheme covers all areas of the life and physical sciences, including engineering. Applications covering the following five identified national research priorities in Ghana and Tanzania are particularly encouraged: agriculture (including animal health); water and sanitation; basic human health research (including medicinal chemistry); biodiversity (including medicinal plants and green chemistry) and energy (including renewables).

Both the UK applicant and the Ghanaian/Tanzanian applicant must: have a PhD or have extensive experience at an equivalent level have a proven track record of training students at Master's and Doctoral level have a proven track record of publishing in both national and international journals be based in the respective countries at the time of the application

Study Subject(s): Agriculture (including animal health), Water and sanitation, Basic human health research (including medicinal chemistry), Biodiversity (including medicinal plants and green chemistry), Energy (including bio fuels). Scholarship application deadline: 8 February 2012.

Employment Opportunities

Director - Economic Commission for Africa, Addis Ababa, Ethiopia

This post is located in the Governance and Public Administration Division (GPAD) of the United Nations Economic Commission for Africa (UNECA). The incumbent will report directly to the Executive Secretary of the commission. She/he should possess substantive knowledge of the field of work in general and of specific areas being supervised. Ability to produce reports and papers on technical issues and to review and edit the work of others. Ability to apply UN rules, regulations, policies and guidelines in work situations. Shows pride in work and in achievements; demonstrates professional competence and mastery of subject matter; is conscientious and efficient in meeting commitments, observing deadlines and achieving results; is motivated by professional rather than personal concerns; shows persistence when faced with difficult problems or challenges; remains calm in stressful situations.

The incumbent should posses:

- Advanced university degree (Master's degree or equivalent) in business or public administration, finance, accounting, law, social sciences or related area. A first-level university degree in combination with qualifying experience may be accepted in lieu of the advanced university degree. Degree or above in economics or political science is desirable. A PHD is an asset.

- A minimum of fifteen years of progressively responsible experience in human resource management, administration, logistics, financial management budget or related field. Experience in governance and public administration in the context of Africa and extensive experience in public sector management and in leadership for policy and programme development in a major institution such as government, multilateral organization, NGO, research institute, or academia or a combination of the forgoing is desirable.

This vacancy is subject to availability of post. Staff members of the United Nations Secretariat must fulfill the lateral move requirements to be eligible to apply for this vacancy. Staff members are requested to indicate all qualifying lateral moves in their Personal History Profile (PHP) and cover note. Closing date: 6 February 2012.

Programme Management Officer, Addis Ababa, Ethiopia

Under the general guidance of the Director of the Office of Strategic Planning and Programme Management (OPM) and direct supervision of the Chief of the Section, the Programme Management Officer is responsible for the following duties: Participates in the development, implementation and evaluation of assigned programmes/projects, etc.; monitors and analyzes programme/project development and implementation; reviews relevant documents and reports; identifies problems and issues to be addressed and proposes corrective actions; liaises with relevant parties; identifies and tracks follow-up actions.Participates in activities related to the preparation of programme budget of the Commission, and programme performance reviews. Researches, analyzes and presents information gathered from diverse sources. Assists in policy development, including the review and analysis of issues and trends, preparation of evaluations or other research activities and studies. Undertakes survey initiatives; designs data collection tools; reviews, analyzes and interprets responses, identifies problems/issues and prepares conclusions. Prepares various written outputs, e.g. draft background papers, analysis, sections of reports and studies, inputs to publications, etc. Document and evaluate systems and controls to determine their adequacy and effectiveness and ensuring compliance with UNECA Monitoring and Evaluation Policy and Framework; Facilitate knowledge-sharing on best practices and lessons learnt from ECA's Results-Based Budgeting (RBB) and Results-Based
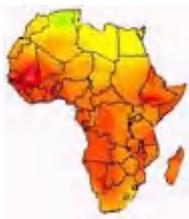
Management (RBM). Undertakes outreach activities; conducts training workshops, seminars, etc.; makes presentations on assigned topics/activities. Participates in or leads field missions, including provision of guidance to external consultants, government officials and other parties and drafting mission summaries, etc. Provides substantive servicing to the annual meetings of the Conference of African Ministers of Finance, Planning and Economic Development , as well as backstopping to consultative and other meetings, conferences, etc., including preparation of documents and presentations

The incumbent should possess Advanced University Degree (Master's degree or equivalent) in business administration, sociology, economics, law, public administration or a related field. A first level university degree with a relevant combination of academic qualifications and experience may be accepted in lieu of the advanced university degree. A minimum of five years of progressively responsible experience in project/programme management, administration or related area. Closing date: 16 March 2012.

Other

Effort to develop drought-tolerant maize for smallholder farmers in Sub-Saharan Africa

Three-quarters of the world's severe droughts over the past 10 years have occurred in Africa, making it the most important constraint of African agriculture. Even moderate drought conditions can severely affect the yields of maize, which more than 300 million Africans depend on as their main food source.

Africa is a drought-prone continent, making farming risky for millions of smallholder farmers who rely on rainfall to water their crops. Maize is the most widely grown staple crop in Africa and it is severely affected by frequent drought. Drought leads to crop failure, hunger, and poverty. Climate change will only worsen the problem. Since 2008, AATF has led the Water Efficient Maize for Africa (WEMA) partnership to develop drought tolerant African maize using the best agriculture technologies available: conventional advanced plant breeding and biotechnology.

The partners of the Water Efficient Maize for Africa (WEMA) project are developing drought-tolerant African maize using the best agriculture technologies available: conventional advanced plant breeding and biotechnology. WEMA is using conventional advanced plant breeding techniques to rapidly develop new drought-tolerant maize varieties from existing high-yielding and locally adapted germplasm from the CIMMYT-led Drought Tolerant Maize for Africa project (DTMA).

WEMA will incorporate a drought tolerance trait developed and donated by Monsanto and BASF into DTMA-developed varieties using transgenic breeding, sometimes referred to as genetic modification. This will contribute additional levels of drought tolerance beyond those gained through conventional advanced breeding techniques. The first WEMA hybrids developed through conventional advanced breeding techniques could be available in five years. The timelines for the genetically modified drought-tolerant maize hybrids depend on research and development results and regulatory approvals in each of the WEMA countries. Farmers could have access to transgenic drought-tolerant maize varieties within eight years. The benefits and safety of these maize varieties are being assessed by national authorities based on field evaluations under local conditions and according to the regulatory requirements in each of the WEMA partner countries. Extensive training and stakeholder outreach activities are also part of the project.The varieties developed through the project will be made available to smallholder farmers through African seed companies royalty-free.

Govt unfolds plan to boost ICT with NigComSat

IN line with its plan to use the recently launched Nigeria Communications Satellite to revolutionise Information and Communications Technology penetration in Nigeria, government at the weekend unfolded a string of programmes towards achieving the goal.

Top on the list is the drive to use the satellite to boost government's e-governance and e-learning agenda. The nation's tertiary institutions are also to benefit from a 'walless' programme that would connect them through virtual library and seamless campus connection.

Managing Director and Chief Executive Officer of NIGCOMSAT Limited, Timasaniyu Ahmed-Rufai, who disclosed this during an interactive session with journalists in Abuja, listed the benefits of the satellite to government agencies and other business enterprises as, among others, reduction in the cost of bandwidth acquisition, which, according to him, costs Nigeria N75 billion yearly.
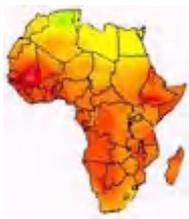
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The satellite will also, according to Ahmed-Rufai, boost development of indigenous software applications to aid Nigeria's quest for a knowledge economy; boost the nation's telecommunications service delivery and facilitate the Central Bank of Nigeria (CBN) pursuit of cash-less economy. The NIGCOMSAT boss said the facility had already attracted the Nigerian Television Authority (NTA), Nigerian Army, Nigeria Postal Service (NIPOST), Nigeria Customs Service, Galaxy Backbone, Nigeria Immigration Service, security operatives and several Internet Service Providers (ISP).

He added that the satellite, which has capacity to cover over 40 African countries, has already got a request from Ghana to supply two transponders. Other countries that have expressed interest in the facility, according to him, include Sierra Leone, Congo Brazzaville, Kenya, Angola, South Africa and six European nations. By facilitating access to e-education, Ahmed-Rufai said study materials would be made available to about 78 universities in the country via the company's e-Library project, expected to take off in June 2012. To forestall possible failure of the satellite, Ahmed-Rufai disclosed that in the next couple of years, two satellites will be launched to act as back up to the NigComSat-1R. According to him, the first of the satellites, the NigComSat-2 will be launched 30 months from now, while the other, the NigComSat-3, will be launched one year after the launch of the first.

Two NASA satellites see tropical storm Chanda in Madagascar

The Tropical Rainfall Measuring Mission (TRMM) satellite has been collecting data that improves understanding of rainfall in the tropics since its launch in 1997. The satellite also provides timely data about the development of tropical cyclones. When Tropical Cyclone Chanda was raining on the coast of Madagascar, TRMM measured its rainfall on January 8, 2012 at 2213 UTC. Data from TRMM's Precipitation Radar (PR) and Microwave Imager (TMI) instruments shows that Chanda was dropping light to moderate rainfall over large areas of southern Madagascar. Deadly tropical cyclones often hit Madagascar but tropical storm Chanda isn't going to one of them. It is predicted to dissipate to a tropical depression it moves further inland. Chanda was a minimum tropical storm when TRMM passed overhead on January 8, with maximum sustained winds near 35 knots (40 mph) as it moved southeast across the Mozambique Channel.

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

| Date	Location	Event
February 2012		
5-7 February 2012	Madhya Pradesh, India	**3rd International Conference on Climate Change and Sustainable Management of Natural Resources**
9-10 February 2012	Tunis, Tunisia	**Infrastructure Planning and Management in North Africa: Geospatial Data Applications and Technology**
March 2012		
5-7 March 2012	Valencia, Spain	**INTED2012 (6th International Technology, Education and Development Conference**
17-18 March 2012	Singapore, Singapore	**International Congress on Informatics, Environment, Energy and Applications (IEEA 2012),** Enquiries: ieea@sciei.org.
21-24 March 2012	Kampala Uganda	**ICT for Africa 2012**, Theme: Africa's E-Inclusion: Defying the Odds and Leading the Way in Global ICT Innovation
26-29 March 2012	London, UK	**Global-Change Open Science Conference**: Planet Under Pressure: New knowledge towards solutions
26-30 March 2012	Tunis, Tunisia	**GeoTunis, The International Congress Geotunis 2012**, "The use and applications of GIS, remote sensing and digital modeling in environment, management of natural resources and hazards"
April 2012		
16-18 April 2012	Hohenheim University, Germany	**International conference on Sustainable Land Use and Rural Development in Mountain Areas**
24-27 April 2012	Avignon France	**AGILE 2012: Bridging the Geographic Information Sciences**
May 2012		

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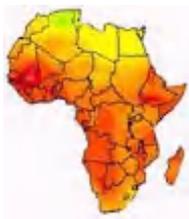
![GSDI - Global Spatial Data Infrastructure]

7-9 May 2012	Rio de Janeiro, Brazil	**4th International Conference on GEographic Object Based Image Analysis (GEOBIA) 2012**
14-17 May 2012	Québec City, Canada	**Call for Papers: Global Geospatial Conference 2012**, GSDI World Conference, 14th GEOIDE Scientific Conference, Canadian Geomatics Conference and 7th 3D GeoInfo Conference.
21-23 May 2012	Boston, Massachusetts	**Global Conference on Oceans, Climate and Security** Call for Abstracts: Deadline 15 October 2011.
21-27 May 2012	Vilnius, Lithuania	**12th World Congress on Environmental Health: New Technologies, Healthy Human Being and Environment**
13-18 May 2012	Dublin, Ireland	**IWA World Congress on Water, Climate & Energy 2012**
14-16 May 2012	Rio de Janeiro, Brazil	**UN Conference on Sustainable Development (INCSD), Rio+20**
21-23 May 2012	Boston, USA	**Global Conference on Oceans, Climate and Security**
23-24 May 2012	Taza, Morocco	**International conference of GIS users, Taza GIS-Days 2012**
23-25 May 2012	Cotonou, Benin	**eLearning Africa**
28-30 May 2012		**International Conference on Green Technology & Ecosystems for Global Sustainable Development**
June 2012		
13-15 June 2012	Columbia University, New York	**ICELW 2012 - The Fifth Annual International Conference on E-learning in the Workplace**
18-22. June 2012	Albena, Bulgaria	**4th International Conference on Cartography and GIS & EU Seminar on EW & CM**, Deadline for abstract submission is 10. January 2012.
July 2012		
2-6 July 2012	Galle, Sri Lanka	**MMM3: Meeting on mangrove ecology, functioning and management**
3-6 July 2012	Sundvolden Hotel, Oslo	**3rd International Statistical Ecology Conference (ISEC2012)**, Abstract submission deadline: 20 January 2012
3-6 July 2012	Salzburg, Austria	**Geomatics Forum, Linking GEovisualisation, Society and Learning**
6-8 July 2012	Cairo, Egypt	**10th International Internet Education Conference and Exhibition**
8-12 July 2012	San Diego, California USA	**ESRI User Conference**
16-21 July 2012	Obergurgl, Austria	**ESF research conference: Energy Landscapes** - Grants to attend
August 2012		
2-10 August 2012	Brisbane, Australia	**34th International Geological Congress**
5-7 August 2012	Kampala, Uganda	**8th Annual International Conference on Computing and ICT Research**
5-10 August 2012	Brisbane, Australia	**34th Session of the International Geological Congress (IGC 34)** Enquiries: info@34igc.org.
22-25 August 2012	Freiburg Germany	**Experience-based Geography Learning, IGU-CGE Precongress**
26-30 Aug 2012	Köln, Germany	**32nd IGU International Congress**, University of Cologne, Theme: 'Down to Earth'
29-31 August 2012	University of Basel, Switzerland	**Third International Sustainability Conference ISC 2012**, Theme "Strategies for Sustainability: Institutional and Organisational Challenges"
September 2012		
3-5 September 2012	Gaborone, Botswana	**2nd IASTED African Conference on Health Informatics**
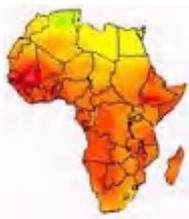
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5-7 September 2012	Gaborone, Botswana	**International Conference on Water Resources Management**
16-18 September 2012	Columbus, Ohio, USA	**AutoCarto 2012, an international research symposium on computer-based cartography**
30 September–5 October 2012	Columbus, Ohio, USA	**EcoSummit 2012, Ecological Sustainability: Restoring the Planet's Ecosystem Services**. Abstract submission deadline, 20 January 2012
October 2012		
15-19 October 2012	Chengdu, China	**International Conference on Mountain Environment and Development**
29 October-2 November 2012	El.Jadida, Morocco	**AARSE 2012 International Conference**, Theme: Earth Observation & Geo-information Sciences for Environment and Development in Africa: Global Vision and Local Action Synergy. Abstract submission - 2 January to 30 April 2012.
November 2012		
December 2012		
2013		
8-12 July 2013	San Diego, USA	**ESRI International User Conference**
2015	Durban, South Africa	**14th World Forestry Congress for SA**
1-31 August 2016	Cape Town, South Africa	**35th International Geological Congress**. Registration deadline: 30 June 2016.

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