

Spatial Data Infrastructure – Africa Newsletter



SDI-Africa Newsletter

December 2009

Vol. 8, No. 12

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@rcmrld.org or gojwang@rcmrld.org

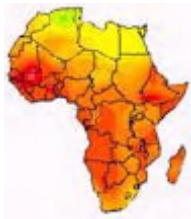


Input to this Issue

Thank you to Kate Lance, NASA/SERVIR-Africa (USA); Hussein Farah, RCMRD (Kenya); Muya Kamamia, RCMRD (Kenya); Yewondwossen Assefa, DM Solutions (Canada); Yolanda Ughini, Molecular Diversity Preservation International (MDPI) (Switzerland); Nadine Laporte, Woods Hole Research Center (USA), and Adam Bausch, Woods Hole Research Center (USA) for their contributions to this issue of the newsletter.

Message from the Editor

Best wishes and happy New Year 2010 to all our esteemed readers. And thanks you to everyone who contributed news items and other geospatial information in 2009. For the year 2010, I request everyone who appreciates the content of the SDI-Africa newsletters to take a little time to share news items with the geospatial community, especially the concerns of Africa for upcoming issues. You just need a few minutes to send a useful URL, workshop summary, announcement of an upcoming event, or an article on research or practical implementation of GIS and remote sensing applications within your profession, organization or country. This will go along way in enhancing the gains already achieved through the application of geospatial technology and research for sustainable development in Africa. Thank you, Gordon Ojwang'.



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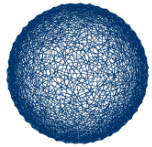


SDI News, Links, Papers, Presentations

[Become Founding Member of International Geospatial Society](#)

The International Geospatial Society is a new venture of the GSDI Association to establish and support an international community of individual specialists and professionals with geospatial, spatial data infrastructure, GIS and related interests. The goal is to engage and enhance communications internationally among individuals that are actively involved in promoting, developing, or advancing spatial data infrastructure and affiliated concepts. The benefits of joining are listed at <http://geospatialsociety.org> or <http://www.igeoss.org>. Join now to have a voice and be actively engaged in developing the bylaws and operating procedures. Those joining in 2009 are being recorded as founding members. The usual annual due is US\$ 50 for individuals and US\$ 25 for students. If you would like to be recorded as a founding member, please choose one of the options at <http://www.igeoss.org/join> because there are only a months left to provide you with a discount for the 2009 founding membership if you also pay your dues for 2010. Please [join](#) us in this new and exciting international venture! Abbas Rajabifard, President, GSDI Association, abbas.r@unimelb.edu.au.

[United Nations Framework Convention on Climate Change](#)



COP15
COPENHAGEN
UNITED NATIONS CLIMATE CHANGE CONFERENCE 2009

The United Nations climate change conference in Copenhagen (COP 15) will be a turning point in the fight to prevent climate disaster. The science demands it, the economics support it, and future generations require it. In early December, negotiators, ministers and world leaders will assemble in the Danish capital to give the people of all nations a strong answer to this common, global threat of climate change. At Copenhagen, governments must reach agreement on all the essential elements of a comprehensive, fair and effective deal on climate change that both ensures long-term commitments and launches immediate action. We have the opportunity now to shape our common future and that of generations to come, for the better. Climate change is a terrible threat, but beating climate change is a historic opportunity to turn humanity onto a path of sustainable growth for everyone. The solutions to climate change will vitalize economies, stabilize environments, and build secure, fairer, more innovative societies. Not only must we act, it makes no sense not to act. In September, at the UN climate change summit in New York, over 100 world leaders stood up and committed to seal a successful Copenhagen climate deal. The world now expects its leaders and the negotiations to deliver the ambitious outcome needed to turn the tide.

Sincere gratitude has been expressed to the Danish government for its generous invitation to host this fifteenth United Nations Climate Change Conference in Copenhagen and the enormous commitment and work it has shown to make it a success. The time for climate action is now, at Copenhagen.

[Kenya: 10th edition of the Kenya National Spatial Data Infrastructure Newsletter](#)

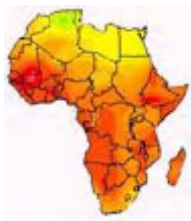
The Kenya National Spatial Data Infrastructure ([KNSDI](#)) is a national initiative to provide better access for all Kenyans to essential information about our national resources. It aims to ensure that users of this information will be able to acquire consistent datasets to meet their requirements, even though the data is collected and maintained by different stakeholders.

[Proceedings of KNSDI Policy Workshop](#), held 19 August 2009, Nairobi, Kenya

An overview of the draft was presented and the stakeholders presented their views on the policy document. Prof. Mulaku introduced the team of experts he was working with and explained how the document was split into four parts to refine it to the current 17 page draft. It involved nine issues as tabled in the document. Prof. Mulaku led the participants to read through the document with the assistance of Mr. Muturi. He requested that the Institution of Surveyors of Kenya (ISK) that was missing be added. Further corrections were made on the document, mainly involving definitions and semantics on the below issues: Standards, Metadata, Legal Framework, Copyright issues, Pricing, and Data access and security. On closing remarks, the Director of Surveys emphasized the importance of a KNSDI Policy and clearing house, and further pointed out the role of the Ministry of Lands as the lead agency, whose role should be clearly specified in the policy document.

[New lands policy document proposes taxation of idle land](#)

Kenya's wealthy land owners will no longer be able to hold on to vast tracts of under-utilized land when the new lands policy takes effect. It proposes a raft of measures aimed at ensuring land is put to productive use,



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including taxation of idle land. The policy aims at correcting historical injustices, including a lopsided system of land tenure inherited from the colonial administration. The proposed taxation of large tracts of idle land is expected to boost productivity by reducing the temptation to hold on to large under-utilised land. The policy also seeks to ensure greater transparency in land acquisition. It takes away the power to allocate land from the Commissioner of Lands and vests it in the National Land Commission. "The policy aims to demystify the subject of land and dignify land ownership so that people no longer have to talk about their holdings in low tones," Lands PS Dorothy Angote said.

The new land laws would also address the land tenure system at the Kenyan coast, a region that has been the worst hit by the lack of an effective land policy. Coast Province has the largest concentration of landless people in the country, a legacy of colonial laws that did not allow locals to hold titles to land. The law was never changed by successive post-independence governments. The proposed policy calls for an inventory of land in areas with a heavy squatter population across the province. This should be followed by "appropriate constitutional and legal amendments for repossession of land that is unoccupied, abandoned, mismanaged and underdeveloped for the purpose of redistribution to the indigenous occupants". Local residents cite the lack of access to beaches and fishing landing sites as growing problems. The draft legislation calls for all access roads to beaches to be open to the public and the establishment of convenient utility plots to serve as boat landing sites. Owners of beach plots who have freehold titles (absolute proprietorship) will be required to convert those into 99-year leases. The policy argues the Coast deserves special attention due to the "peculiar legal and historical" circumstances surrounding tenure in the province and says only systematic reforms can defuse the "potentially explosive" land issue there.

[Digitization of land records to attack rot at Kenya's land Ministry](#)



A land information management system is being implemented, and officials say many records in the ministry's custody will be computerized by the middle of next year. The update is expected to make it easier for citizens to access information on land through the automated system without having to bribe clerks and pay brokers at the ministry. The project, sponsored in part by Sweden, is one of the centerpieces of the national land policy, which was approved by the Cabinet in June. The

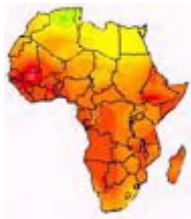
computerization project is being implemented in a partnership between the Lands ministry, the Information, Communication and Technology board and the Swedish development agency Sida. If the government sticks to established timelines, the project will represent a sea change in the management of land in the country. A sessional paper on the subject is expected to be brought to Parliament soon. According to a government official who offered consultancy services to a group of civil society members who were active in the formulation of the new land policy, corruption networks at the Lands ministry are among the most entrenched in any government agency.

Lands Permanent Secretary Dorothy Angote told the *Sunday Nation* the new policy represents the most comprehensive attempt to refashion the nation's land laws since independence. "This will give us a systematic platform for addressing issues such as access to land, land use planning and historical injustices," she said. "We will replace an outdated legal and institutional framework which we inherited from the colonial administration and which we have not changed since." Land reform is one of the key objectives of the Agenda Four changes proposed by the panel of eminent personalities led by former UN secretary-general Kofi Annan that negotiated an end to last year's post-election stalemate. An effort is also under way to create a national cadastre, a comprehensive official register of the extent, value and ownership of all the land in Kenya. Land information management system will make a significant difference to ordinary citizens since too much effort is wasted chasing information, while a national, digitized database would make a world of difference [Source: Sunday Nation].

[Current status of GIS in the Sudan](#) (October 2009)

This report, prepared by Abdullah Elsadig Ali, Director General, Sudan National Survey Authority, Khartoum, focuses on a study and assessment of mapping and GIS status in the Sudan. The report is part of PhD research to design and develop an enterprise geo-spatial system for Khartoum State. The conclusion states that "GIS status in Sudan is far from satisfactory" and recommends the development of an approach and standards to help GIS implementation within organizations.

[Lack of resources hinders project implementation in Botswana](#)



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Director of the Department of Surveys and Mapping ([DSM](#)), Mr Geoffrey Habana says lack of resources has impacted negatively on his departments project implement. Speaking during a one-day map users workshop in early November 2009, Mr Habana said resource constraints hinder them in their efforts to conclude some of their projects. However he noted that they usually prioritise and determine what could be possible under the circumstances. Mr Habana said the workshop was one of their major communicating tools to reach out to the stakeholders to discuss issues of concern, achievements and the planned activities for the NDP 10. He noted that the purpose of the workshop was to also access and prioritise the stakeholders needs based on their planned mapping activities in accordance with the budget of his department. Mr Habana said their mandate is to provide possible resources and services to citizens and visitors of this country in the form of maps. He explained that DSM has for the past three years undertaken three major projects covering the national mapping programme. He referred to integrated geographic information systems project which was completed in 2007, the digital color aerial photography for 100 settlements as well as orthophoto maps for the same settlements acquired whilst the establishment of a remote sensing infrastructure project was completed in 2008.

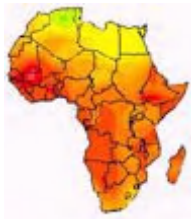
When presenting on the NDP10 projects, the DSM principal surveyor, Ms Lucy Phalaagae explained that DSM has planned to acquire satellite imagery for the entire country in order to enhance the remote sensing infrastructure. Ms Phalaagae said the satellite imagery data will be used to update the national topographic mapping series at 1:50 000 as well as the production of land cover or land use map which will be an added product. Other DSM NDP10 projects include the revision of the national Atlas, production of settlement mapping, and production of medium scale mapping, acquisition of aerial photography, national spatial data infrastructure and the enhancement of the remote sensing facility. Ms Phalaagae noted that map users meetings seek to solicit information on the users needs in order to provide the best possible solutions and to provide the expertise on type of mapping required. She added that DSM is mandated to survey and produce mapping for the whole country, thus it needs to be informed of any type of mapping to be carried out to avoid duplication as specified in the Land Survey Act.

South Africa: Land use classification workshop

Land use data is important to many programmes and processes conducted by different spheres of government in South Africa. Currently, there are numerous incompatible and inconsistent classifications in use. The uniform classification of land uses and the corresponding methodology of arriving at a land use dataset are therefore vital to ensure the creation of a national land use dataset that is compatible with datasets derived at local and district level. The Chief Directorate: National Geo-spatial Information (CD:NGI) of the Department of Rural Development & Land Reform held workshops in Cape Town, Pretoria, Pietermaritzburg and East London to discuss the National Land Use Classification and Methodology initiative. Various organisations and government departments were identified as key stakeholders in the process, and were invited to attend and participate in the workshops which were facilitated by GeoTerraImage (Stuart Martin) and GIS Global Image (Werner Fourie). CD:NGI is in the process of developing a National Land Use and Land Cover Classification System and Methodology. In 2008, a National Land Cover Classification system was agreed on and work has already commenced on the development of a standard and methodology (which is envisaged to be completed by early 2010). In parallel to its land cover initiatives, CD: NGI has embarked on a process to "Develop a Methodology for National Land Use Classification". An overview of international examples of land use classification, namely the Australian Collaborative Land Use Mapping Program (ACLUMP) and the UK's National Land Use Classification (NLUC) was given during the workshop and the South African version was going to be guided more by the UK example. Delegates were presented with copies of the draft [National Land Use Classification and Methodology](#) which consists of 14 main classes and 47 sub classes in a lookup table with 448 potential sources. In the interim, all interested parties are requested to email Aslam Parker at aparker@sli.wcape.gov.za with comments, concerns and suggestions to ensure that the final document can adequately meet the needs of all stakeholders.

South Africa: Address standards workshop

The South African Bureau of Standards (SABS) officially launched the South African Address Standard, SANS 1883, on 15 and 16 October 2009 at Gallagher Estate in Midrand. SABS through the Standards South Africa sub committee SC 71E Information Technology – Geographic Information, and various organisations in both the public and private sectors prepared the series of standards. The series defines the data elements of addresses, and how the data elements are combined to make up different address types e.g. informal



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addresses, street addresses, landmark addresses, etc. It also provides guidelines on how address data are stored in databases, to enable interoperability between address datasets, and gives guidance on how to allocate and maintain addresses in the form of a list of recommendations, e.g. a street name can only change at an intersection. A panel discussion on the implementation of the address standards into the South African environment was held. Representatives on the panel included Steven Canter (Nelson Mandela Municipality), Retha van Wyk (City of Johannesburg), Marike Brown (City of Tshwane), Melanie du Plessis (IEC), Sharthi Laldaparsad (StatsSA), Sarel Naude (SITA), Marius van der Merwe (AfriGIS), Arjen van Zwieten (Prosource), and Pierre Rossouw (Post Office). The panel discussed issues on how the new address standard would be implemented in the South African environment, custodianship of national address data and how this would be governed. A discussion led by Dr. Coetzee addressed the guidelines and requirements for the storage of addresses in databases; data transfer, exchange and interoperability and a presentation on the international importance of addresses and South Africa's contribution to the ISO Addressing stage zero project. She gave an overview of ISO 19160, its background, progress to date and the parties involved. See the [SABS workshop presentations](#) and [South African Address Standard: SANS 1883](#). For further information, contact: Serena Coetzee at scoetzee@cs.up.ac.za or Grantham Daniels at danielgd@sabs.co.za.

[Nigeria set to launch Nigeria Sat-2 in 2010](#)

At a press conference on September 30th, the Director General of the National Space Research and Development Agency (NASRDA) Dr. Seidu Mohammed disclosed that Nigeria's spacecraft, NigeriaSat -2, will be launched in the first quarter of 2010. The spacecraft which has a 2.5m high spatial resolution sensor as a strength point will be operated by Nigerian engineers and scientists who have concluded training abroad and returned home. The second satellite was a follow up to the manifestation of the strong technological innovation behind the design and implementation of the satellite system called NigeriaSat-1 which was launched on September 27, 2003 with a lifespan of five years. The professionals who trained abroad were said to have successfully designed and built an experimental satellite called NigeriaSat-X which will be launched along with NigeriaSat-2. NigeriaSat-1 is currently in its sixth year in orbit.

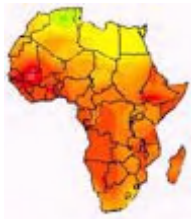
The satellite is a medium resolution multi-spectral low orbiting sun synchronous satellite. The satellite is part of the world-wide Disaster Monitoring Constellation System. Images of the country obtained from the satellite are beamed back to the control station for use by the Government. It can be used for demographic uses such as mapping and planning of population surveys, census enumeration areas, as well as mapping, planning and monitoring of rural and urban growth and to give advance warnings of natural disasters like floods, earthquakes, volcanic eruptions and storms. It can also be used to avoid or manage occurrence of man-made disasters like oil pollution, desertification, erosion, forest fire, and deforestation. In agriculture, it's used for mapping, land use planning, and management of sustainable grazing, forest logging, planning afforestation programmes, crop inventory and yield forecast.

[Nigeria: Lagos State completes Continuously Operating Reference Station](#)

The Executive Governor of Lagos State, Nigeria accepted on 19 October 2009 the completion of the State's first operational Continuously Operating Reference Station by the Nigerian based company – GeoQinetiq Limited. With this system, Lagos State Government has blazed a trail in establishing world-class, ultra modern technologies to provide a solid basis for the transformation of the State and providing the technological foundations for successful implementation of the Lagos Mega City Project. In the words of the Managing Director of the company – Juliet Ezechie, "this initiative will help build a new Lagos infrastructure; help in tackling land management, poor town planning practices and contribute to alleviating road congestion, road safety, and improving public transport".

[First IES-FAO regional forestry and remote sensing workshops](#)

The IES produced extensive draft tree-cover results for sample sites in tropical countries (in Africa, Brazil and Indonesia), which form the basis for a first set of workshops to train forestry and remote sensing experts from these countries on how to interpret and validate such maps. The first regional workshops in Africa were organised by the IES with support from the FAO (the UN Food and Agriculture Organisation) in September and October. Participants from eight countries in Central Africa came for a 2-week workshop in Kinshasa, Democratic Republic of Congo (co-organised by University of Louvain) and nine participants from countries in Eastern and Southern Africa took part in a 1-week workshop in Nairobi, Kenya. A 2-week workshop with experts from the Forest Services of Indonesia and a 1-week workshop with experts from the Brazilian



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Agricultural Agency were held at the IES in October. The next workshop was scheduled in Campinas, Brazil in November 2009, and other countries will be involved in training in 2010. [Source: Institute IES Monthly Report, October 2009]

[Swiss-South Africa Joint Scientific Conference: Towards sustainable fine resolution hydroecological observatories in Southern African mountains](#), 2-6 November 2009, Zernez and Lausanne, Switzerland

The seminar was organized to initiate international collaboration, including the planned establishment of a network of permanent hydro-ecological observatories in southern African mountains. The idea is to 'import' Swiss knowledge, skills and expertise that can enable South African scientists to establish a world class observational network, and will ensure sustainable international technical and research collaboration in future.

AMESD Steering Committee meeting in Abuja

At the AMESD ([African Monitoring of the Environment for Sustainable Development](#)) Steering Committee meeting held in Nigeria on 5-9 October 2009, the delegates of 5 Regional Economic Communities of Africa and of the ACP secretariat fully endorsed the approach of the technical assistance group regarding the installation in each African country of at least one "e-station". An e-station is a set of open-source solutions developed by the European Commission Joint Research Center, Institute for Environment and Sustainability (IES), to process and analyse data acquired from local satellite data receiving stations for the purpose of monitoring the environment. In addition, the delegates approved the IES proposal for the training of African staff, both through intensive training sessions in Africa and on-the-job training secondment to JRC Ispra. The e-station will be demonstrated for the first time to the African users at the AMESD Forum taking place in Kinshasa, Democratic Republic of Congo, 1-4 December 2009). [Source: Institute IES Monthly Report, October 2009]

[Marine management in Africa](#)

In support of the ACP Observatory Thematic Programme, the European Commission Joint Research Center, Institute for Environment and Sustainability (IES) organized a 2-week training course (12-23 October 2009) in Zanzibar on "Methods and Applications of Ocean Colour Remote Sensing in African Coastal and Regional Seas", hosted by the Institute of Marine Sciences, University of Dar-Es Salaam. The training course was designed to provide the theory behind space-based optical radiometry, key two applications in coastal management and the protection of marine ecosystems. It represents an important achievement in the frame of the International Chlorophyll Global Integrated Network ([ChloroGIN](#)), a contribution identified by the Ecosystems Societal Benefit Area in the Global Earth Observation (GEO) workplan. These courses could become an essential component of GMES (Global Monitoring for the Environment and Security) Africa, consolidating the capacity building network in developing countries. [Source: Institute IES Monthly Report, October 2009]

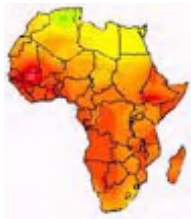
[Additional GEONETCast receivers installed in Africa](#)



The GEONETCast for and by Developing Countries ([DevCoCast](#)) project involves Developing Countries more closely in the GEONETCast initiative. To improve the monitoring of 4 Large Marine Ecosystems (LME) in Africa, EUMETCast satellite receivers are built up or upgraded to operational status at 4 large marine ecosystem monitoring services in Ghana, Namibia, Tanzania, and Senegal:

- University of Ghana, Accra, Ghana for the [Guinea Current LME](#).
- National Marine Institute and Research Centre, Swakopmund, Namibia for the [Benguela Current LME](#)
- Institute of Marine Sciences, Zanzibar, Tanzania for the [Agulhas and Somali Current LME](#)
- Laboratoire d'Enseignement et de Recherche en Geomatique, Senegal for the Canary Current LME

These 4 marine end-users are supported to embed the marine data they receive into their applications. Additional EUMETCast receivers are also built up in 3 pilot national Desert Locust Centres in Eritrea, Mali and Sudan, to support UN-FAO's fight against the Desert Locust in Africa: Centre National de Lutte Contre le Criquet Pélérin, Bamako, Mali Central Institute for Desert Locust Research and Control, Khartoum, Sudan Desert Locust Office of the Ministry of Agriculture, Asmara, Eritrea. This will improve the access and availability of Earth Observation data, including a brand new vegetation greenness product. At one of these



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pilot centres, the usability of both the new product and the broadcasting system will be assessed. [Source: SERVIR-Africa community news]

[2nd Regional Workshop in the Workshop Series of the GEO Coastal Zone Community of Practice \(CZCP\)](#), 15-17 February 2010, Cotonou, Benin

The 2nd regional workshop of the series will focus on the specific needs, challenges and capabilities in the coastal zones of the African region. In contrast to the first workshop, this will provide a first critical assessment of the situation pertaining in tropical coastal countries of the developing world. This will also be the first occasion when attention is paid to the particular issues of coastal mega-cities. The Workshop aims to enlist strong participation from all the coastal countries around Africa. Socio-economic issues will lie at the heart of this African Regional Workshop. The burgeoning coastal population of Africa both looks to the coast for an improved quality of life through, for example, food and shelter, and is most at risk where the resilience of the coast is weak and becomes a key political issue. The capabilities in ocean observation and forecasting are fairly well-known, and it will be fairly easy to collect that information prior to the workshop by tasking sponsored conference attendees from each participating country to submit a 2-3 page white paper on the state of coastal observing capabilities in their individual countries. New knowledge on coastal vulnerability on the regional and continental scale has also recently become available (www.africanmarineatlas.net). However, much less is known about the capabilities in decision-making and coastal zone management, in particular those aspects dealing with the terrestrial issues (runoff, erosion rates, sedimentation, etc.). A pre-workshop review of these capabilities can make an important regional contribution by serving as a vehicle to bring the land and ocean scientific and regulatory communities together.

[Atlas of Water, 2nd Edition](#)

The new edition of the Atlas of Water shows water distribution worldwide and reflects the latest thinking and emerging issues. It includes new maps on climate change, water for tourism, dam construction, biodiversity, and water management, commerce and legislation. With snapshots of especially vulnerable areas and major polluters as well the global picture, this is a resource for general readers as well as policy makers and students. See: [water shortage map](#), [water footprint map](#), [floods map](#).

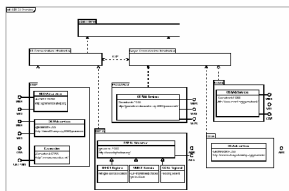
[African universities need affordable and reliable broadband](#)

Most universities in Africa pay about 100 times as much for the Internet as do those in Canada. With the click of a mouse, students at Canadian universities find information quickly and download what they need at high speeds. They could not imagine doing research without using the Internet to supplement material from their university library. But it's a different story in most parts of Africa, where limited library collections make access to the Internet even more critical for research, yet that access is harder to come by. The bandwidth available to the average African university roughly equals that of a single Canadian home. Canada's International Development Research Centre (IDRC) is working to help solve this problem. For four decades, IDRC has been at the forefront of Canadian efforts to increase scientific and technological capabilities in the developing world.

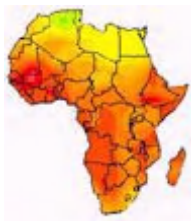
[Notes \(by representative on UNGEGN\) on 10th UNGIWG Plenary Meeting](#), held October 19-21, 2009 at United Nations Premises, Bonn, Germany

The United Nations Geographical Information Working Group ([UNGIWG](#)) is a network of professionals working in the fields of cartography and geographic information science to building the UN Spatial Data Infrastructure needed to achieve sustainable development. UNGIWG was formed in 2000 to address common geospatial issues - maps, boundaries, data exchange, standards - that affect the work of UN Organizations and Member States.

[SDI in East Africa - Leveraging the UN presence](#)



During 2007, East Africa has been the venue for an attempt to field-test the principles of spatial data infrastructures (SDIs). The effort has involved a self motivated group of United Nations (UN) offices and programmes, and their partners amongst the non-governmental organizations, inter-governmental organizations, regional research institutions, and academia and beyond. The motivation for the exercise arises from the on-going definition of a United Nations Spatial Data Infrastructure (UNSDI) coupled with the recognition that there is little



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practical basis upon which to base such design, especially in the case of the governance structures necessary to sustain a co-dependent community of institutions that are building business applications over each others' data and services. A number of key points distinguish SDI-East Africa (SDI-EA) from equivalent ones occurring in more economically developed countries or regions in that it lacks top-down mandate or authority; there is a wide variety of institutional and legal frameworks governing data and service provision; the breadth and disparity of technical capability and infrastructure amongst the participants; the serious and pressing needs driving applications in areas as diverse as humanitarian response and protection, food security, and social and environmental vulnerability and adaptation to global climate change. The lesson emerging is that the constraints limiting effective SDI implementation are less to do with communications and technical infrastructure, and far more related to institutional misapprehension, "mission lock" and mistrust. Effective strategies for outreach, policy development and capacity building are considered. [Source: *International Journal of Spatial Data Infrastructures Research*, 2009, Vol. 4, 1-23]

Annual AFREF and GNSS Data Processing Course held at RCMRD in August 2009



African Geodetic Reference Frame (AFREF) and GNSS data processing course has been held at RCMRD in Nairobi annually every August since 2006. The fourth AFREF and GNSS data processing course took place from 24 August - 4 September 2009. The course had 21 participants from drawn from Algeria, Botswana, Ethiopia, Kenya, Lesotho, Malawi, Mozambique, Namibia, Sudan, South Africa, Tanzania, Uganda, Zanzibar and Zambia. The course was jointly conducted by RCMRD, Hartebeesthoek Radio Astronomy Observatory (HARTRAO) South Africa and Directorate of Surveys & Mapping,

of South Africa. The course is intended to sensitize and build capacity within Africa and particularly National Mapping Organizations to enable Africans to AFREF. AFREF project is an African initiative with support of African Union, UN ECA and IGS through its collaborating international organizations including International Association of Geodesy (IAG). When fully implemented, AFREF would be fully consistent with the International Terrestrial Reference Frame (ITRF) Standards. It will consist of a network of continuous, permanent GNSS stations such that a user anywhere in Africa would have free access to the generated data and would be, at most, 500km from such stations. The following areas were covered during the course:

- Concepts and progress of AFREF implementation and country reports on Implementation of AFREF
- Concepts of space positioning, GNSS and Global Positioning Systems(GPS)
- Reference Systems, African Datum s, International Terrestrial Reference System(ITRS) and Frame(ITRF realizations), datum transformations, and geodetic network design Installation and maintenance of continuously operating GNSS base stations and networks
- GNSS data formats and conversions, use of International GNSS Service(IGS) data and product, expected AFREF data and products
- African/National Geoids and GPS leveling Online GNSS data processing, and Post processing
- Plan, and carry out static GNSS observations using different GNSS receivers, download GNSS receiver format data, convert to receiver to Receiver Independent RINEX and post process GNSS data for local datum and coordinate solutions
- Presentation of the case of TRIGNET of South Africa.

The course is both theoretical and hands on particularly on handling of GNSS equipment and data processing. Over the years and this year, RCMRD, the secretariat and conveners of AFREF has been sponsoring the AFREF course with support from University of Beira Interior, Portugal, HARTRAO, South Africa, Directorate of Surveys & Mapping of South Africa, and IGS through UNAVCO, Trimble Navigations, TOPCON Europe and UNOOSA. RCMRD is particularly pleased to welcome UNOOSA for joining AFREF course supporting group this year and we look forward to their continued support. For further information, contact Muya Kamamia or AFREF Secretariat at afref@rcmrd.org or muyack@rcmrd.org. [Source: AFREF NewsLetter No.10]

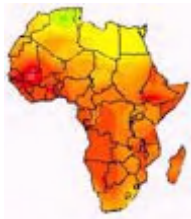
Status of AFREF in various African countries



Zambia:

Zambia has one Base station at Lusaka. She has undertaken GPS campaign on 41 zero order trig stations across the country and subsequent transformation parameters have hence been computed.

Namibia:



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In line with new demands from the user community as well as international modern trends, the Directorate of Survey and Mapping has in recent years embarked on an exercise to upgrade the current geodetic network to a new system based on the International Terrestrial Reference Frame (ITRF). This effort also complements the initiative for the establishment of a common African Geodetic Reference Frame (AFREF). To date a zero order network of 22 trig stations has been established, GPS observations carried out and computed based on ITRF 2000, epoch 2005. Densification of zero order networks is currently going with Construction of the first 32 first order monuments having been completed. GPS observations are yet to be carried out but it is the desire of the Namibia to do this soon and provide ITRF solution to first network including orthometric heights.

Tanzania:

Tanzania through World Bank program on land reform is in the process of implementing Tanzania Reference Frame in line with (TAREF) toward realization of AFREF. To date in consultation with world Bank consultant and local stakeholders and surveyors, Tanzania has already agreed and planned on the levels and distribution of the network as follows; zero, first and second order network. Zero Order networks of 13 stations have been proposed which includes a small number of Continuously Operating Reference Stations, CORS. The First Order Network shall consists of 72 pillar stations, one for each one degree-by-one degree cell over Tanzania The second order network shall be the densification of the First Order Network which has an average inters station distance of 110 km to 40 km. This level of densification shall allow kinematics and L1 only GPS surveying to be undertaken across Tanzania. The densification generates, on average, 8 additional GPS stations per one degree grid cell, or some 600 odd stations across the length and breadth of Tanzania.

Rwanda:

New IGS station NURK has been added to the IGS Network in March 2009 located in Kigali, National University of Rwanda, Africa. It is operated by the Geographic Information Systems & Remote Sensing Centre. Station NURK is a true GNSS station transmitting both GPS and GLONASS data. [Source: AFREF Secretariat, afref@rcmr.org]

[Kenya hosts 43rd Governing Council Conference for the Regional Centre for Mapping of Resources for Development \(RCMRD\)](#)

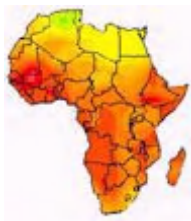
Kenya hosted the 43rd Governing Council Conference for the Regional Centre for Mapping of Resources for Development (RCMRD) in Mombasa from 9th-14th November 2009. The objective of the Conference was to enhance Mapping Technology in the East, Central and Southern African Region. Kenya is a member of the Regional Centre which offers facilities of Geo-Information Resource Surveys and Monitoring to Member States. The Ministry of Lands, which is the co-convenor of the Conference, is in the process of putting up a Remote Sensing and Geographical Information System (GIS) through the Department of Surveys. The Ministry is already spearheading the development of the Kenyan National Spatial Data Infrastructure (KNSDI) with various sectors and has adopted a Draft KNSDI Policy to be presented to the Cabinet. KNSDI is expected to facilitate access to Spatial Data and to ease the retrieval of Geographical Information for users. The Regional Centre is also assisting the Ministry to establish Cadastral and Topographical Databases and to put up a Hydrographic Office. This system will allow ordinary citizens to access Geo-Information at the touch of a button. It will be a landmark in Kenya's history. Countries in Eastern, Central and Southern Africa were represented at the Conference that focussed on environmental issues, Geo-Information, marine resources and the Strategic Plan for the Regional Centre. The conference was attended by senior government officials.

[Impressions of AfricaGIS'09 in the blogosphere](#)



AFRICAGIS is one of the leading geospatial conferences in Africa and provides a platform where geo-information professionals from Africa and around the world come together to learn and interact about geo-information technology and its applications. In 2009, [the conference](#), was held in Kampala, Uganda, from October 25th to 30th. Several participants posted blogs about their impressions of the conference:

- [Recap of AfricaGIS: A Geospatial Technology Conference](#) \ [AfricaGIS](#) (AGCommons blog)
- [WhereCampAfrica](#), a side event held at AFRICAGIS, was attended by over 40 people with many more visiting throughout the day. Software developers from Appfrica Labs, the Development Seed, Grameen App Labs and DM Solutions mixed with students, GIS professionals, and government agencies.
- [Google Geo University comes to Uganda](#)



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- [OpenStreetMap enables rural development projects in Uganda](#)

Robert Soden of US communications firm Development Seed has been working with some development groups working in [Bigoda](#), a small Ugandan village, who are now using OpenStreetMap and Quantum GIS to map out the village. While maps of the area had been made before, they tended to get lost when their creator moved on from the project. By storing the mapping data in OpenStreetMap, it's there for everyone to use at any time. No server is needed in the village just to map it, and anyone can help improve it. You can see the [early results](#) for yourself. [Source: SERVIR-Africa community news]

[2nd Conservation-GIS Conference: Our Environment - Our Future, Using GIS technologies to Ensure Sustainable Futures](#), 9-10 December, 2009, Nairobi

The Society for Conservation GIS (SCGIS), Kenya chapter invites you to the 2nd Conservation-GIS conference to be held in Nairobi at Lenana House Conference Centre (on Lenana Road, Hurlingham) from 9-10 December, 2009. The conference is open to conservationists, environmentalists and GIS practitioners/enthusiasts who would want to enhance their conservation efforts through application of appropriate GIS technologies. The theme for the conference is Our Environment - Our Futures, using GIS technologies to ensure sustainable futures. Subthemes are:

- Our changing environment
- Understanding Climate and Land use Change
- Mapping Sustainable Futures
- GIS for Environmental Management
- GIS Education opportunities

Registration for participation is KShs 500 per person only. Those coming from out of Nairobi may apply for limited support. There will be technical training sessions within the conference and an optional training workshop on December 11, 2009. Details will be sent to registered Conference Participants. Those who would like to present posters or reserve space in the Exhibitor section, contact: info@scgiskenya.org for more information.

[17th Session of the African Forestry and Wildlife Commission and 1st African Forestry and Wildlife Week](#), 22-26 February, 2010, Brazzaville, Republic of Congo

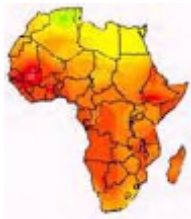
At the kind invitation of the Government of the Republic of Congo, the Seventeenth Session of the African Forestry and Wildlife Commission (AFWC) will be held in Brazzaville, Republic of Congo. For the first time ever, the African Forestry and Wildlife Commission will observe an African Forestry and Wildlife Week (AFWC), simultaneously with its meeting. The theme selected for the AFWC 17 and FFAW1 is: "African Forests and Wildlife: Response to the Challenges of Sustainable Livelihood Systems". Secretariat Notes will be prepared by FAO and made available before the Meeting. These and other information regarding the 17th AFWC and the 1st AFWW, as well as the session registration form, will be accessible at the Commission's at www.fao.org/forestry/afwc. For further information: afwc@fao.org or fax to +233 21 7010943. For more information download the [Session Brochure](#).

[4th Session of the International Congress Geo Tunisia 2009](#), 16-20 December 2009, Tunisia

Under the high patronage of Mr. Zine El Abidine Ben Ali, President of the Tunisian Republic, The Tunisian Association of Digital Geographic Information and in cooperation with an important number of universities, organizations, companies and institutions concerned with geographic information systems and spaces sciences, is organizing the 4th Session of the International Congress Geo Tunisia 2009. The theme is "Survey of the hydraulic resources and of desertification by using the geographic information systems, remote detection and numeric designing."

[Call for Submissions for COM.Geo 2010 Conference](#), 8-11 June, 2010, Washington, DC, USA

The first International Conference and Exhibition on Computing for Geospatial (COM.Geo 2010) will be held on June 8-11 in Washington, DC. The explosion of computing driven location based applications in the past few years has revolutionized the way we live and work. COM.Geo is an international conference and exhibition on computing for geospatial, which focuses on the latest computing technologies for multidisciplinary research and development that enables the exploration in geospatial. COM.Geo is an exclusive event that connects researchers, developers, scientists, and application users in both computing and geospatial fields. One of the COM.Geo 2010 Conference spotlights is Cloud Computing and Geospatial.



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Submit research or application papers, tech talks, and special sessions, to organize courses and workshops. Suggested topics include all computing, geospatial, and applications.

- Papers include full or short papers. Both can address research or application work.
- Courses can be proposed by scholars or company representatives. A Courses Program will share the very best of computing for geospatial technologies, such as cloud computing for geospatial, business intelligence & GIS, Web GIS, mobile GIS, etc.
- Tech Talks are work in progress, late-breaking research, emerging technologies, case studies, development techniques, student projects, and exhibitor technical talks. Either a regular abstract or an extended abstract can be submitted.
- Invited sessions offer focused discussions on specialized topics in Papers Programs. They can be organized in a specific or a general theme. Proposals are required to submit.
- Workshops proposals are solicited for COM.Geo 2010 in Washington, DC.

Submission deadlines: Full and Short Papers - [February 19, 2010](#), 11:59 PM EST; Courses Proposal - [February 19, 2010](#); Tech Talks Abstract - [March 22, 2010](#), 11:59 PM EST.

Future ESRI International User Conferences in San Diego, California, USA

July 12-16, 2010

July 8-12, 2013

July 11-15, 2011

July 14-18, 2014

July 23-27, 2012

July 2024, 2015

[Africa Gathering: Sharing ideas for positive change](#), 21-22 December 2009, Nairobi, Kenya



Africa Gathering is the event that brings technophiles, thinkers, entrepreneurs, innovators and everybody else together to talk about positive change in sustainable development, technology, social networking, health, education, environment and good governance in Africa. The goal is to help highlight all of the great work being done in the world by Africans and friends of Africa. Innovators and entrepreneurs may also be helped by putting the profits of the events in to some of the projects that the attendees like the most.

As a result, by attending you are not only directly supporting some of Africa's most innovative entrepreneurs and innovators, you are able to meet, network and share ideas with them - helping build confidence and develop interest in Africa-focused initiatives and businesses. Everyone can benefit from this enlightening experience.

- Book & Pay for tickets using PayPal: <http://agnairobi.eventbrite.com> (Not available in Kenya due to PayPal Sanctions). Reserve tickets online in Kenya and pay on the door in Shillings:
- Website: <http://www.africagathering.org>

Contact: The Africa Gathering Team: info@afriagathering.org.

[41st Session of the Statistical Commission](#), 23-26 February 2010, New York, NY, USA

The UN Statistics Division is committed to the advancement of the global statistical system. The Division compiles and disseminates global statistical information, develops standards and norms for statistical activities, and supports countries' efforts to strengthen their national statistical systems. It facilitates the coordination of international statistical activities and supports the functioning of the UN Statistical Commission as the apex entity of the global statistical system.

- [Membership of the Statistical Commission 2010](#)
- [Documents for the Statistical Commission 2010](#)

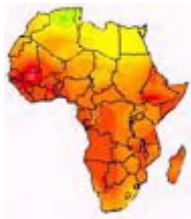
[2nd Open Source GIS UK Conference - OSGIS 2010](#), 21-22 June 2010, Nottingham, UK

The OSGIS conference series has a strong international focus and takes a holistic approach in bringing together speakers and delegates from government, academe, industry and open source communities. High profile speakers are invited for giving presentations and run hands-on workshops for the conference series.

1. Inaugural Presentation - Professor Ari Jolma (Helsinki University of Technology, Finland)
2. Keynote Address - Arnulf Christl (President of the Open Source Geospatial Foundation)
3. Plenary Speaker - Tyler Mitchell (Executive Director of the Open Source Geospatial Foundation)

OSGIS 2010 Workshops

- gvSIG Desktop & Mobile Workshop- (gvSIG Association, Spain)
- OS OpenSpace Workshop (Ordnance Survey, UK)
- GEOSS Workshop (CGS, University of Nottingham, UK)



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Practical SDI implementation materials from within and outside of Africa

[SDI in the Mediterranean Basin](#)

Twenty countries make up the Mediterranean Basin (starting from the north-west coast and moving clockwise): Spain, France, Italy, Slovenia, Croatia, Bosnia-Herzegovina, Albania, Greece, Turkey, Cyprus, Syria, Lebanon, Israel (and Palestine), Egypt, Libya, Malta, Tunisia, Algeria and Morocco, with Spain, France, Italy and Greece being EU member states and Slovenia, Cyprus and Malta becoming Members in 2004. Two main themes cut across this review: the first, relates to the common challenges in managing the physical environment. The Mediterranean area has a number of sensitive ecosystems that react substantially to human activity. As such sustainable development is an important issue in this area, as any form of economic development will have direct impacts on the surrounding environment and the welfare of inhabitants. In particular, the degradation of coasts and soils and the limited amount of water in the region causes particular problems, where climates can be very arid and groundwater limited or polluted, impacting on human health and agricultural production. There are several projects presented that explore issues across the Mediterranean Basin including:

The Blue Plan

The United Nations Environment Programme (UNEP) began in 1972 and initiated a regional sea programme, with the Mediterranean Sea as a pilot project area. From this stems the the [Blue Plan](#), which has concerns about pollution in the Basin. The Blue Plan has scientific targets aimed at monitoring pollution in the sea, alongside more socio-economic ones, where long-term studies examine the impact of development, such as urban expansion, on the Basin's environment.

MERSI.Web

MERSI.Web was developed to help manage ERS/RAC's data and started by a regional forum in Rabat in 2000. The Web's general objectives involve the implementation of a regional network of Mediterranean centres dealing with satellite remote sensing and its environmental applications. Specifically it will create a web-based Geographic Server (a clearinghouse) to store and search metadata and meta-information on Projects/organisations/persons relying/working on the application of earth observation resources for environmental monitoring at regional and national levels for the Mediterranean area.

MOLAND

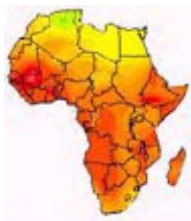
MOLAND ([Monitoring Land Use / Cover Dynamics](#)) is a EU Project developed by the EC Directorate General Joint Research Centre's Institute for Environment and Sustainability, that aims to support sustainable urban & regional development across Europe, and not just the Mediterranean Countries) is an example of pan-Basin activity. It aims to provide scientific and technical support to the EC's various Directorate Generals, services, and associated bodies that are responsible for the conception, development, and implementation and monitoring of EU policies related to urban and regional development. The EC Directorate for Regional Policy has been developing two related areas of the European Spatial Development Perspective (ESDP) and the European Spatial Planning Observation Network (ESPON). The coverage of MOLAND has focussed on urban centres across Europe, and not just for member states, with six lying in the Mediterranean Basin.

[MetroGIS \(Minnesota, USA\) Performance Measurement Plan update](#) (September 2009)

The proposed strategy retains, but makes secondary, the DataFinder-related statistics that comprised the central theme of the Performance Measurement Plan adopted in 2002. Rather, the proposed next-generation strategy is intended to provide a survey-based mechanism to monitor emerging needs as well as assess value created, from the stakeholders' perspective, of MetroGIS's accomplishments. The 'old' measures identified valuable information about "what" is happening, but they fell short because they were not helping decision makers understand "why" trends were occurring, nor did they provide a means to identify and monitor emerging needs.

[Fifty States \(USA\) Next Steps Report](#)

Over the past five years the U.S. Fifty States Initiative has been successful in raising the profile of the NSDI with state and local geospatial stakeholders by catalyzing strategic and business planning. The next steps for the program involve consolidating those gains, supporting the realization of the plans through implementation, and beginning the process of measuring where the nation stands on NSDI development. The thrust of the recommended next steps for the Fifty States Initiative acknowledges that successful statewide strategic planning efforts are winding down and that there needs to be a new focus on assisting



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states in actualizing the goals identified through strategic planning. The report makes seven specific recommendations.

[Measuring Progress of the Fifty States \(USA\) Initiative Report](#) (September 2009)

The Federal Geographic Data Committee (FGDC) administers the Cooperative Assistance Program (CAP) to advance the National Spatial Data Infrastructure (NSDI). To provide insight into how the Fifty States CAP grant category has improved intrastate and interstate coordination on geospatial matters, and thereby impacted the growth of the National Spatial Data Infrastructure (NSDI), this report analyzes quantitatively and qualitatively how these grants benefited state government geospatial activities. Four analyses applied in this report are: 1) analyses of the nine criteria for successful geospatial coordination from the National States Geographic Information Council (NSGIC) Survey, 2) analyses of five questions from the NSGIC Survey selected by the analysis team based on those question being indicators of the level of success in coordination, 3) survey responses from federal employees concerning the effectiveness of Fifty States Initiative grants in improving state geospatial coordination, and 4) a qualitative assessment of changes in the effectiveness of state coordination efforts based on five case studies of states that have received grants. The Federal Employee Survey and qualitative assessment provided strong evidence that grants have been effective and useful for states. Reliable quantitative analysis is currently problematic due to the limitations of existing information resources and data that were created for different purposes. Significant measurement challenges also exist due to the relative “newness” of the grants (three years), and the expectation that there will be a lag time between receiving funding and when one might reasonably expect to be able to detect the external results of that funding. The report offers conclusions and recommendations for the future of this grant program and how to effectively measure and monitor progress in the future.

GIS Tools, Software, Data

[FDO Toolbox 0.9.0 released](#)

1. Support for “flattening” geometries. Previously when attempting to preview spatial data with Z or M coordinates, it will fail. Now these extra coordinates are stripped away when previewing. Geometry flattening is also a new bulk copy option (regular and express).
2. The ability to [see what your geometry WKT looks like](#). This is used in the [Expression Editor](#).
3. Schemas, Classes and Properties are now alphabetically sorted in the Object Explorer. Makes FDO connections with 100+ class feature schemas easier to sift through.
4. The Save Schema as XML and Save Schema as SDF commands have been replaced with a new schema saving dialog. This dialog allows you to save the full schema or a subset of the Feature Schema by un-ticking the feature classes and properties you don't want saved.

You can also see Jackie Ng's presentation on the [FDO Toolbox at FOSS4G](#).

[Global Forest Watch - interactive website](#)

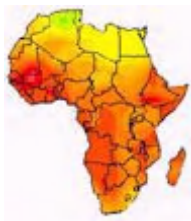


The Global Forest Watch initiative hosted by CBFP's member WRI (World Resources Institute) offers a large choice of interactive maps for the Central African region on its website.

- [Global Forest Watch Website](#) - CARPE map library - maps and posters of the Congo Basin.
- [Carpe map library](#) - Lessons from Cameroon: Forestry Impact Monitoring. Since 2001 the Government of Cameroon has embarked on a National Forest and Environment Sector Program (Programme Sectoriel Forêt et Environnement - PSFE) with the objective of guaranteeing the long-term sustainability of the economic, ecological and social functions of the forest ecosystems. The German Technical

Cooperation (GTZ) supports the Government of Cameroon in the implementation of the PSFE through its own program called ProPSFE (Programme d'appui au PSFE). As part of its support, the GTZ has financed the creation of an impact monitoring system. This system, started in 2005 is based on a [Online Indicator Database](#) of 33 indicators (in the categories “natural resources”, “good governance” and “poverty alleviation”) as well as an [interactive Online Atlas](#) and an [Online Library](#). Today it is one of the fully operational impact monitoring systems in Central Africa.

[Greenhouse gas \(GHG\) data from UNFCCC](#)



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In accordance with Articles 4 and 12 of the Climate Change Convention, and the relevant decisions of the Conference of the Parties, countries that are Parties to the Convention submit national greenhouse gas (GHG) inventories to the Climate Change secretariat. These submissions are made in accordance with the reporting requirements adopted under the Convention, such as The UNFCCC Reporting Guidelines on Annex I Inventories (document FCCC/SBSTA/2004/8) for Annex I Parties and Guidelines for the preparation of national communications for non-Annex I Parties (decision 17/CP.8). The inventory data are provided in the annual GHG inventory submissions by Annex I Parties and in the national communications under the Convention by non-Annex I Parties.

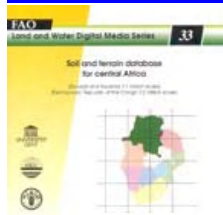
The GHG data reported by Parties contain estimates for direct greenhouse gases, such as: CO₂ - Carbon dioxide; CH₄ - Methane; N₂O - Nitrous oxide; PFCs - Perfluorocarbons; HFCs - Hydrofluorocarbons; SF₆ - Sulphur hexafluoride as well as for the indirect greenhouse gases such as SO₂, NO_x, CO and NMVOC. The sources and availability of data are described in detail under "[Information on data sources](#)". The major data definitions can be found under "[Definitions](#)"; for more information on definitions and methodologies, relevant methodological publications of the Intergovernmental Panel on Climate Change ([IPCC](#)) should be consulted.

[Updated data, improved methodology for 2009 NRMI release](#)

The NASA Socioeconomic Data and Applications Center (SEDAC) operated by CIESIN have released the 2009 National Resource Management Index ([NRMI](#)). This version of the NRMI has updated data and improved methodology for the eco-region protection indicator, one of the four indicators that make up the NRMI. The improvements included the exclusion of international protected areas, many of which lack effective protection (the ones that do already have a national designation), and improved coastal boundary matching between biomes and national boundaries using the highest resolution coastal data available.

The NRMI is a composite index of four measures. The indicators include: access to improved sanitation, access to improved water, and child mortality. In response to the search for a natural resources management indicator initiated by the [Millennium Challenge Corporation](#) (MCC), the NRMI was first developed in May 2005 by a consortium led by CIESIN and including the Yale Center for Environmental Law and Policy ([YCELP](#)), the University of New Hampshire [Water Systems Analysis Group](#), the [Wildlife Conservation Society](#), and the Columbia University [Tropical Agriculture Program](#). The MCC uses the NRMI as one of its performance indicators to help determine country eligibility for its foreign aid programs.

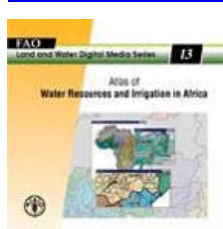
[Soil and Terrain Database for Central Africa](#)



The compilation of a Soils and Terrain database for Central Africa (SOTERCAF) forms a part of the ongoing activities to update the world's baseline information on natural resources. The present SOTERCAF database has been compiled by merging all existing data on soils in the Central Africa region. The data and maps have been compiled using standardized SOTER procedures and resulted in a soil and terrain database for the Democratic Republic of Congo at a scale of 1:2 Million with a total of 144 SOTER units, for Burundi and Rwanda both at a scale of 1:1 Million with a total of 56 and 41 SOTER units respectively. About one hundred and sixty described and

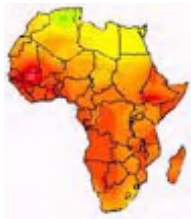
analyzed soil profiles have been included in the database. Landform and lithological information is also included. The SOTER-GIS files are presented in ArcInfo format as coverage and export files with geographic coordinates in decimal degrees and with datum WGS84. SOTER attribute data have been stored in a relational database system in MSAccess format. A number of thematic maps - landform, lithology, and dominant soils- are presented in Arcinfo shape files.

[Atlas of Water Resources and Irrigation in Africa](#)



The Land and Water Development Division of FAO is developing a global information system of water and agriculture with the objective to provide users with comprehensive information on the state of agricultural water management across the world. The system will help assessing the role of irrigation in global food production and the relation between irrigation and water scarcity. The system combines classical country-based statistics on all aspects of agricultural water management (water resources and use, irrigation, drainage, etc.), known as AQUASTAT, and a set of maps, data and models combined through a Geographical Information System (GIS). Africa is the first continent

for which the information system has been completed.



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[The GEO Data Portal](#)

The GEO Data Portal is the authoritative source for data sets used by UNEP and its partners in the Global Environment Outlook (GEO) report and other integrated environment assessments. Its online database holds more than [500 different variables](#), as national, subregional, regional and global statistics or as geospatial data sets (maps), covering themes like Freshwater, Population, Forests, Emissions, Climate, Disasters, Health and GDP. Display them on-the-fly as [maps](#), [graphs](#), [data tables](#) or download the data in different formats. [New datasets added/updated](#).

[Final GlobAEROSOL dataset publicly available](#)

Aerosols are a fundamental component of the Earth's atmospheric chemistry and balance. Knowledge of the aerosol distribution is also important for the study of the Earth's climate and biogeochemical cycles, for climate change assessment, weather forecasting and for the atmospheric correction of satellite remote sensing data. Particulate matter is also of major concern for public health. Although much of the anthropogenic component arises in industrial regions, it is often advected across national boundaries and affects remote and otherwise pristine environments.

Information on the concentrations of particulates, the emission sources, transport and sinks are required by public agencies responsible for monitoring environmental hazards to human health, and in the formulation of policy on local and trans-boundary pollution.

GlobAerosol is an ESA DUE project whose aim is to produce a global aerosol data set from merging ATSR-2, AATSR, MERIS and SEVIRI satellite data. The products produced are aerosol optical depths at 0.55 and 0.87µm and Angstrom coefficient and estimated speciation, the data will cover the period 1995 - 2007. The data sets will be disseminated to support the information needs of users in climate and meteorological research, trans-boundary pollution and air quality agencies. As of the end of October 2009, the full GlobAEROSOL dataset is publicly available for download from the project FTP.

[MapGuide Open Source 2.1 released](#)

Thanks to the ever growing team of developers who are contributing to make the [MapGuide](#) Open Source project is a more self-sustaining. Many improvements in performance, scalability and stability:

- Improved error reporting system, including service specific tracing;
- Raster re-projection;
- Multiple labeling improvements;
- GDAL raster support no longer crashes server;
- CS-Map as the coordinate system library;
- Fusion 2.0, including support for generic OpenLayers;
- Optional enhanced handling of rendered line widths [\[3830\]](#);
- AJAX viewer enhancements:
 - Basic map commands now have cursors.
 - Ability to toggle layer selectability from the legend pane
 - Support for Task Pane URLs with query string parameters
 - Brand-new open source Windows Installer

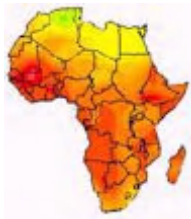
Downloads: <http://mapguide.osgeo.org/download/releases/2.1.0>.

[Project HUMBOLDT Open Source software released](#)

The first components of the HUMBOLDT framework are now published under the GNU Lesser General Public License version 3 (LGPL v3). They are available for free download at the OSS Community Website.

This developer preview release includes the following software components:

- The HUMBOLDT GeoModel Editor, a graphical editor to support the formal and complete specification of conceptual data models, specifically tailored for the handling of geodata specifications;
- The HUMBOLDT Alignment Editor, a tool that supports the definition of conceptual schema transformations;
- The Mediator Service, a proxy service that executes transformation chains to provide harmonised geodata;
- The Workflow Design and Construction Service, a service that analyses data sets and decides which processing is required to match a target product description;
- The Context Service, a service that can be used to define the transformation target product;
- Several transformation services exposed as OGC Web Processing Services, such as Coordinate Transformation Service and Edge Matching Service.



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More detailed descriptions of services and applications, such as full specifications, are available under the same license as the software itself. Furthermore, a forum, wiki and issue tracker are made available.

With this first major step towards the creation of an Open Source Community the HUMABOLDT consortium invites developers to test the design and expandability of the framework. Suggestions and contributions are highly welcome.

Geospatial Research, Applications, Reference Material

[The interannual variability of Africa's ecosystem productivity: a multi-model analysis](#)

The authors compare spatially explicit process-model based estimates of the terrestrial carbon balance and its components over Africa and confront them with remote sensing based proxies of vegetation productivity and atmospheric inversions of land-atmosphere net carbon exchange. Particular emphasis is on characterizing the patterns of interannual variability of carbon fluxes and analyzing the factors and processes responsible for it. [Source: Biogeosciences, 6, 285–295, 2009]

[A first estimation of above ground woody biomass in Africa using satellite imagery and forest inventories](#)



Africa has one of largest remaining blocks of tropical humid forest in the world (after the Amazon basin) and a high potential for increased emissions. The carbon or biomass stored in these forests, however, is poorly studied. Understanding, with greater precision, the quantity and distribution of carbon in these forests will help to more accurately estimate emissions of carbon dioxide associated with deforestation.

In 2008, the Woods Hole Research Center (WHRC) produced a first map of the distribution of above-ground biomass covering the tropical region of Africa utilizing images from the Moderate Resolution Imaging Spectrometer (MODIS) satellite (1-km resolution) along with data from recent forest inventories covering the period from 2000 to 2003.

In 2009, a new carbon map covering all tropical forest countries began at WHRC based on the most recent 2007 MODIS images, new forest inventory data [currently in collection](#), and from Lidar (light Detection and Ranging) data from the Geoscience Laser Altimeter System (GLAS) satellite. [Download national level data.](#) The production of this [pantropical map](#) is part of a three-year multi-disciplinary [project](#) with the principal objectives being to generate biomass maps for the entire pan-tropical region and to increase the technical capacity of institutions engaged in natural resource management in tropical forest regions.

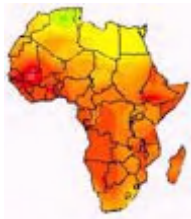
WHRC is soliciting and encouraging collaborations with research institutions and forest experts interested to be part of this project. For more information, contact: biomass@whrc.org or Dr. Nadine Laporte at nlaporte@whrc.org. [Cliquez ici pour la version française.](#)

[Weather indexed crop insurance for farmers started in Laikipia East District, Kenya](#)

Small-scale farmers are now being insured against the effects of drought and excessive rain. This follows a pilot phase for the new Weather Indexed Crop Insurance developed by UAP and Syngenta Foundation for Sustainable Agriculture. According to UAP head of marketing and distribution, Mr Joseph Kamiri, the product was developed in response to insurance needs of farmers. "We realized that many small-scale farmers had more failed crop seasons than successful ones and brought them this product to develop a sustainable way of crop farming," he said. The product has been tested and saw UAP hand over compensation payouts in form of inputs to farmers who were affected by the prolonged drought situation in Laikipia East district.

Under the system, farmers register their purchases by sending an SMS to a phone number provided by UAP. The weather stations then monitor the weather and inform the insurance company of impending crop failure and subsequent compensation. Each farmer is then informed via SMS about the payouts. "The project is intended to roll out to other parts of Kenya next year," said Ms Rose Goslinga Insurance coordinator of Syngenta Foundation for Sustainable Agriculture in Kenya.

The UAP [crop insurance product](#) that will pay farmers the inputs they used during the planting of the crops in case of excess or less rainfall that reduces the expected harvest. The product is primarily targeted at small holder farmers with an average of two acres of land, who will pay premiums of between KSh 500-1000 per year. The pilot was conducted over 18 months and involved 200 small scale farmers in Laikipia East District. UAP Insurance has partnered with Syngenta Foundation for Sustainable Agriculture, which works to improve the lives of small-scale farmers. The foundation will provide the inputs (seeds, fertiliser and chemicals) while



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UAP is providing the services. Both companies have invested in special weather stations that use satellite technology to monitor the amount of rainfall received in each area. The stations record rainfall after every 15 minutes and can be monitored remotely from the computers. This eliminates the need to travel across areas of operations to monitor amount of rainfall received. So far, the partnership has bought three weather stations, each costing Sh308,000, and intends to increase this number to 100 weather stations. The product will only cover crops and not livestock farmers.

Swaziland: HIV and AIDS web-based GIS

With financial support from the African Development Bank (ADB), and technical support from GeoSpace International, the National Emergency Response Council on HIV and AIDS ([NERCHA](#)), Swaziland is working to provide GIS services in the country. NERCHA has identified the need for putting into geographical context the HIV/AIDS related data captured in Swaziland by numerous state organs and NGOs. This includes the creation of a web-based GIS that can act as a master spatial warehouse which integrates various data sources onto one spatial platform. This will allow NERCHA to implement spatial analysis and thematic mapping initiatives. It will enhance the effectiveness of their intervention planning, implementation and monitoring through better decision making and understanding of the spatial context of the HIV/AIDS pandemic. GeoSpace will assist through a 12-month contract with the planning, design, development and implementation of this national system with a strong focus on skills transfer and capacity building. [Source: Position IT, Nov/Dec 2009]

[New study uses satellite imagery to identify active magma systems in Rift Valley](#)

Surface deformation of four active volcanoes captured on InSAR underscore possibility for human hazard, potential of geothermal resources. A team from the University of Miami, University of El Paso and University of Rochester has employed Interferometric Synthetic Aperture Radar (InSAR) images compiled over a decade to study volcanic activity in the African Rift. The study, published in the November issue of *Geology*, studies the section of the rift in Kenya. Small surface displacements, which are not visible to the naked eye, were captured using InSAR, a sophisticated satellite-based radar technique. Using images from European Space Agency satellites ERS and Envisat, the team was able to detect the smallest (<1 cm) of surface displacements at a very high resolution. The study detected signs of activity in only four of the 11 volcanoes in the area - Suswa, Menengai, Longonot and Paka - all within the borders of Kenya. The study also provides insight as to the geothermal potential of the region. Kenya was the first African country to build geothermal energy plants to generate this renewable, environmentally friendly alternative to coal and oil. The impact of harnessing such a resource could provide an important economic engine for the region. [Source: SERVIR-Africa community news]

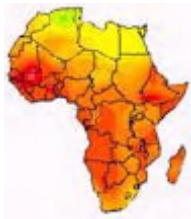
[Call for Papers - GIScience track at ESRI UC2010](#)

ESRI invites colleagues to present a peer-reviewed paper in a GIScience Research Track for the 2010 ESRI International User Conference and Educational User Conference. Papers in this special track must focus on cutting-edge research in GIScience. Full papers will be included in a special issue of [Transactions in GIS](#) to be distributed at the 2010 Conference. Abstracts (500 words) must be submitted to Dr. John Wilson at jpwilson@college.usc.edu, University of Southern California, by December 15, 2009. For questions or guidelines on this GIScience Research Track, please contact Michael Gould at mgould@esri.com.

[Articles for the Special Issue "Global Croplands"](#)

This special issue on "Global Croplands" by Journal "Remote Sensing" is an effort to bring together the collective knowledge base of the best experts involved in ensuring our food security for future generations. Given this, the overarching goal of this special volume will be to ensure that this diverse state-of-art knowledge base is available in one place for decision makers, experts, and other users in order to make use of the same and to advance our knowledge further to find smart solutions to overcome food crisis and produce in plenty for future generations. Articles should be from best multi-disciplinary experts addressing multitude of issues that are of relevance to ensure a food secure world for many generations to come. Specific topics may include:

- Global cropland areas - irrigated and rainfed
- Methods of mapping croplands - Remote sensing: At various spatial, spectral, radiometric, and temporal resolutions; and Non-remote sensing



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- Water use - linking croplands to water use; surface energy balance models; other approaches like water balance; water use assessments without use of thermal data.
- Water productivity mapping - Remote sensing approaches; Non remote sensing approaches.
- Green water - link to rainfed croplands and food production.
- Blue water - link to irrigated croplands and food production.
- Green revolution - achievements, current stagnation, future growth possibilities.
- Blue revolution – opportunities; Food security model.
- Economy - linking economy to croplands, water use, and food security.
- Accuracies and errors - in mapping, modeling, and assessments.

Other topics relevant to above introduction are welcome. Papers should be submitted to remotesensing@mdpi.org. to be published continuously until the deadline and papers will be listed together at the special issue website. A guide for authors is available on the [Instructions for Authors](#) page. [Remote Sensing](#) is an international peer-reviewed quarterly journal published by [Molecular Diversity Preservation International](#). Deadline for manuscript submission: 31 December 2009.

Contribution to Special Issue “Biodiversity, Conservation and Wildlife Management “of Diversity

Contribution of a comprehensive review article or a full research paper for peer-review and possible publication is invited for a special issue on "Biodiversity, Conservation and Wildlife Management" to be published in the journal Diversity ([ISSN 1424-2818](#)). See the [Instructions for Authors](#) before submitting a manuscript. Manuscripts should be submitted by e-mail to diversity@mdpi.org with copies to the Guest Editor (Dr. Lyne Morissette, E-mail: lyne.morissette@globetrotter.net) and the Editor-in-Chief (Prof. Dr. Michael Wink, E-mail: wink@uni-hd.de). The subject title of the message should be "Manuscript for Special Issue on "Biodiversity, Conservation and Wildlife Management". Deadline for manuscript submission is 28 February 2010.

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.

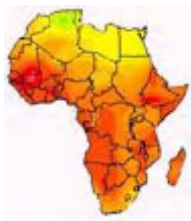
JICA-Net (Videoconferencing/E-learning) Remote Sensing & GIS Course, January - March 2010 (January 7, 13, 20, 27, February 3, 10, 17, 24 and March 3)

Organized by Japan International Cooperation Agency (JICA) and supported by Japan Society of Photogrammetry and Remote Sensing.

Learning objective is to promote remote sensing and GIS for the sustainable development of natural resources and environment in developing countries through e-learning or distance education. Contents Outline:

1. The remote sensing course has been designed for promoting remote sensing for the sustainable development of natural resources and environment in developing countries with the financial support of Japan International Cooperation Agency (JICA). The course is intended to be delivered in a lecture style and will be transmitted to target countries as distance learning through satellite communication systems.
2. GIS course has been designed for promoting GIS for the sustainable development of natural resources and environment in developing countries with the financial support of Japan International Cooperation Agency (JICA). The lecture of the course is intended to be transmitted to target countries through satellite communication systems.

This e-learning program is scheduled to be broadcasted in four (4) instruments in Remote Sensing (RS) Course and GIS Course respectively, and each instrument consist of three (3) units of sessions approximately three (3) hours. After the series of eight (8) instruments, (1) instrument and GIS in RS is



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broadcasted. Under the guidance of local coordinator attending each site, self-learning materials (recorded lectures) will run in the sessions and Q & A sessions with lecturers will be provided live from Tokyo.

[International Masters Program in Geospatial Technologies - Grants for students and visiting scholars](#)

The University of Münster, Germany, University Jaume I, Spain, and New University of Lisbon, Portugal, provide a new Masters Program in Geospatial Technologies. The English-taught Masters program has been approved in the educational program of excellence of the European Union ERASMUS MUNDUS. The program targets international applicants and will provide 10 full scholarships for non-EU students (26.000 € + tuition fees + insurance package). The Masters program addresses holders of Bachelor degrees in application areas of Geographic Information, such as Geography, Environmental Planning, Regional Planning, Transportation/Logistics, Agriculture, Forestry, Retailing/Marketing, etc., and/or researchers (visiting scholars) with high-level academic achievements in the field of Geographic Information. Deadline for third country (non-EU) scholars applying for an Erasmus Mundus grant: January 15, 2010.

[2nd Workshop on Satellite Navigation Science and Technology for Africa](#), 6-24 April 2010, Miramare, Trieste, Italy

The workshop will include formal lectures, and hands-on practice particularly oriented towards the scientific exploration using GNSS. Space weather and ionospheric research activities will be stressed in an effort to initiate space science research programs in African universities, and support existing groups in the field. Week 1: Basics of GNSS including system architecture, signal structures, receiver and antenna technologies and error sources.

Week 2: State of the art of GNSS applications including remote sensing, land, maritime and aviation navigation, and natural resources management.

Week 3: Scientific exploration using GNSS including geodesy, space physics and space weather studies.

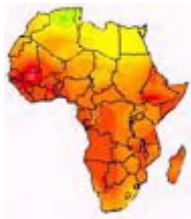
The Workshop calls for the participation of a number of lecturers/professors of African universities and research centres to promote the establishment of GNSS programs and research at the university level in the region. The selected participants will be entitled to propose the participation in the Workshop of up to three students from their university or research centre. Limited funds are available for some participants, who are nationals of, and working in, an African country. Deadline for requesting participation: 1 December 2009.

[Residential School 2010 - Governance for Development in Africa Initiative](#), 19-25 April 2010, Uganda

The Mo Ibrahim Foundation in association with SOAS and the Centre of African Studies-University of London is organising a Summer School in Uganda in April 2010 on the topic of 'Governance and Development in Africa'. The residential school is for 25 participants who are policy makers, academics, or civil society representatives from any African country who will gain, through this training, new ideas and experience on the wide issue of good governance and development. Applications are welcomed from a wide range of backgrounds. Applicants should have proven research and/or professional experiences in fields relevant to the theme of Governance and Development in Africa. All costs for successful applicants, including economy flights, accommodation, and subsistence, will be covered. Applications should include: 1. CV (including email address for correspondence); 2. one reference letter (or names of referees in CV), 3. Proposal of max 1500 words outlining research interest and professional background and how the applicant will benefit from attending the Summer School. Deadline for applications: 10 January 2010. Contact: Angelica Baschiera ab17@soas.ac.uk.

[Traineeships in Observational Oceanography for Students from Developing Countries](#), 1 August 2010 - 31 May 2011, Bermuda

The Bermuda Institute of Ocean Sciences (BIOS) has been awarded the Nippon Foundation-POGO Centre of Excellence in Observational Oceanography. The Centre will offer a 10-month programme of study at Bermuda on Observational Oceanography. Travel and living expenses of the trainees will be covered by the NF-POGO Centre of Excellence. The course is open to about 10 participants, approximately 8 will be from developing countries with the remainder from developed countries. Trainees must have at least a first degree in science. Preference will be given to applicants who currently hold a position in a research or academic institution in a developing country and anticipate returning to the country after completion of training at the NF-POGO C of E. Candidates have to demonstrate immediate relevance of their training to on-going or planned ocean observations in their home country. Deadline: 1 February 2010.



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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.

Virtual seminar series - Dynamic Modeling in a GIS Environment, October-December 2009

Dynamic spatial modeling is not a scientific discipline in itself; instead spatial modeling techniques are used in many fields such as ecology and transport research. In these separate domains spatial modeling methods are applied and developed, often on an ad hoc basis. How can we make sure that these efforts lead to an accumulation of knowledge and avoid missing important developments in parallel worlds? Can we promote spatial modeling as a domain in itself by seeking common ground in concepts, methods and software? Can we share out knowledge? The series will make a start on these agendas. Each seminar will commence at 1700 GMT. To participate in a seminar, you need to establish a broadband link and then visit the specified web URL. Although you can listen in without any further equipment, to participate actively requires that you have a decent quality microphone and speaker headset. Upcoming date, presenters and topic is as follows:

- 2 December 2009: Validation and calibration of spatial simulation models

See guide at: http://www.wun.ac.uk/ggisa/documents/pdfs/Seminar_user_guide.pdf.

Course on Demographic and Health Surveys, June 21-25, 2010, Nairobi, Kenya

University of Nairobi Enterprises and Services Ltd is offering professional short course on Demographic and Health Surveys. The course provides an overview of the DHS surveys and how to use DHS data to improve health programs. Demographic and Health Surveys (DHS) are nationally-representative household surveys that provide data for a wide range of monitoring and impact evaluation indicators in the areas of population, health, and nutrition. Demographic and Health Surveys provide countries with a standardized tool to obtain indicators for the effective monitoring of national programs such as those on HIV/AIDS, health and family planning services available in a country. Contact: Prof. Mwanthi, mmwanthi@uonbi.ac.ke.

Bahir Dar University undergraduate and graduate programs in disaster management

Bahir Dar University in Ethiopia is running undergraduate program in Disaster Risk Management and Sustainable Management, and Disaster Management at MSc level in collaboration with Arizona University. Contact: Dr. Zeleke Mekuriaw, Dean, College of agriculture and Environmental Sciences, Bahir Dar University, zeleke_mekuriaw@yahoo.co.uk.

CIRAD training session: "GIS for local development", February 2010, Dakar, Senegal

Systèmes d'information géographique pour le développement local La formation est structurée en 4 modules qui s'enchaînent logiquement mais peuvent être suivis indépendamment. Module 1. Le rôle du SIG dans le projet territorial. Le dessous des cartes (3 jours). Le rôle des SIG utilisés dans le cadre de projet territorial: production de cartes (diagnostic, planification, document de discussion et de négociation ...).

- La cartographie : sémiologie et étapes de conception de la carte.
- Planification et gestion de projet de SI.
- Atelier critique sur le dessous des cartes à partir d'exemples pris dans des projets territoriaux et des atlas.

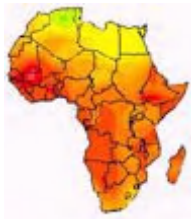
Module 2. Conception d'un système d'information avec UML, initiation à la mise en oeuvre et à l'utilisation des bases de données (5 jours).

- Introduction aux systèmes d'information, aux bases de données, et aux activités de modélisation (UML).
- Modèle relationnel: opérateurs et langage SQL, construction de requêtes.
- Initiation à Access: notions de tables, de formulaires et d'états de sortie.
- Micro projet : Développement local, projet d'agence régionale de développement (ARD) de Louga (Windesign, Access).

Module 3. Conception et mise en oeuvre d'un SIG (5 jours).

- Introductionaux SIG (géoréférencement, projections et mise en page).
- Initiation à l'utilisation du logiciel Arcgis 9.
- Acquisition de données géoréférencées, cartographie thématique, mise en page de cartes, analyse spatiale.
- Micro projet : Développement local, projet d'agence régionale de développement (ARD) de Louga (Arcgis 9, Access).

Module 4. Initiation à l'interprétation d'images satellitaires (3 jours).



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- Notions de bases en télédétection.
- Classification d'images, interprétation sous SIG.
- Micro-projet : Classification sous ERDAS Imagine.

Apply by end of December 2009. Contact: ccornu@cirad.fr.

GIMS course schedule for December 2009, South Africa

GIMS is an ESRI accredited learning centre servicing Southern Africa. Contact:

- Midrand & Port Elizabeth: Contact Queen Mofokeng (011) 238 6300, (011) 238 6310 at gmofokeng@gims.com
- Durban: Contact Patricia van Schalkwyk, (031) 303 5356, (031) 303 5376 at pvanschalkwyk@gims.com
- Cape Town: Contact Kathi Wöhl (021) 422 4620, (021) 422 4628 at kathi@gims.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 curus de l'ERAIFT aboutit à l'obtention d'un Diplôme d'Etudes Supérieures Spécialisées (DESS). Ce diplôme est l'équivalent d'un Master du système « LMD » (Licence, Master, Doctorat) des Accords de Bologne. Il est reconnu par le Conseil Africain et Malgache pour l'Enseignement Supérieur (le CAMES). Le programme du DESS comprend 16 chaires dont l'enseignement s'étend sur une période de 12 mois. L'étudiant dispose ensuite de 6 mois

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

Short-courses offered by RECTAS in 2009, Ile-Ife, Nigeria



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

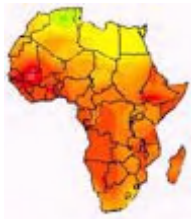
LUMA-GIS, Lund University GIS Centre (Sweden) Master's program in GIS

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

Distance Learning - Certificate



- Principles of Databases (8 weeks). Starting date: 8 February 2010. Deadline for application: 18 January 2010. [Register](#).
- GIS Data Quality (6 weeks). Starting date: 15 Mar 2010. Deadline for application: -. [Register](#).
- Multi-Hazard Risk Assessment (6 weeks), Starting date: 17 May 2010. Deadline for application: 26 April 2010. [Register](#).
- Principles of Remote Sensing (8 weeks). Starting date: 17 May 2010. Deadline for application: 26 April 2010. [Register](#).
- Environmental Impact Assessment and Strategic Environmental Assessment using spatial decision support tools (6 weeks). Starting date: 7 Jun 2010. Deadline for application: 17 May 2010. [Register](#).



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- [Principles of Geographical Information Systems](#) (7 weeks). Starting date: 6 Sep 2010. Deadline for application: 16 August 2010. [Register](#).
- [Spatial Decision Support Systems](#) (8 weeks). Starting date: 11 October 2010. Deadline for application: 20 September 2010. [Register](#).
- [Learning IDL for Building Expert Applications in ENVI](#). Starting date: 25 Oct 2010. Deadline for application: 4 October 2010.
- [Digital Terrain Model extraction, processing and parameterization for Hydrology](#) (3 + 3 weeks). Starting date: 29 November 2010. Deadline for application: 8 November 2010. [Register](#).
- [Principles and Applications of Remote Sensing and GIS in Natural Resources Management, at KNUST, Kumasi, Ghana](#) (12 weeks). Starting date: 20 Sep 2010. [Register](#).

MSc and PG Diploma

- [Water Resources and Environmental Management](#) (Mc degree -18 months), Netherlands. Starting date: 13 Sep 2010. Deadline for application: 1 July 2010. [Register](#).
- [Water Resources and Environmental Management](#) (PG Diploma - 9 months), Netherlands. Starting date: 13 September 2010. Deadline for application: 1 July 2010. [Register](#).

Funding Opportunities, Awards, Support

[Poverty and Economic Policy \(PEP\) 2010 Call for Proposals](#)

The Poverty and Economic Policy (PEP) Research Network (www.pep-net.org) announces a call for proposals for its 2010 competition for research grants with a value of up to CA\$50,000 each. PEP provides financial and scientific support to teams of developing-country researchers studying poverty issues. Specific objectives are to:

- Better understand the causes and consequences of poverty.
- Propose alternative strategies, policies, and programs to reduce poverty.
- Improve the monitoring and measurement of poverty.
- Develop local research (and training) capacity in these areas.
- Develop new concepts and methodologies through fundamental research.

Deadline: January 6, 2010.

[International Research Initiative on Adaptation to Climate Change - Request for Applications](#)

This Initiative will support the formation of multi-national teams from Canada and low and middle income countries (LIC-MICs), who will develop networks and programs of research. The initiative will support multi-national research teams involving eligible countries that pursue the following specific objectives:

- Advancing knowledge that develops a fuller understanding of climate and related stressors on vulnerable populations, resources and ecosystem health in Canada and in low and middle income countries, and their potential to worsen inequities within and between countries;
- Shaping policies or practices that help vulnerable populations and sectors adapt to climate change; and
- Training highly qualified personnel and establishing networks that enhance the capacity of governments, the private sector and civil society to adapt to and mitigate climate change.

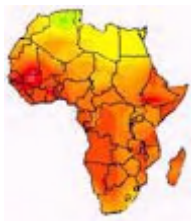
Letter of Intent (LOI) application: deadline: January 7, 2010.

[Alexander von Humboldt Foundation Fellowships on Climate Issues](#)

The Alexander von Humboldt Foundation is granting up to twenty International Climate Protection Fellowships annually funded under the Federal Environment Ministry's (BMU) International Climate Protection Initiative. The fellowships target prospective leaders from non-European threshold and developing countries who are engaged in the field of climate protection and resource conservation in academia, business and administration in their countries. The fellowship will enable the recipients to conduct a research-related project of their own choice with hosts in Germany whom they are free to choose themselves. Complete applications must reach the following address by 15 January 2010 (further calls for sponsorship beginning in 2011 and 2012 are currently planned).

[TWOWS Prize Scheme for Young Women Scientists](#)

TWOWS is now accepting nominations of excellent young women scientists from throughout the developing world. A prize of US\$5,000 will be awarded to the best young female natural scientist from each of the four regions of the developing world (Africa, Arab region, Asia and the Pacific, Latin America and the Caribbean).



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The first awards will be presented during the TWOWS General Assembly in Beijing, China, in June 2010. Deadline for nominations: 15 January 2010.

[Volkswagen Foundation Postdoctoral Junior Fellowships for African Researchers](#)

The Volkswagen Foundation has issued a call for pre-proposals for postdoctoral junior fellowships for African researchers on "Resources, their Dynamics, and Sustainability - Capacity Development in Comparative and Integrated Approaches". The Foundation's funding initiative, "Knowledge for Tomorrow – Cooperative Research Projects in Sub-Saharan Africa," and this call for pre-proposals aim at providing sustainable support for research in Sub-Saharan Africa. This is to be achieved in cooperation between African and German scholars, and further partners, if necessary. The overall intention is to provide junior scholars in Africa with opportunities to enhance their skills and academic qualifications, and thus to open up perspectives for the best of them to stay in academia. Besides this Afro-German cooperation, a second focus lies on the development and extension of academic networks in Africa.

Four main areas of natural resources are in the focus of this call for pre-proposals: a) land, b) water, c) biological resources, and d) sustainable energy for domestic use. Projects focusing on natural hazards are accepted, if the applicants can provide evidence that these hazards have a major effect on large parts of the population in Africa.

Applicants must be junior postdoctoral researchers from Sub-Saharan Africa with less than 3 years of postdoctoral experience. The necessary degree (PhD) must have been granted at the latest by the End of 2010. Applicants from Sub-Saharan countries outside South Africa and applicants returning to Sub-Saharan countries are particularly encouraged to apply. The deadline for the first stage is 15 December 2009.

[UNESCO/Keizo Obuchi \(Japan\) Co-Sponsored Research Fellowships Programme: 2010 Cycle](#)

With a view to keeping alive and honouring the spirit of former Prime Minister Obuchi and his belief in "people building the next era", 20 fellowships per year, for the ninth year, will be awarded to deserving candidates from UNESCO developing countries, especially the least developed countries (LDCs), who are eager to undertake research on one or more of the selected topics: 1. environment (with particular emphasis on water sciences); 2. Intercultural dialogue; 3. Information and communication technologies; and 4. peaceful conflict resolution. The aim of the fellowships is to support innovative and imaginative post-graduate research in the areas of development to which former Prime Minister Obuchi was committed and which coincide with areas of particular interest to UNESCO. Deadline: 8 January 2010.

[UNESCO-Keizo Obuchi Fellowship for Young Researchers](#)

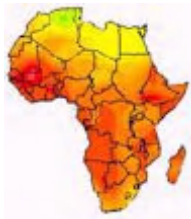
UNESCO is inviting young researchers in developing countries to apply for grants through the UNESCO/Keizo Obuchi Research Fellowship Programme, financed for the tenth time by Japan through funds-in-trust dedicated to the development of human resources. The programme offers a total of 20 fellowships for a maximum value of US\$6,000-10,000 each. They target post-graduate university researchers with a Masters Degree or equivalent in one of four fields: the environment, inter-cultural dialogue, information and communication technology, and peaceful conflict resolution. Deadline: 8 January 2010.

[Amy Mahan Research Fellowship Program to Assess the Impact of Public Access to ICTs](#)

The Program will award up to 12 Research Fellowships to emerging scholars from developing countries in Africa and the Middle East, the Asia Pacific region and Latin America and the Caribbean. Fellowships will provide research grant funding and specialized "mentoring" guidance to enable emerging researchers to carry out a new and original research study that addresses one or more critical research questions regarding the impact of public access to ICTs. Qualified researchers from developing countries in Africa and the Middle East, the Asia Pacific region and Latin America and the Caribbean are encouraged to submit their application in English, French, Portuguese or Spanish, no later than Midnight Eastern Standard Time, 31 December 2009.

[African Agriculture Science Competitions and Awards](#)

This science competition seek to identify and give recognition to outstanding agricultural scientists and innovations led by African researchers, scientists and professionals who are effectively engaged in communicating the outputs (knowledge, technologies, approaches) of innovative agricultural research to farmers and agro entrepreneurs as well as advocating for policy change to optimize the benefits from



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scientific and technological developments. Excellence in science and innovation with high economic impact is seen as major criteria in promoting investments in agricultural research for development. The science competitions and awards are categorized as:

1. Young Professionals in Science Award (25-40 years); and
2. Women in Science Award

Entrants must submit a two page (A4) abstract (1500 – 2000 words) that clearly details the objectives, methodology, results and conclusion of the successful project/programme and the information and communication tools and strategy used, and the impact on agriculture and/or rural livelihoods. Deadline: 6 January 2010.

[Commonwealth Scholarship and Fellowship Plan \(CSFP\)](#)

The CSFP is an international programme under which member governments offer scholarships and fellowships to citizens of other Commonwealth countries. All applications should be made through a candidate's local Agency in their home country, and interested candidates are advised to check with the local agency before submitting an application in case there are specific eligibility criteria or any specific advice on how to make an application. See [countries currently offering an award](#) (i.e., Botswana and South Africa). Closing date for applications: 31 December 2009.

[2010 United Nations Public Service Awards](#)

The United Nations Public Service Awards Programme is the most prestigious international recognition of excellence in public service. It rewards the creative achievements and contributions of public service institutions to development in countries around the world. Through an annual competition, the UN Public Service Awards Programme promotes the role, professionalism and visibility of public service. All Public organizations/agencies at national and sub-national levels, as well as public/private partnerships and organizations performing outsourced public service functions, are eligible for nomination. Self-nominations are not accepted. Deadline: 31 December 2009.

[Yale University's World Fellows Program](#)

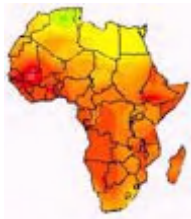
Each September, 16 to 18 World Fellows come to Yale's campus in New Haven, Connecticut, for a concentrated 13-week program designed specifically for those leading and refining the critical institutions in societies around the globe. To augment their accelerating careers, the World Fellows Program provides a lively intellectual setting within which to analyze issues, debate goals, define strategies, reexamine values, and undertake a unique set of professional development opportunities. Recognizing that contemporary issues and problems defy easy categorization, the scope of the World Fellows Program is deliberately interdisciplinary, flexible, and capable of meeting the needs of Fellows across a wide range of fields. The Program also provides participants with an expanding network of contacts and connections both on campus and off to further enhance their future effectiveness. All nominations must be complete and must be submitted online by December 15, 2009.

[Captain Planet Foundation Funding for Youth Environmental Projects](#)

The mission of the Captain Planet Foundation is to fund and support hands-on environmental projects for children and youth. The foundation's objective is to encourage innovative programs that empower children and youth around the world to work individually and collectively to solve environmental problems in their neighborhoods and communities. Through environmental education, the foundation believes that children can achieve a better understanding and appreciation of the world in which they live. The foundation offers small grants of \$500 or less each, as well as a limited number of grant awards ranging from \$500 to \$2,500 each. Applicants must be at least 18 years old to submit a proposal. Deadlines for submitting grant applications are June 30, September 30, December 31, and March 31. Grant proposals are reviewed over a period of three months from the date of the submission deadline. Visit the Captain Planet Foundation Web site for complete program information and guidelines.

[Disney Worldwide Conservation Fund](#)

The Disney Worldwide Conservation Fund (DWCF) was established to promote wildlife conservation through partnerships with scientists, educators, and organizations committed to preserving Earth's biodiversity. DWCF supports projects around the world, including North America, Central/South America, Africa, Asia, and Europe. Applying organizations must have U.S. nonprofit status; international NGOs can apply in



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partnership with a U.S. organization. Funded projects should clearly contribute to the conservation of endangered or threatened species and their habitats. Preference is given to projects that target specific wildlife issues, including efforts to explore sustainable aquaculture, address sustainable seafood, or to control illegal wildlife trade. Evaluators are looking for robust projects that can equally meet all of the necessary criteria including solid field science, a strong educational component, and community involvement. Letters of inquiry may be submitted via email at any time. An invitation to apply will be sent to approved inquiries and previous grantees during the first week of November. DWCF recommends that applicants contact them no later than January 1, 2010 for an invitation to apply.

[TeachAManToFish Competition](#)

TeachAManToFish, in partnership with Educating Africa is proud to announce the EDUCATING AFRICA Pan-African Awards for Entrepreneurship in Education 2009. The competition is open to all organizations based in Africa working in education, from primary through to tertiary, as well as in non-formal and adult education. As well as a first prize of \$10,000 and two runners-up prizes of \$5,000, there are up to 50 awards of \$1,000 available for the best entry from every country on the continent. Deadline: 31 December 2009.

[IDRC-IERI Doctoral Research Awards in Science, Technology and Innovation Studies](#)

The principal objective of the IDRC-TUT Doctoral Research Awards is to identify case studies on context-specific innovation processes from Mozambique, Rwanda, Senegal and South Africa. The IDRC-IERI Doctoral Research Award are valued at ZAR 72, 000.00 (equivalent to CAD\$10,000) each and are expected to identify innovation activities in one of the four countries through case studies. The award seeks to enhance the engagement of doctoral students in field research within this subject area to produce high quality dissertations, encourage timely completion of their training and produce findings that are policy relevant.

This competition invites research proposals on specific questions that address the following themes:
•How does indicator development (and use) differ in country-specific cases in Mozambique, Rwanda, Senegal and South Africa?

•In what way(s) do innovation processes differ in Mozambique, Rwanda, Senegal and South Africa?

Award recipients will also engage in training to learn techniques, approaches, and uses of science, technology and innovation (STI) indicators as part of the policy process. This training, which includes a three day workshop, will support the measurement and evaluation of domestic science, technology, and innovation capabilities in participating countries, and more specifically will help build a critical mass of graduate students, researchers, and junior-to-mid-level policymakers with a strong understanding of the importance of linking various STI capabilities in the country. Deadline: 16 December 2009.

Employment Opportunities

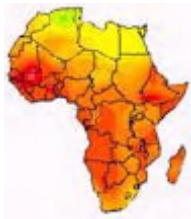
[Meteorology Regional Expert](#), Pretoria, South Africa

The Government of Finland has decided to support SADC National Meteorological and Hydrological Services (NMHSs), to add value to their national and regional services through capacity building (human and institutional), increasing regional collaboration and efficiency, and making use of the regional experiences, best practices and new technologies. Nationals of SADC Member States are eligible to apply. The expert should be familiar with: meteorological observation systems, both in situ observations and remote sensing methods; meteorological communication networks; operations of a weather forecasting service; climate services; and manpower development and general project management. Deadline: December 1, 2009.

[Executive Director of the Academy of Sciences for the Developing World \(TWAS\)](#), Trieste, Italy

UNESCO is seeking the appointment of a renowned scientific leader and administrator to serve as Executive Director of the Academy of Sciences for the Developing World (TWAS) based in Trieste, Italy. UNESCO promotes international cooperation in science in the interests of peace, human rights and development. The Academy is administered by UNESCO within the Natural Sciences Sector (SC), and operates under the direction of a steering Committee appointed by UNESCO and the Italian Government, as well as the TWAS Council. The main objectives of the Academy are to:

- (i) recognize, support and promote excellence in scientific research in the South;
- (ii) provide promising scientists in the South with the research facilities necessary for the advancement of their work;



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- (iii) facilitate contacts between individual scientists and institutions in the South;
 - (iv) encourage North-South cooperation between individuals and centres of scholarship; and
 - (v) promote scientific research on major challenges faced by developing countries
- Deadline: December 8, 2009.

Disaster Risk Management Consultant, Djibouti

Working with Intergovernmental Authority on Development (IGAD), the selected candidate will join the Regional Food Strategy and Risk Management (REFORM) Programme. The overall objective of the REFORM programme is the sustainable reduction of vulnerability to food insecurity and poverty in Eastern and Southern Africa. Deadline: December 31, 2009. Send your CV to Dr James Walsh: james.walsh@gopa.de.

Research Associate - Vulnerability and Risk Assessment and Adaptive Planning Section, Bonn, Germany

Under the authority of the Director of UNU-EHS and the Head of Section on Vulnerability and Risk Assessment and Adaptive Planning, the successful candidate will be entrusted with the following tasks within the framework of the externally funded project KIBEX (Verwundbarkeitsassessment von Kritischen Infrastrukturen und Bevölkerung gegenüber klimawandelbedingten Extremwetterereignissen):

- Development and testing of methodologies to assess the vulnerability of critical infrastructures to climate change related hazards
- Analysis of the interdependencies and links between the vulnerability of critical infrastructure and its services on the one hand and different vulnerable social groups on the other
- Development of criteria and indicators for assessing and evaluating the vulnerability of critical infrastructures. This also involves the application of qualitative and quantitative methodologies.
- Strengthening of the co-operation with the academic community (also including non- Anglophone groups) worldwide.

Requirements

- Master or Diploma in Geography, Spatial Planning, Engineering or Environmental Sciences
- Proven expertise in at least two of the following fields: natural hazards research, critical infrastructure, vulnerability assessment, environmental planning and quantitative as well as qualitative methodologies
- Fluency in English and German
- Proven computer skills (e.g. Word, Excel, SPSS, and GIS) particularly in terms of the analysis of statistical data as well as for the mapping of specific elements of critical infrastructures are an advantage.

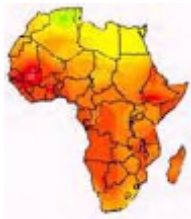
Please apply electronically indicating the respective reference number to Ms. Beatrice O'Reilly (e-mail: oreilly@vie.unu.edu). Interested applicants should submit a letter of motivation, their Curriculum Vitae and the UN Personal History Form (P.11), accessible on the UNU website <http://www.unu.edu/employment>. Deadline: 12 December 2009.

Information Management Officer, P-3, Multiple duty stations

Manage information to support OCHA and the UN system, as well as partner organizations, prevent, mitigate, manage, and recover from humanitarian disasters and emergencies. This vacancy is issued for roster purposes. The United Nations Office for the Coordination of Humanitarian Affairs, through its roster program, will pre-select qualified & suitable individuals and deploy them to field assignments across the globe in accordance with operational requirements. Vacancy announcement no.: 09-IMA-OCHA-421833-R-MULTIPLE D/S. Deadline: 19 December 2009.

Consultant - multi-hazard early warning systems, International Strategy for Disaster Reduction (ISDR)

Provide an analytical overview of progress made in implementing multi-hazard early warning systems at national and regional levels. In order to accomplish this task, the consultant will analyze the results of the 2008 responses of the early warning survey, make linkages to information collected for the Global Early Warning survey in 2006, the WMO Early Warning Survey in 2007, national reports, outcome documents of Early Warning Conference II & III and the submissions on Early Warning for the Global Assessment report, hydro met and tsunami early warning national capacity assessment carried out by the UNESCO-IOC post tsunami. Furthermore, the consultant will identify progress made on EW systems and include the perspective on climate change. Deadline: 15 December 2009. Contact: isdr.vacancies@un.org.



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GIS Analyst, Fauna & Flora International, Cambridge, UK

The Corporate Partnerships team has identified an immediate need for a GIS Analyst to support and develop the growing demand for GIS based Ecosystems Service and Biodiversity risk and opportunity assessments. This is in recognition that all of our partner organisations are using spatial data and GIS as an integrated and mainstream tool for planning and decision making. Many are also using GIS data to identify emerging opportunities in carbon, REDD and future payment for ecosystem service (PES) markets. FFI therefore requires the capacity to develop and utilize GIS assessment tools that can be integrated into Partner Company operational systems.

The successful candidate will have a degree in GIS at either post or undergraduate level. S/he will have at least two years relevant experience in GIS modeling and spatial analysis; preferably for conservation and/or land management purposes and will be familiar with general environmental, ecological, geological, and biological processes. The successful candidate will possess good communication skills in English, especially for report writing. S/he will have the ability to assess and prioritise tasks effectively to accomplish projects to deadlines. The successful candidate will show commitment, reliability and efficiency, with good organisational skills and time management. Please view the following document for further details of the position and how to apply: [Download Information and Terms of Reference](#). Deadline: 4 December 2009. Only short-listed candidates will be notified.

Project Director, Nouabalé-Ndoki Park Project, Congo

Assist Project team leaders in the development, design, organization and implementation of their work plans. Collaborate with MEFE Conservator to assist with design and implementation of law enforcement program. Collaborate with the Project Scientific Coordinator to design, organize and implement ongoing biological and socioeconomic monitoring programs in the NNNP, to provide monitoring data that will allow for adaptive management of the Park. Masters degree, preferably in a conservation-related field (PhD considered a plus); 'Written and spoken fluency in French and English; At least three years of experience in protected area/project management, preferably in Africa. An emphasis on working with local communities and some knowledge of forestry is desirable. Interested candidates should send cover letter and CV and/or requests for detailed terms of reference to Paul Telfer, ptelfer@wcs.org, with copies to Pamela Watim, pwatim@wcs.org. Deadline: 24 December 2009.

Other

Failure in Copenhagen is not an option



If the world fails to deliver a political agreement at the UN climate conference in December, it will be “the whole global democratic system not being able to deliver results in one of the defining challenges of our century”, says incoming COP15 president, Connie Hedegaard.

- [Flow of pledges drives up UN expectations](#) - Apart from the US, all industrialized countries have given targets for their greenhouse gas emission reductions. This promises a successful conference in Copenhagen next month, according to

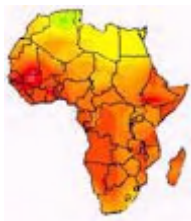
UN's top official on climate change.

- [The essentials in Copenhagen](#) - Rather than getting every small detail of a new global climate treaty done in Copenhagen, executive secretary of the United Nations Framework Convention on Climate Change (UNFCCC) Yvo de Boer hopes the conference will reach agreements on four political essentials.

The UN climate conference in Copenhagen in December this year may not yield a new global climate treaty with every minor detail in place. But hopefully it will close with agreements on four political essentials, thereby creating clarity the world, not least the financially struck business world needs. According to Yvo de Boer, the four essentials calling for an international agreement in Copenhagen are:

1. How much are the industrialized countries willing to reduce their emissions of greenhouse gases?
2. How much are major developing countries willing to do to limit the growth of their emissions
3. How is the help needed by developing countries to engage in reducing their emissions and adapting to the impacts of climate change going to be financed?
4. How is that money going to be managed?

The new climate treaty will be replacing the Kyoto Protocol which was adopted in Kyoto, Japan, in December 1997 and entered into force on 16 February 2005. The Kyoto Protocol which sets binding targets for the



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reduction of greenhouse gas emissions has been signed and ratified by 184 parties of the UN Climate Convention. One notable exception is the United States, but the US back in the international climate change process and is engaging domestically in the process.

[African pastoralists face climate change threat](#)



As the world's leaders meet in Copenhagen, Denmark on 7 December 2009, at the [United Nations Climate Change Conference](#), things are already starting to look bleak for the poorest of the poor on the planet. They are the pastoralists of Africa. Many eke out a living in the Sahel, a semi-desert belt that stretches from Senegal to Sudan, and other pastoralists struggle similarly in the horn of Africa and in Ethiopia, Kenya, Tanzania, and parts of southern Africa. Today these pastoralists face drought, desertification, and disruptions in water supplies because worldwide precipitation is shifting away from the equator towards the poles, warming the polar region while parching countries in Sub-Saharan Africa.

As far as the global south is concerned, basic development and the alleviation of poverty remain at the top of the agenda. Those in the global south see the concern of some rich nations as an attempt to hold back that agenda by limiting their energy use. The global South seeks solutions to climate change in substantial transfers of capital and technology from north to south that would facilitate development without increasing emissions. Thus it is widely expected that the issues visited at the [1992 UN Conference on Environment and Development](#), the Rio Summit, which revealed divisions in interests, will rear their head again at Copenhagen, and the summit may not produce a control regime.

Even before the alarm on climate change sounded in 1988, desertification and environmental degradation had hit the Sahelian countries of Senegal, Burkina Faso, Mali, Mauritania, Niger, and Sudan. The situation has made these nations prone to either floods or extreme scarcity of resources for livestock. In the Nile Basin, environmental degradation, coupled with the beginning impact of climate change, is producing famine-like situations. Nations such as Ethiopia, Kenya, and Tanzania are beginning to be impacted and at times have been threatened with famine because seasonal rains are in short supply. But Copenhagen will also produce new visions and solidarities among the powerless. Sub-Saharan Africa and small island nations in the Pacific, Indian, and Atlantic Oceans, some of which are only two meters above sea level at their highest point and thus most vulnerable, will be vocal in asking for early action to reduce carbon dioxide emissions as well as halt deforestation and the destruction of the Earth. Theirs will be small but righteous voices speaking on behalf of the planet that is home to us all.

[Climate Change Science Compendium 2009](#)



The Climate Change Science Compendium is a review of some 400 major scientific contributions to our understanding of Earth Systems and climate that have been released through peer-reviewed literature or from research institutions over the last three years, since the close of research for consideration by the IPCC Fourth Assessment Report.

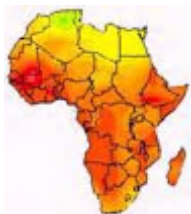
The Compendium is not a consensus document or an update of any other process. Instead, it is a presentation of some exciting scientific findings, interpretations, ideas, and conclusions that have emerged among scientists.

Focusing on work that brings new insights to aspects of Earth System Science at various scales, it discusses findings from the International Polar Year and from new technologies that enhance our abilities to see the Earth's Systems in new ways. Evidence of unexpected rates of change in Arctic sea ice extent, ocean acidification, and species loss emphasizes the urgency needed to develop management strategies for addressing climate change. An up-dated version of the Climate Change Science Compendium 2009 was uploaded to the Internet on 21 October 2009. It follows feed-back from researchers, experts and members of the public following the launch.

[Initiatives to popularise soils for school kids](#)



There are many initiatives to popularise soils for school kids. Henry Ferguson, a soil scientist at the National Geospatial Development Center in the USA, has a website with ideas, interesting suggestions and a couple of simple experiments illustrating some soil processes. There is also lesson plan suitable for elementary or secondary educators which include materials and preparation, background information, student procedure and a student worksheet.



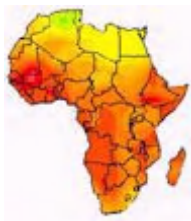
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Items newly added to this listing of events since the last SDI-Africa issue are marked ***NEW***

Conferences, Events

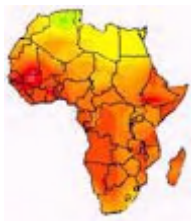
| Date | Location | Event |
|---|-------------------------|---|
| December 2009 | | |
| 1-4 December 2009 | Kinshasa, Congo | 1st Forum of African Monitoring of Environment for Sustainable Development (AMESD) |
| 5-9 December 2009 | Moshi, Tanzania | 25th Annual Conference of the Soil Science Society of East Africa Contact: M. Kilasara, Chairman, SSSEA, mmkilasara@yahoo.com . |
| 7 December 2009 | Copenhagen, Denmark | OFAC: Side-Event on "REDD issues in the Congo Basin: towards an operational observatory" , Time: 18:00, EU pavillon |
| 7-9 December 2009 | Algiers, Algeria | 3rd African Leadership Conference on Space Science and Technology for Sustainable Development (ALC-2009) Application deadline: <u>6 November 2009</u> . A limited amount of funding is available to enable a number of participants from African countries to attend ALC-2009. Contact: alc2009@asal.dz . |
| 7-18 December 2009 | Copenhagen, Denmark | 15th United Nations Climate Change Conference (COP 15) |
| 9-10 December 2009 *NEW* | Nairobi, Kenya | Society for Conservation GIS (SCGIS)- Kenya Conference 2009 |
| 14-15 December 2009 *NEW* | Addis Ababa, Ethiopia | Roundtable Enhancing Governance and Applications of ICT for Achieving the MDGs |
| 14-16 December 2009 | Accra, Ghana | 2nd IEEE International Conference on Adaptive Science & Technology Contact: icast@edicttech.com . |
| 15-17 December 2009 | Cape Town, South Africa | 2nd International Conference on Management of Natural Resources, Sustainable Development and Ecological Hazards |
| 16-20 December 2009 *UPDATED* | Tunis, Tunisia | 4th International Congress Geo Tunisia 2009 Survey of the hydraulic resources and of desertification by using the geographic information systems, remote detection and numeric designing. Contact: atigeo_num@yahoo.fr . |
| 21-22 December 2009 *NEW* | Nairobi, Kenya | Africa Gathering: Sharing ideas for positive change |
| January 2010 | | |
| 12-16 January 2010 *NEW* | Addis Ababa, Ethiopia | Conference on Water Resources in Ethiopia (CWRE2010) Abstract deadline: <u>September 30, 2009</u> . |
| 20-23 January 2010 *NEW* | Dakar, Senegal | 8th World General Assembly of the International Network of Basin Organizations Theme: Adapting to the consequences of climate change in the basins: Tools for action |
| 27-29 January 2010 | Cape Town, South Africa | Winter Congress on Science, Engineering and Technology (WCSET 2009) Paper deadline: <u>October 31, 2009</u> . |
| February 2010 | | |
| 2 February 2010 *NEW* | Addis Ababa, Ethiopia | 2010 Euro-Africa Cooperation Forum on ICT Research Learning and Reflecting on ICT Collaborative Research and Development - Projecting the Future of ICT Research in Africa |
| 1-5 February 2010 | Maun, Botswana | International symposium: Wetlands in a flood pulsing environment - effects on biodiversity, ecosystem function and human society Deadline for abstracts: <u>1 October 2009</u> . |



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|--------------------------------------|----------------------------------|---|
| 15-17 February 2010 *NEW* | Cotonou, Benin | 2nd Regional Workshop in the Workshop Series of the GEO Coastal Zone Community of Practice (CZCP) |
| 18 February 2010 *NEW* | Bryanston, Midrand, South Africa | Spatially-enabled Information Services Conference |
| 21-24 February 2010 *NEW* | Dubai, UAE | 2nd Annual Middle East and North Africa (MENA) GIS Conference |
| 22-26 February, 2010 *NEW* | Brazzaville, Republic of Congo | 17th Session of the African Forestry and Wildlife Commission and 1st African Forestry and Wildlife Week |
| 23-26 February 2010 *NEW* | New York, NY, USA | 41st Session of the Statistical Commission |
| March 2010 | | |
| 1-3 March 2010 | Stellenbosch, South Africa | Precision Forestry Symposium Abstract deadline: <u>30 November 2009</u> . |
| 6-10 March 2010 | Alexandria, Egypt | International Conference on Coastal Zone Management of River Deltas and Low Land Coastlines . Abstract deadline: <u>31 October 2008</u> . Contact: Professor Nabil Ismail, nicoastmarine@gmail.com . |
| 22-23 March 2010 | Kampala, Uganda | ICT and Development - Research voices from Africa |
| 25-26 March 2010 | Cape Town, South Africa | International Conference on Information Management and Evaluation (ICIME 2010) Organized by University of Cape Town, Department of Information Systems. |
| 25-28 March 2010 | Yaounde, Cameroon | International Conference on ICT for Africa 2010 (ICIA 2010) Theme: ICT for Development - Contributions of the South. Deadline for full papers: <u>December 1, 2009</u> . |
| April 2010 | | |
| 9-16 April 2010 | Sydney, Australia | International Federation of Surveyors (FIG) 2010 |
| 11-15 April 2010 | Cape Town, South Africa | INORMS 2010 - Organisation for Research Management Societies |
| 11-16 April 2010 | Sydney, Australia | XXIV FIG International Congress 2010 Abstract deadline: <u>22 September 2009</u> . |
| 14-16 April 2010 | Addis Ababa, Ethiopia | UN-SPIDER Regional Workshop "Building Upon Regional Space-based Solutions for Disaster Management and Emergency Response for Africa" |
| 14-16 April 2010 | Zahedan, Iran | 4th International Congress of Islamic World Geographers (ICIWG2010) Contact: M A Daraei@yahoo.com . Abstract deadline: <u>22 October 2009</u> . |
| 14-16 April 2010 | London, UK | GISRUK Conference 2010 Theme: <u>Global Challenges</u> |
| May 2010 | | |
| 11-14 May 2010 *NEW* | Guimarães, Portugal | 13th AGILE Conference on Geographic Information Science |
| 24-26 May 2010 *NEW* | Rome, Italy | 4th Global Workshop on Digital Soil Mapping Theme: From Digital Soil Mapping to Digital Soil Assessment: identifying key gaps from fields to continents. |
| 26-28 May 2010 *NEW* | Lusaka, Zambia | 5th International Conference on ICT for Development, Education and Training (eLearning Africa 2010) Deadline: <u>December 14, 2009</u> . |
| June 2010 | | |



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|---|---------------------------|---|
| 2 June 2010 *NEW* | Enschede, The Netherlands | International Society for Photogrammetry and Remote Sensing Symposium on Education & Outreach 2010 |
| 8-11 June 2010 *NEW* | Washington, DC, USA | COM.Geo 2010 Conference |
| 21-22 June 2010 *NEW* | Nottingham, UK | 2nd Open Source GIS UK Conference - OSGIS 2010 |
| 21-24 June 2010 | Yogyakarta, Indonesia | 9th GISDECO Conference Theme: Applying Remote Sensing and GIS in Disaster Management Abstract deadline: <u>15 January 2010</u> . Contact: sliuzas@itc.nl . |
| 28 June-2 July 2010 | Bergen, Norway | Living Planet Symposium Abstract deadline: <u>1 December 2009</u> . |
| July 2010 | | |
| 5-7 July 2010 | Vienna, Austria | ISPRS TC VII Symposium, "100 Years ISPRS - Advancing Remote Sensing Science" |
| 6-9 July 2010 *NEW* | Salzburg, Austria | Applied Geoinformatics Forum Symposium and Exhibition Salzburg (GI Forum 2009)- Advancing the GI Dialogue Deadline for papers and extended abstracts: February 1, 2010. |
| 12-16 July 2010 | San Diego, CA, USA | 2010 ESRI International User Conference Abstract deadline: <u>October 16, 2009</u> . |
| August 2010 | | |
| September 2010 | | |
| 13-15 September 2010 *NEW* | Ghent, Belgium | 8th International Conference on Geostatistics for Environmental Applications (GeoENV 2010) |
| 14-17 September 2010 *NEW* | Zurich, Switzerland | GIScience 2010 Full paper deadline: <u>January 29, 2010</u> . |
| October 2010 | | |
| 18-22 October 2010 *NEW* | Singapore | GSDI-12 World Conference 2010: Realizing Spatially Enabled Societies In conjunction with the 16th PCGIAP Annual Meeting. |
| 25-29 October 2010 | Fez, Morocco | 6th World FRIEND Conference (Flow Regimes from International Experimental and Network Data) Theme: Global Change: Facing Risks and Threats to Water Resources. Abstract deadline: <u>October 30, 2009</u> . Contact: friend2010@msem.univ-montp2.fr . |
| November 2010 | | |
| December 2010 | | |

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