Spatial Data Infrastructure – Africa Newsletter

GSDI
Global Spatial Data Infrastructure

SDI-Africa Newsletter	April 2011	Vol. 10, No. 4

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.

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.

AFREF

SERVIR

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

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

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

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Input to this Issue

SDI News, Links, Papers, Presentations

GSDI Small Grants Program: 2010-2011
The following awards were made in February 2011, Announcement in PDF Format
Cash awards:
- Ethiopia - Establishment of Geospatial Metadata and Clearinghouse Node Using Open Source Solutions. Primary Contact: Information Network Security Agency (INSA)
- Ethiopia - The 2nd General Congress of the GIS Society of Ethiopia Promoting the need for National Spatial Data Infrastructure of Ethiopia. Primary Contact: Geographic Information Systems Society of Ethiopia (GISSE).
- Indonesia - Tailor-Made SDI Workshop & Training: Use of GeoPortal for Integrating Community Data and SDI Layers in Support of Collaborative Efforts in Urban Disaster Reduction in Yogyakarta, Indonesia. Primary Contact: Gadjah Mada University
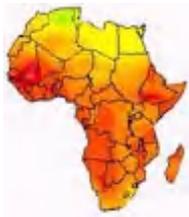
- India - Ecologically Sensitive Areas (ESA) of Western Ghats of India-Capacity Building for stake holders for developing Spatial Data Infrastructure (SDI). Primary Contact: Open Source Geospatial - India (OSGeo-India).
- Jamaica - NSDI Awareness Campaign. Primary Contact: Office of Prime Minister, Land Information Council of Jamaica, National Spatial Data Management Division
- Kyrgyz Republic - SDI Awareness Training - Central Asia (SDIaware.CA). Primary Contact: Kyrgyz GIS Association (KgGISA).
- Philippines - Workshop for the Harmonization of Spatial Data Infrastructure and Application to the Ancestral Domain Database Information System.Primary Contact: Ancestral Domains Office, National Commission of Indigenous Peoples (NCIP).
- Southeast Europe - Workshop for Building Network Related to the South Eastern European Spatial Data Infrastructure. Primary Contact: Hungarian CASCADOSS Association
- Ukraine - The Development of the Thematic Component of Spatial Data Infrastructure in Ukraine. Primary Contact: Institute of Geography of the National Academy of Sciences of Ukraine.
- Zimbabwe - Zimbabwe National Spatial Data Infrastructure (ZNSDI): Making NSDI a Reality by Raising Awareness through National Workshops and Publication of an NSDI Newsletter. Primary Contact: University of Zimbabwe.

Cash award and offer of professional services from GISCorps:
- Nigeria - Integration of Web Map Services with the current Nigeria NGDI Portal Primary, Contact: National Space Research and Development Agency (NASDA)
- Nigeria - Sensitization Program for the GRDC Metadata Clearinghouse Node and the Extension of its Present Capabilities Primary Contact: Geographical Resources for Development Centre (GRDC).

Awarded the offer of professional services from GISCorps:
- Cameroon - Development of a Geodatabase of the Activities of Councils Forests in Cameroon. Primary Contact: Centre Technique de la Forêt Communale (CTFC)
- Indonesia - Establishing Metadata and Clearinghouse Nodes Spatial Planning Data Policy. Primary Contact: Jaringan Kerja Pemetaan Partisipatif (Indonesian Community Mapping Network).

UN to establish entity on Global Geospatial Information Management

The United Nations is to bring together the world's national mapping agencies and other geospatial organisations to develop a streamlined and integrated framework that would support global geospatial information management. "There is general agreement of an urgent need for an inter-government consultative mechanism that can play a leadership role in setting the agenda for the development of global geospatial information, and to promote its use to address key global challenges; to liaise and coordinate among member states, and between member states and international organisations," a UN statement said.

According to Hiroshi Murakami, Co-chair of the second preparatory meeting on Global Geospatial Information Management (GGIM), while there are various international organisations that have been working on geospatial information, the UN feels that there is a need for an official mechanism that would link the outcomes of such organisations to specific policy decisions and actions of member states.

The purpose of the GGIM would be to address the growing number of global issues such as: climate change; natural disasters; disease pandemics; population and displacement; and, other cross-border problems that no single nation or region can self-sufficiently deal with. The UN would provide the member states with an ideal venue for global policy development on geospatial information management with much attention and insights from key policy makers and experts from other member states and international organisations. The GGIM would serve as an apex entity of the global geospatial information community that would link all regional cartographic conferences together. Published by: Future Gov Asia Pacific

Nigeria Government adopts GIS to map Lagos

Lagos Geospatial information, previously in analogue form, has now been officially digitalized, following the formal unveiling of the state's Digital Mapping and Geographical Information System (GIS) project. The comprehensive digital surveying and mapping of the entire state will apparently revolutionize the process of data acquisition, processing, storage, dissemination and use of spatial data in digital format for planning and decision making in the megacity. Essentially, a GIS integrates hardware, software and data for capturing, managing, analyzing and displaying varying forms of geographically referenced information.

Science & Technology Commissioner, Kadri Hamzat, expressed elation over the completion of the project, saying that no fewer than two stakeholder conferences were held during the course of the project. According
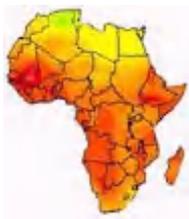
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to Hamzat, GIS is utilized for enormous amount of infrastructural and geographical planning including mapping changes to anticipate future needs, crime patterns to determine the deployment of officers and monitoring the condition of landscapes.

Special Adviser to the Governor on Digital Mapping/GIS, M. A. O. Durowoju, submitted that the project was probably the most comprehensive in the world. He listed the components to include: aerial photos and Light Detector and Ranging (LiDAR) covering the whole state at 1:4000; digital maps covering the entire state at 1/500 for urban areas and 1/1000 for rural areas; a composite GIS Database of Imagery, Digital Maps, Bathymatry Data, Geodetic Data, Transportation as well as Housing Data; and a Geodetic Framework for primary and secondary controls in three-dimensional mode. Others are: Active GPS reference station referred to as Continuous Operating Reference Station (CORS) with a GEOID for Lagos State; GIS Application for Environmental Control and Monitoring, Land Registration and Management; a web-based Enterprise GIS; and a Navigator System.

Experts at the 2nd General Congress of the GIS Society of Ethiopia (GISSE) discusses use of geospatial data for sustainable development


The second General Congress of the Geographic Information Society of Ethiopia (GISSE) held on 22 March 2011 in Addis Ababa, brought together 300 participants including policymakers, geoscientists, educators, researchers, experts and practitioners from various institutions in the field of Geographic Information Systems (GIS) and remote sensing in Ethiopia. The objective of the congress was to discuss how to leverage the potential of geo-information for sustainable socio-economic development in the country, addressing the needs and prospects of geospatial science and technology, and the benefits of developing, applying and utilizing the products and services as well as developing policies and standards in the country.

The Congress was opened by Ms. Aida Opoku-Mensah, Director of the ICT, Science and Technology Division of ECA, who highlighted the importance of geospatial information, and emphasized the importance of policies and standards for its management and usage in accelerating Africa's development. She said "ECA had undertaken major actions to foster the development of Spatial Data Infrastructures (SDI) as the appropriate mechanism for the production, management, dissemination and use of spatial data and information products, both at regional and national levels on the continent". Ms. Opoku-Mensah reiterated the commitment of ECA to continue to assist Ethiopia in its utilization of geospatial tools, as well as build its national spatial data infrastructure (NSDI).

Esayas Dagnew, in his welcoming speech on behalf of the Chairman of the Board of Directors, indicated that the Congress would lay the ground to facilitate the exchange of knowledge and information between Geo-information players. He said that although the GIS Society is young in Ethiopia, it had contributed its share to the profession, and achieved a lot in the past three years. He also noted that the Congress comes at a time when the people and government of Ethiopia are set to begin the Growth and Transformation Program to ensure sustainable economic development; and that members of GISSE, are committed to the successful implementation of the transformation plan. Mr. Sultan Mohammed, Director-General of the Ethiopian Mapping Agency (EMA), in his address, said geo-information had become important national infrastructure just like utilities, roads, facilities, etc. Thus, it will play a pivotal role in the successful implementation of the country's Five Year Growth and Transformation Plan, since there is a lot of economic potential that can be leveraged with geoinformation services. He said EMA is prepared to take a leading role in moving Ethiopia toward the GIS revolution. The congress was organized by the GIS Society of Ethiopia and the Economic Commission for Africa (ECA). Also see: GIS Society Ethiopia to standardize spatial data.

Atlas of the Potential Vegetation of Ethiopia
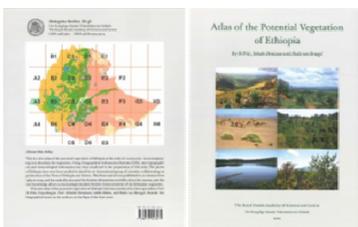
The Atlas of the Potential Vegetation of Ethiopia shows the distribution of twelve potential vegetation types that can be mapped using environmental parameters and GIS-methodology at the scale of 1:2,000,000. In the accompanying text, these vegetation types have been described and further divided into a number of subtypes, including desert, semi-desert, deciduous bushlands and woodlands, evergreen Afromontane forests and grasslands, transitional rain forest, Ericaceous and Afroalpine vegetations, riverine vegetation, various types of freshwater lake- and swamp-vegetation, as well as salt-lakes and salt-pans.
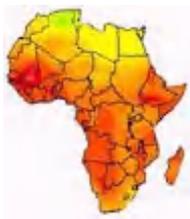
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This new comprehensive and well-researched volume by Friis et al. fills the need for a high-quality vegetation map of Ethiopia for land-use planning, natural resource management, agricultural development and conservation. Sadly, an important group of uses will also be to track the destruction of vegetation, areas where the 'potential' vegetation of the title is no longer present, and the effects of change in climate, and for this the Atlas sets an essential reference point.

The new vegetation atlas benefits from the complete taxonomic revision for the Flora of Ethiopia and Eritrea made during the years 1980–2009, as well as intensive field studies of the vegetation and flora that have been carried out over nearly the entire country in connection with the Flora project.

This atlas is a successor to two well known vegetation maps of Ethiopia, one published by Pichi Sermolli in 1957, and one which formed part of a vegetation map of the whole of Africa by Frank White in 1983. Both were produced at the scale of 1:5,000,000. For the new atlas, definitions of previously accepted vegetation types have been completely revised, and for the first time, it has been attempted to map saline vegetation types. The atlas has been produced using a digital elevation model with a resolution of 90 x 90 meters in connection with GIS technology, allowing a much finer resolution than on previous maps. It is also based on an analysis of information about approximately 1300 species of woody plants in the completed Flora of Ethiopia and Eritrea.

A mashup of the vegetation map and Google map layers is available (the map was made with MapTiler). For more information about the atlas, or if you would like a copy of the map (vector or pdf), please contact Ib Friis or Paulo van Breugel. Friis, I., Demissew, S., and P. van Breugel, 2010. Atlas of the potential vegetation of Ethiopia. Copenhagen: Royal Danish Academy of Science and Letters. Read more (review). Source: Servir Community Blog.

Multi-layer natural resources and land use database and map for Darfur, Sudan

GAF has been awarded a contract by the Darfur Land Commission (DLC) to set up a Natural Resources and Land Use Database and Map for the whole of Darfur. The overall objective of this project is the establishment of a multi-layered and dynamic state-of-the-art natural resources information system that provides basic land management and planning information and thereby will enable decision makers to develop and manage Darfur's natural resources in a sustainable way. The DLC was established on 13th July 2007, as an integral part of the Transitional Darfur Regional Authority (TDRA), in order to address traditional and historical issues of land tenure and to review natural resources management.

The TDRA is defined by the Darfur Peace Agreement as being the principal instrument for the implementation of that agreement and is tasked with enhancing coordination and cooperation among the three Darfur states: West Darfur, South Darfur, and North Darfur. Its primary responsibilities include facilitating the return of refugees and internally displaced persons, coordinating the restoration of security, and promoting peace and reconciliation. Generally, the Natural Resources and Land Use Database and Map for Darfur Project aims to increase the government's long-term institutional and technical capacity to manage Darfur's natural resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages. This will establish a basis for poverty reduction and also rural economic renewal in selected areas of the country, via the development of non-farm and farm income, thereby improving the social and economic welfare of the community and promoting a better environment.

This database will help decision makers and planners to establish plans for agricultural development and other land livelihood initiatives and to select the potentially most productive areas for investment and development projects. With a comprehensive capacity building component, the project will also enable the key rural and urban development and planning institutions to perform their tasks efficiently.

Rwanda mapped on Google map

In a two day (26-27 March 2011) exercise dubbed the Rwanda mapping party and jointly organized by Google, the National University of Rwanda (NUR) and Rwanda Development Board (RDB), the Rwandan communities were for the first time mapped by local cartographers using a Web program called Google map maker. On its first day, the cartographers, drawn mainly from local Universities, RDB and the National Land Centre were introduced to the mapping process using the ICT buses. The following day they grouped into two, with one group mapping the Eastern part of the country, and the other group, the Western part.
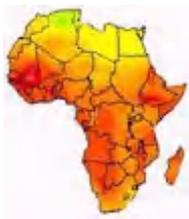
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Patrick Nyirishema, who heads the IT department at RDB, said that it was an opportunity for Rwanda to mark their areas. He added that the exercise was important for the country's development efforts, especially investment where important features could be easily traced on on-line. A Geographic Information Specialist from Google Kenya, Evans Arabu, said Google with seven branches across the continent was facing challenges in the process of mapping, given uncertain internet accessibility in most parts of the continent. "This is the major challenge and we normally try to deal with it by deliberately reaching various universities where we offer stronger internet facilities to enhance the process" he said. Arabu added that the exercise was part of Google's efforts to involve local people across the globe in contributing to the map by indicating features like social and economic infrastructures, tourist attractions and others in their local areas. "We usually hold mapping competitions among University students to increase awareness. This exercise is like sawing seeds and we expect it to grow after many people get used to the tool (Google Map maker)," he emphasized. Areas marked include; infrastructures such as roads, hospitals and schools as well as tourist attractions and memorial sites.

The Google Ambassador to NUR urged participants to continue with the exercise and sensitize others saying it was crucial for the country's development programmes.

New geospatial research station opened in Taita Hills, Kenya

The University of Helsinki is opening a research station in the Taita Taveta county of Kenya and establishing an agreement of collaboration with the University of Nairobi.

The inauguration of the Taita research station was held in Kenya on Wednesday 12 January 2011. Taita Taveta area is located 150 kilometres inland from the coast and approximately 400 kilometers from Nairobi. For years, geographers from the University of Helsinki led by Petri Pellikka, Professor of Geoinformatics, have engaged in multi- and cross-disciplinary research in the area in cooperation with Kenyan and international organizations as well as the Faculty of Biological and Environmental Sciences and the Faculty of Agriculture and Forestry of the University of Helsinki.

Since 2003, Professor Pellikka's TAITA projects have studied land cover and land use change, fragmentation of indigenous cloud forests, land degradation, land use conflicts and livelihoods of local communities in the Taita Hills and surrounding plains. The main research data and methods have been remote sensing with airborne and satellite imagery, and the use of geographic information systems for mapping, modeling, analyzing the landscape changes. The geospatial data is stored in geographic databases for further use and collaboration.

Taita Taveta area is especially well-suited for the research of feedbacks, links and interaction between land cover changes and regional climate change issues. The research center will offer accommodation and research resources for researchers from the University of Helsinki, as well as Kenyan and international scientists. Read more. Source: Servir Community Blog.

Is Kenya Africa's Silicon Valley?

Kenya is on the brink of becoming Africa's ICT hub due to the continued growth in Internet and mobile technology use in East Africa's biggest economy with investors flooding the country. The recent Kenya Economic Update report by the World Bank states that over the last decade, ICT has outperformed all others sectors in Kenya, growing at an average of 20 per cent annually. "The benefits of ICT are starting to be felt in other sectors, and have contributed to the conditions for the country to reach an economic tipping point," the report says. The report reveals that Kenya has opened 2011 with renewed and stronger than expected growth on the back of a new constitution, strong macro-economic policies, and a favourable regional environment.

Over the past three decades, Kenya has experienced only two short periods of economic growth that exceeded five per cent and was sustained for at least three consecutive years: 1986-88 and 2004-2007.

This has raised the question: Is Kenya on the verge of experiencing another growth spurt? Will it last longer and go deeper than the previous two episodes? The World Bank researchers envision that this could indeed be the case, as the uptake of ICT throughout the economy could provide the impetus required for high and sustained growth. Today, Kenya has the largest mobile money platform in the world. An estimated 15 million mobile phone users were using mobile money by the end of 2010, the equivalent of three out of every four adult Kenyans. In East Africa, Internet access in recent years has recorded a significant growth. The World Bank estimates that in 2004, there were 1.65 million active Internet users in the region. By 2007, the number

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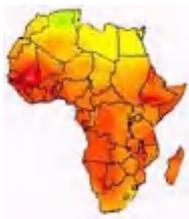
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had increased to 4.78 million, and by 2010 the number of regular users had jumped to 6.78 million, a penetration rate of about 5.1 per cent of the population. The introduction of data enabled smartphones, which allow internet access through mobile phones has boosted this area hugely. Kenya's active Internet usage stands at 8.7 per cent of the population, the highest in the region, compared with Uganda (7.9 per cent), Rwanda (3.1 per cent), Tanzania (1.2 per cent) and Burundi (0.8 per cent).

A Review of the status of Spatial Data Infrastructure Implementation in Africa

Spatial data is a key resource for the development of a nation. There is a lot of economic potential that is locked away in spatial data collections and this potential is realized by making the data widely available. Spatial Data Infrastructures (SDI) provide a platform for spatial data users, producers and those that manage it, to distribute the data more efficiently. Governments all over the world are realizing the value of National Spatial Data Infrastructures (NSDI) and therefore making major investments to establish them. However, in Africa, Implementation of formal NSDI is being done at a seemingly slow pace. This paper presents an assessment of the status of NSDI activity in Africa. 29 countries are selected for the survey and assessment was done per region (Southern Africa Development Community (SADC), West, East, North and Central Africa). The results show that formal NSDI activity is generally still in its infancy in most African countries.

The paper gives recommendations of possible measures that can be taken to foster SDI implementation on the continent and highlights possible areas of further SDI research. This research has identified areas that need research for the future of SDIs in Africa, which include:

- Quantifying Informal SDI activity
- Funding Models for SDI in an African Context
- How to make SDI development sustainable projects
- Models for handing over informal SDI activity to governments

The Dynamics of a Spatial Data Infrastructure – A National Case Study

It widely cited that 80% of government data is spatial in nature and the accessibility of this data is a critical aspect of E-government. Many countries are developing standardised infrastructures, which will allow sharing and reuse of spatial data. This paper presents the findings of a national level case study of the Spatial Data Infrastructure implementation in Ireland. The study draws on concepts from Corporate Information Infrastructure (CII), most notably the power of the installed base, role of standardization, multiple actors and top-down versus bottom-up tensions. A significant outcome of this paper is the application of the CII concepts to a national level case study.

A Summary for Decision Makers: Scientific results to support the sustainable use and conservation of marine life

The Scientific Results to Support the Sustainable Use and Conservation of Marine Life is designed to help policymakers determine how results of the first Census of Marine Life might be used to craft science-based policy. The report complements the 2010 Highlights Report and summarizes the discoveries, tools and technologies from the decade-long Census of Marine Life that are most relevant to policy makers, resource managers, and government officials. Included are examples and data that can help inform decisions about ecosystem and species level protection discuss findings about marine habitat degradation and rehabilitation and introduce Census-developed tools to identify biodiversity hotspots and large-scale ecological patterns and analyze distributions of species over time and space. The report is available in seven languages: English (3.0MB), French (3.1MB), Indonesian (1.1MB), Japanese (2.7MB), Portuguese (3.0MB), Spanish (3.1MB)and Chinese (3.5MB).

Call for papers and exhibitors - 4th African Leadership Conference on Space Science and Technology for Sustainable Development (ALC2011): Building a shared vision for space in Africa, 26-28 September 2011, White Sands Beach Hotel, Mombasa, Kenya

The African Leadership Conference (ALC) is a biennial forum established by the Governments of Algeria, Kenya, Nigeria and South Africa. These Governments are in the forefront of an ongoing plan in the continent for development of an African Resources and Environmental Management Satellite Constellation (ARMC) Initiative. The concept is open to other African countries that wish to join the venture in the future.
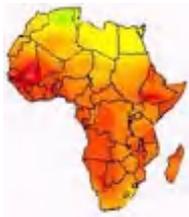
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The ALC offers continuous advisory services to the African Member States on space-related activities and provides a forum for engagement among academicians, researchers, policy makers and politicians to discuss space science in broader perspectives. ALC have been held in Nigeria, South Africa and Algeria in 2005, 2007 and 2009 respectively. ALC2011 will deliberate on the role of space science and technology in Africa's present and future development, knowledge and skills development, knowledge sharing and regional and international cooperation(s). It will also provide an opportunity for professionals to engage with experts from several of disciplines relating to developmental issues. All the presentations will be geared towards building a shared vision of space in Africa.

The Conference targets the chief executives of space-related organizations, senior government officials, diplomats, decision makers, academicians, private sector representatives and members of professional and civil society organizations concerned with Africa's development, with emphasis on space technology. The the deadline of submission of papers is the 31st March, 2011. Relevant documents are available at the Conference website: www.africanleadership2011.com / www.ncst.go.ke (under upcoming events). Conference contact: Ms. Margaret W. Maimba, Tel: +254 20 2246254 / 20 2241349/20 310571, Cell phone: +254 701 161 849, +254 731 140 834, E-mail: alc2011secretariat@ncst.go.ke.

1st Conference on Advances in Geomatics Research, 3-4 August 2011, Makerere University Kampala, Uganda

The Department of Geomatics and Land Management, Makerere University will hold the 1st Conference on Advances in Geomatics Research on 3 - 4 August 2011 at the CEDAT Conference Hall, Makerere University Kampala, Uganda. The theme of the conference is "Geomatics Research for Sustainable Development". The theme seeks to bring to the fore Geomatics research and practice taking place internationally, regionally and locally in Uganda. The conference essentially seeks to highlight, promote, share and encourage scholarship in the various Geomatics sub-disciplines such as Geographical Information Systems (GIS), Remote Sensing, Engineering Surveying, Global Navigation Satellite Systems (GNSS) Geodesy, Land Management etc. For additional information, contact Moses Musinguzi, Head Geomatics and Land Management Department at musinguzim@tech.mak.ac.ug or Anthony Gidudu - Chair, Organising Committee at gidudu@tech.mak.ac.ug.

Call for Abstracts and Scientific Symposium on "Contribution of ocean data and information to sustainable development in Africa" 4 - 6 October 2011, Saly, Senegal

The Ocean Data and Information Network for Africa (ODINAFRICA), in collaboration with the Centre de Recherche Océanographique de Dakar Thiaroye (CRODT) and the Direction des Pêches Maritimes (DPM) have announced the ODINAFRICA Scientific Symposium to be held in Saly, Senegal from 4 - 6 October 2011. The symposium will be followed by a workshop for the Head's of Institutions that are part of the ODINAFRICA network on 7 October 2011 at the same venue. The Symposium is open to marine scientists, resource managers, decision-makers and others who would like to present paper(s) and/or participate in the discussions. The topics to be covered include:

- Access to, and Utilization of Coastal and Marine Data and Information (including policies and legal issues, data quality and inter-operatability, strategies for improving access and sharing of data and information etc).
- Incorporating data and information in the Integrated Coastal Management process (including integration of environmental and socio-economic data, modular approach based on LMEs, and managing the marine-freshwater interface).
- Application of Decision Support Tools in support of Coastal Management (including ecosystem models, and marine spatial planning)
- Outreach and Communication in Marine Science
- Mitigation of Impacts of, and Adaptation to climate change and variability in the Coastal Areas (including erosion, salt-water intrusion, and coastal inundation)
- Application of operational oceanography (including operational numerical models, remote ?sensing data, observing systems, etc)
- Prevention and reduction of the impacts of natural hazards (including floods and storm surges)
- Technologies and Instrumentation for ocean observations

Abstracts are invited on the above and related topics. The submitted abstracts should not exceed 300 words. Abstracts must be submitted to m.odido@unesco.org not later than 30 June 2011.

A limited number of travel grants will be provided to experts from Africa whose abstracts have been accepted. Applications for the travel grants should be sent to m.odido@unesco.org, not later than 15 July
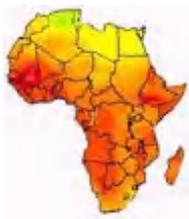
2011, and should include details of support required. Note that applicants whose abstracts have been accepted for oral presentation, and require partial support (only travel or accommodation) stand a better chance. Special consideration will be given to women scientists and young scientists.

1st Call for Papers: Worldwide Online Climate Conference (CLIMATE 2011/KLIMA 2011), 7-12 November 2011

The Hamburg University of Applied Sciences has issued the first call for papers for the Worldwide Online Climate Conference CLIMATE 2011/KLIMA 2011 (7-12 Nov 2011). CLIMATE 2011 is organized in cooperation with UNEP, IPCC, WMO, the Sahara and Sahel Observatory and further world bodies. The free of charge online event will specifically focus on "Climate Change and Disaster Risk Management".

Researchers from developing countries are encourage to submit their scientific abstracts online at www.climate2011.net until 15 April 2011 at the latest to the unique CO2-friendly virtual conference, relating to one of the four following categories:

- Category 1: Climate-smart disaster risk management
- Category 2: Climate-smart capacity building
- Category 3: Costs and benefits of climate-smart adaptation
- Category 4: Climate-smart methods, tools and technological solutions

All submissions will be peer reviewed by a scientific committee. Besides online publication throughout the conference week, the best English papers will to be considered for publication in the "International Journal of Climate Change Strategies and Management" and/or the book publication "Climate Change and Disaster Risk Management" as part of the Climate Change Management Series (Springer). Apply with studies/reports for incorporation to: info@klima2011.net.

AfricaGeo - Pre-Conference Workshops, 31 may - 2 June 2011, Cape Town, South Africa
SDI workshop with local and international experts on 30 May 2011

The Committee for Spatial Information (CSI) and the Centre for Geo-Information Sciences at the University of Pretoria are arranging a full-day workshop on spatial data infrastructures (SDI) in Cape Town on Monday, 30 May, the day before the conference. Local and international experts present on a number of SDI topics, including Dr Derek Clarke (CSI Chair) on an SDI vision for South Africa; Mr Søren Rude on the social and economic benefits of providing the official Danish address data "free of charge" for public as well as commercial re-use since 2002; Dr Max Craglia on the return of investment of the European SDI (INSPIRE). Refer to the draft programme for more information. Workshop attendance is free. For catering purposes, registration is required.

Trignet Workshop on 30 May 2011

The Chief Directorate: National Geospatial Information will host a Trignet workshop for its users on Monday, 30 May, a day before the conference at the Cape Peninsula University of Technology. Participation in the workshop will be free of charge but registration is required due to the limited space.

Editorial and AfricaGIS 2011 announcement

EIS-AFRICA has issued the following statement regarding AfricaGIS 2011. After discussions with members of the local and international organising committee as well as potential sponsors of AfricaGIS 2011, EIS have had to come to a difficult decision to cancel AfricaGIS 2011 in Cairo, Egypt.

The current political situation in Egypt and uncertainty about the future has forced the EIS esteemed colleagues at NARSS to suspend all preparations to host AfricaGIS 2011. EIS-Africa, the Board of Directors and members of the International Organising Committee has place on public record gratitude to the members of the Local Organising Committee especially the officials of NARSS for their sterling effort. The decision was due entirely to circumstances beyond NARSS's control and in no way reflects on NARSS's professionalism and dedication to making AfricaGIS 2011 a huge success.

In terms of protocol, EIS-Africa has made contact with the second bid nation to host AfricaGIS 2011 and will offer this country the right to host the event.

They will make the announcement on the new host nation, date and venue shortly. They also apologize to you for any inconvenience this may have caused you in your preparations to attend AfricaGIS 2011. Sives Govender (Executive Director EIS-AFRICA).

Call for Expression of Interest to Host AARSE 2014 and Future Conferences
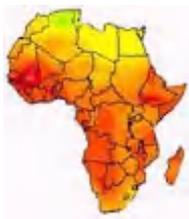
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- The African Association of Remote Sensing of the Environment (AARSE) was founded in 1992 and incorporated as an international NGO under Section 21 of the South African Companies Act (Act 61 of 1973). AARSE conducts biennial (once every two years) international conferences across Africa apart from other awareness and capacity building activities. Up to 2010, AARSE has organized conferences in Harare (Zimbabwe) in 1996, Abidjan (Cote D'Ivoire) in 1998, Cape Town (South Africa) in 2000, Abuja (Nigeria) in 2002, Nairobi (Kenya) in 2004, Cairo (Egypt) in 2006, Accra (Ghana) in 2008 and Addis Ababa (Ethiopia) in 2010. The 9th conference will take place in the last week of October 2012 in Morocco (watch out for the conference website www.aarse2012.org before the third quarter of 2011).

AARSE is inviting expression of interest from national institutional members and other organizations/agencies in Africa for the hosting/organization of the 10th Conference of the Association in 2014 or other future editions of the conference. The conference is usually held in the month of October (of every even-number year). The bidding/declaration of interest should clearly indicate the name of (leading) organization including history of the organization and statement of previous hosting of international conference(s) of similar magnitude; Names of supporting organizations in the country supported by letters of intent from such organizations; Venue (city) of the conference; Strength of AARSE membership as well as geo-information activities in the country; Other useful information.

AARSE does not provide funds for the hosting organization but the Association can and will solicit for funding on behalf of the organization towards a successful hosting of the conference. Submit the declaration of interest to: Prof. Harold Annegarn at hannegarn@gmail.com with a copy to: Prof. Jide Kufoniyi at Jide.kufoniyi@aarse-africa.org.

Practical SDI implementation materials from within and outside of Africa

March 11, 2011 Honshu tsunami propagation

Propagation of the March 11, 2011 Honshu tsunami was computed with the NOAA forecast method using Most model with the tsunami source inferred from DART data. See http://nctr.pmel.noaa.gov/honshu20110311.

In response to the 8.9 magnitude earthquake, which struck offshore Sendai, Japan on Mar 11th 2011, the Harvard Center for Geographic Analysis has launched the Japan Sendai Earthquake Data Portal. The Portal has a huge collection of data and maps.

UN-SPIDER team also quickly put together a resource page on our Knowledge Portal following the devastating earthquake and resulting tsunami that affected parts of the Japan coast following, as well as by now other areas across the Pacific basin. The SpaceAid page has been listed as one of the major data sources. See also: Tsunami travel times map by NOAA. Honshu tsunami: Was Africa shielded by continental land masses? Google Earth KML: Estimated Tsunami Arrival Time, based on NOAA forecasts.

WFP spatial data infrastructure (SDI) implementation in support of emergency management

Short-term emergency response capacities, long-term risk reduction, development and environmental protection activities are sector where a Spatial Data Infrastructure (SDI) may strongly improve efficiency, facilitating access to geographically-related information using a minimum set of standard practices, protocols, and specifications. The production and use of geospatial information within the United Nations has been accomplished historically by its component organizations in accordance with their individual needs and expertise. This has resulted in multiple efforts, reduced opportunities for sharing and reuse of data, and an unnecessary cost burden for the United Nations as a whole. The ITHACA association is supporting UN World Food Programme (WFP) in developing and implementing an SDI solution based on UNGIWG (UN Geographic Information Working Group) recommendations that can be resumed by the following keywords: decentralized geospatial information framework, interoperability between spatial data infrastructures, to avoid duplication in data collection and management, to enhance decision-making, re-use and sharing. A geodatabase conceptual schema has been developed using a general purpose modeling language (UML, Unified Modeling Language) in order to be as far as possible interoperable and independent of any particular database management system (DBMS). Following the same principles, the geodatabase schema is maintained in XML format, allowing structured data sharing possible. A two level architecture has been defined in order to efficiently combine complex management and administration activities with interoperable and open source based applications and services, dedicated to the broader humanitarian community of users.
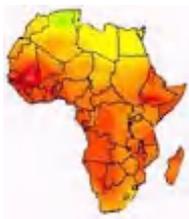
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GIS Tools, Software, Data

Free trial version - GeoRover mobile geological mapping software

The system utilises a relational database on a laptop computer combined with a mobile PDA device (Personal Digital Assistant with GPS capability). In the field, the PDA assists geologists by displaying all manner of already existing maps and data in order to provide optimum orientation on the ground. The spatial and attribute data are incorporated into a central database and thus easily shared with and visualised by other geologists. The mapping geologist is equipped with a digital field book which is constantly being updated and the interpretation of the data can quickly be refined and perfected by visualisation. In the short, the main features of the software GeoRover.

Observation data is standardised and thus comparable using a customised relational database. All the observation points are directly attributed, stored and visualised in the field. Direct access in the field to a range of datasets is possible by using a GPS-connected viewer. The easy-to-use functionality of the system lets the mapping geologist create the digital mapping base by generating shapefiles in the GeoRover. Finally, the cartographer receives interpreted digital data from the field that can be directly integrated into the GIS environment.

Open access data archive (via KNB)

Various open access data files from the KLEE projects are in the process of being uploaded onto the KNB national database, managed by NCEAS. This will include vegatation data, dung counts, rainfall data, and the raw data from collaborating projects.

Vegetation data from the Kenya Long-term Exclosure Experiment 1995-present. There are 18 4 ha plots; three replicate blocks of each of six large herbivore treatments. Within in each plot, there is a 100m x 100m grid, with a sample point every 10m, for a total of 100 sample points per plot. Every six month, each lots is surveyed, recording the presence/absence and aerial cover (pin frame hits) of each plant species.

New Social Conflict in Africa Database

The Climate Change and African Political Stability program has launched its Social Conflict in Africa Database (SCAD). SCAD includes over 6,300 social conflict events in Africa from 1990-2009, including strikes, riots, protests, and communal violence that have not been systematically tracked in other datasets. By filling this critical gap, SCAD aims to provide a new resource for policymakers and researchers to analyze conflict patterns and intervention strategies. SCAD includes information on the location, timing, and magnitude of social conflict events, as well as the actors, targets, issues of contention, and government response.

Geospatial Research, Applications, Reference Material

Satellite applications: e-health

Satellites are playing an increasing role in the support of health and welfare on Earth. In the first of a series of bulletins looking at the range of satellite applications, this brief note summarizes how satellite technology can assist in the provision of efficient health care and touches on some relevant legal issues. There has been a limited awareness of space capabilities by the medical/health profession and an equally limited understanding of users' needs by the satellite industry. However, due to factors such as an ageing-population and a reduction in health practitioners, particularly in rural areas, medical support involving a satellite element is being looked upon as an increasingly feasible solution. It also provides a cost-effective and accessible solution in developing countries where populations lack even basic levels of health care due to remoteness, poverty and lack of availability of local skills. The use of satellite communications can play a role in several areas, as for instance:

- Diagnosis, consultations, treatment and health monitoring - Satellite communications provide the ability for remote medical diagnosis and remote medical care in the home, which is particularly important for the growing ageing society, which may require assisted living. The World Health Organisation recently published the statistic that there are 600 million people globally who are over 60 years of age, and that 860 million people worldwide are living with a chronic condition.
- Several satellite communications applications and services are already providing isolated populations with access to healthcare and medical practitioners with second opinions or additional support (e.g. tele-
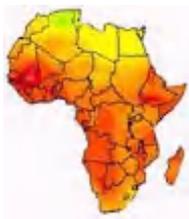
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diagnosis in the absence of local expertise and health monitoring to enhance homecare, mobility and the autonomy of the ageing population). This is also coupled with a trend towards greater patient involvement and more general health awareness.

- Emergency Services and Disaster Response - Miniaturized sensing equipment can be used to send data to a medical centre by means of a satellite system during emergencies and in relation to disaster response and rescue activities.
- Commercial Aviation - Telemedicine by satellite can also support diagnosis and medical assistance on-board commercial aviation. Such a system could provide a multimedia data exchange between the aircraft and a ground based medical centre to support decisions as to whether to land, divert the flight or what action to take on board the aircraft.
- Early Warning System - Satellite communications can also assist in the gathering of data to predict and track disease progression and associated risks of outbreaks.

New paper: Effects of spatial population dataset choice on estimates of population at risk of disease
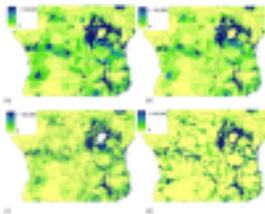
The spatial modeling of infectious disease distributions and dynamics is increasingly being undertaken for health services planning and disease control monitoring, implementation, and evaluation. Where risks are heterogeneous in space or dependent on person-to-person transmission, spatial data on human population distributions are required to estimate infectious disease risks, burdens, and dynamics. Several different modeled human population distribution datasets are available and widely used, but the disparities among them and the implications for enumerating disease burdens and populations at risk have not been considered systematically. The paper quantifies some of these effects using global estimates of populations at risk (PAR) of P. falciparum malaria.

The methods use employed recent construction of a global map of P. falciparum malaria endemicity to enable the testing of different gridded population datasets for providing estimates of PAR by endemicity class. The estimated population numbers within each class were calculated for each country using four different global gridded human population datasets: GRUMP (~1 km spatial resolution), LandScan (~1 km), UNEP Global Population Databases (~5 km), and GPW3 (~5 km). More detailed assessments of PAR variation and accuracy were conducted for three African countries where census data were available at a higher administrative-unit level than used by any of the four gridded population datasets.

The authors conclude that spatial medical intelligence and disease modeling are becoming central to the effective planning, implementation, monitoring, and evaluation of disease control. Significant advances in the approaches to mapping and modeling of disease risks and epidemic spread have recently been made, supported increasingly by the collection of geospatially referenced survey data. Such advances also involve the incorporation of models of uncertainty in output disease estimates and models, but rarely is the uncertainty inherent in the human population datasets commonly used to provide the denominator even acknowledged. Using the example of P. falciparum PAR estimation, the authors have shown that these uncertainties can significantly impact findings. The quantification of uncertainties inherent in existing spatial population datasets, and the improvement of demographic evidence bases, represents an important research direction if spatial approaches to disease modeling and burden estimation are to become more accurate. Read full paper at: population health metrics website.

Geospatial Efficiency - Where does it begin?

Efficiency is expected where sustainable development takes place. How efficiency is measured may vary though, particularly where non-tangible benefits arise. Ms Yvonne O. Sowah, President of the Ghana Institution of Surveyors (GhIS) said that a need exists for governments to recognize the role of surveyors in the development of every nation. But are surveyors alone the only geospatial actors at the table?

In an article written by Geoff Zeiss entitled 'Quantifying the Business Benefits of Open Geospatial Standards' attention is directed to the role standards play in geospatial related work and the business benefits involved. Cameron Shorter of New Zealand has written on the topic of 'How to explain the business benefits of Open Source for Government." Geographic information systems (GIS) professionals have written on the benefits of GIS as well. 'The Business Benefits of GIS: An ROI Approach' explains in a step-by-step manner, how GIS is adding benefits to organisations. ERDAS has been working on building Geoportals with ERDAS APOLLO that integrate a wide range of technologies that integrate and process geospatial information, delivering higher rates of return on investment. It has been noted that Pakistan, for example, benefits across its IT
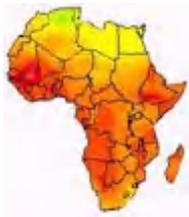
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sector through the integration of remote sensing technologies and the image analysis performed through automation.

Saving cost is one of the strongest arguments for putting forth a geospatial technology proposal. There are many examples where this has taken place due to increased efficiency in managing geospatial data, streamlining of services, improved results and overall better performance. But other benefits are not as apparent, at least not at first sight. Considerable cost benefits can be realized through 'ecological services' that attempt to understand and management all resources within a wider systems approach. While land administration systems are necessary for proper benefits to be measured and identified, the benefits arising through intangible gains can be significant and need attention as well. Published by: ASM

Spatial Data Infrastructures for cities in developing countries: Lessons from the Bangkok experience

The cities of the developing world face major problems in managing growth and their urban infrastructure. The experiences of cities in the developed world have usually proved inappropriate in developing countries and consequently new and innovative solutions are continually being explored for these cities. Geographic information systems and the underlying spatial data infrastructures appear to offer significant potential to assist in managing human settlements in developing countries.

In examining the status of spatial data infrastructures in developing countries, the first part of the paper compares cities in developing countries to those in the developed world. It then highlights issues facing developing countries in establishing spatial data infrastructures to support efficient urban land management. The paper describes the Bangkok Land Information System as an example of a city attempting to use spatial information technologies to manage the urban environment. This case study, together with the experience of the authors, is used to describe generic issues involved in the development of spatial data infrastructures for cities in similar socio-economic conditions. The paper provides a technical and institutional framework for the development of spatial data infrastructures for cities in developing countries. The paper concludes by suggesting that simple, low cost, project oriented, easily maintained and user-friendly spatial information technologies have the best chance of success.

Social conflict linked to rainfall patterns

Using the new Social Conflict in Africa Database, researchers find that rainfall has a surprising influence on social conflict in Africa. In recent decades, social conflict events have been more common in extremely wet and dry years than in years of normal rainfall. Furthermore, violent social conflict has been more common in extremely wet years.

Training Opportunities

Institute for Capacity Development (ICD) Short courses and Workshops: March - May 2011
- Management Advancement Programme - Victoria Falls: Zimbabwe| Tatenda Lodge| 11 - 15 April 2011
- Advanced Project Monitoring and Evaluation - Pretoria: South Africa| ICD Centre| 14 - 25 March 2011
- Project Planning, Management and Evaluation - Windhoek: Namibia| ICD Training | 4 - 15 April 2011
- Macroeconomic Policy Analysis and Forecasting - Windhoek: Namibia| ICD Centre| 16 - 27 May 2011
- Strategic Management Skills for Senior Executives - Windhoek: Namibia| ICD Centre| 14 - 26 March 2011

For further information, contact: coordinator@icdtraining.com.

African Regional Centre for Space Science and Technology Education in English (ARCSSTE-E)

The African Regional Centre for Space Science and Technology Education in English (ARCSSTE-E) is established in Nigeria at Obafemi Awolowo University Campus, Ile-Ife. Within the frame work of its mandate
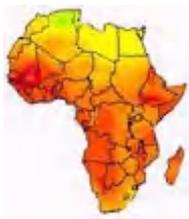
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to build capacity in core areas of Remote Sensing and GIS, Satellite Communication, Satellite Meteorology and Global Climate and Basic Space and Atmospheric Sciences Applications.

The Space Education courses comprise a 9-month Post Graduate Diploma programme (January to September) every year; and an optional 12 months MSc degree programme. The list of courses:

- Satellite Communication (SATCOM)
- Satellite Meteorology (SATMET)
- Remote Sensing/Geo Information System (RS/GIS)
- Basic Space

The Center trains participants mostly from English speaking African countries: Angola, Botswana, Cameroon, Egypt, Ethiopia, Ghana, Kenya, Lesotho, Liberia, Malawi, Mozambique, Namibia, Nigeria, Sierra Leone, South Africa, Sudan, Swaziland Tanzania, The Gambia, Uganda and Zimbabwe. Deadline for applications: 30 September of each year.

ESRI Technical Certification

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

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

Workplace experience, combined with GIS education and ESRI training courses, is the best preparation. The ESRI Technical Certification Web site lists specific skills that will be assessed in each exam, as well as training courses that aid in acquiring and improving these skills. Advice on the best training and preparation for a particular certification is available. Read more.

ESRI South Africa presents a full spectrum of GIS courses: April 2011

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

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

Free ESRI Courses

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

ESRI Eastern Africa Hands-on Training for GIS Professionals
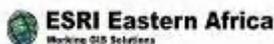
The following courses are offered at the ESRI Authorized Learning Centre in UpperHill, Nairobi, Kenya.

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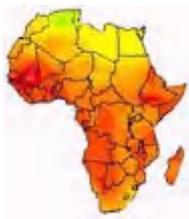
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- **Data Production and Editing with ArcGIS**
- Field Data Collection Using ArcPad and ArcGIS Desktop   3
- Building Geodatabases   4
- Data Production and Editing Techniques   4

Analysis with ArcGIS
- Performing Analysis with ArcGIS Desktop   4

Cartography with ArcGIS
- Creating and Publishing Maps with ArcGIS   4

Enterprise GIS
- Introduction to ArcGIS Server   3
- Introduction to the Multiuser Geodatabase   3
- Managing Editing Workflows in a Multiuser Geodatabase   4

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

Added new courses focusing on ENVI: the Image Processing Software for processing and analyzing geospatial imagery.
- Introduction to Remote Sensing with ENVI   3
- ENVI for GIS   3
- Exploring ENVI   5
- ENVI for Defense and Intelligence   4

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

ITC Education Brochure 2011-2012 online
Read the new ITC Education brochure with all the degree, diploma and certificate programmes in geo-information science and earth observation starting in 2011. More information is available at www.itc.nl/Pub/Study/CourseFinder

NFP Course List 2011-2012
Short courses in agriculture, forestry and fishery, fellowship provided. Application deadlines 1 May 2011 and 1 October 2011.

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] –
l'ÉRAIFT est une école d'avant-garde au service du développement humain et durable de l'Afrique.
Elle a pour vocation de former des Spécialistes (DESS & Ph.D) de l'Aménagement et de la Gestion des Forêts et Territoires Tropicaux, par une Approche Interdisciplinaire, Globale et Intégrée, autrement dit Systémique. Contact: info@eraift.org.

Short-courses offered by RECTAS in 2011, Ile-Ife, Nigeria
The Regional Centre for Training in Aerospace Surveys (RECTAS) is offering a number of three-week courses. Also note that RECTAS is able to package and deliver customised training for intrested organisations. These could be either advanced or other certificate programs. Contact: info@rectas.org or thontteh@rectas.org.

RCMRD - Courses offered by the department of Remote Sensing, GIS and Mapping
The Centre offers the following courses in geo-information. The courses last between one week to three months, and offered through out the year.
- Introduction to Remote Sensing & Image Processing
- Introduction to Geographic Information Systems (GIS)
- Introduction to Global Positioning Systems (GPS)
- Application of Remote Sensing & GIS in natural resources management.
- Application of Remote Sensing & GIS in Early Warning Systems for Food Security Application of RS & GIS in Disaster   Risk Management
- Geospatial database development and management for use in planning process and decision making
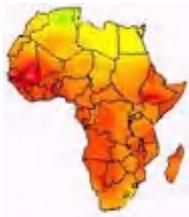
- Principles of Digital Cartography
- Application of GPS technology in resource surveys and mapping
- Integrated Water Management
- Application of GIS in poverty mapping, health care & good governance
- Land Information Management Systems
- Service and Repair of Survey equipment

Funding Opportunities, Awards, Support

Youth Leadership Program with Sub-Saharan Africa

The Office of Citizen Exchanges, Youth Programs Division, of the Bureau of Educational and Cultural Affairs (ECA) announces an open competition for the Youth Leadership Program with Sub-Saharan Africa. Public and private non-profit organizations meeting the provisions described in Internal Revenue Code section 26 USC 501(c)(3) may submit proposals to provide youth and adult participants with three-week exchanges focused on civic education, community service, and youth leadership development, and to support follow-on projects in their home communities. U.S. Embassies in the participating countries will recruit, screen, and select the participants.

ECA anticipates 2 awarding one or two cooperative agreements that will support approximately 100 participants from 10 countries. Exchanges for participants from Anglophone countries will be conducted in English, and exchanges for participants from Francophone countries will be conducted in French. The awards will be contingent upon the availability of FY-2011 funds.

The amount of funding available is approximately $550,000, pending the availability of funds. ECA anticipates awarding one or two cooperative agreements for the management of the Youth Leadership Program with Sub-Saharan Africa. One project will be conducted in English for 40 participants from four Anglophone countries of Kenya, Nigeria, South Africa and Tanzania; one project will be conducted in French for 60 participants from six Francophone countries of Burkina Faso, Chad, Cote D'Ivoire, Mali, Mauritania, and Niger.

- Option 1: Anglophone countries (approximately $220,000) - A regional project conducted in English for 40 participants from Kenya, Nigeria, South Africa, and Tanzania. Approximately 10 participants (8 youth and 2 adults) from each participating country will travel to the United States.
- Option 2: Francophone countries (approximately $330,000) - A regional project conducted in French for 60 participants from Burkina Faso, Chad, Cote D¨Ivoire, Mali, Mauritania, and Niger. Approximately 10 participants (8 youth and 2 adults) from each participating country will travel to the United States. French language interpreters must be provided for U.S. programming.

U.S. Embassies in the participating countries will recruit, not be involved in participant selection. The youth participants will be high school students aged 15 to 18 years old with at least one semester of high school remaining. The adult participants may be teachers, trainers, school administrators, and/or community leaders who work with youth. They will have the dual role of both exchange participant and chaperone. The Anglophone participants will be proficient in the English language. The Francophone participants will not be required to have English proficiency; the award recipient must provide French language interpretation and place the participants in host families where at least one member speaks French. Application deadline: April 14, 2011.

The TWAS-AAS-Microsoft Award for Young Scientists

The Prize will recognize young scientists in Africa whose research in computer science promises to have a positive impact in the developing world. Three winners will be selected from different countries on the continent. Each recipient will receive a Euro 7,000 cash award, of which EUR 2,000 may be spent at the recipient's discretion and EUR 5,000 shall be earmarked for further research.

- Nominees can be any nationality, but must have been resident and working in Africa for at least the two years immediately prior to their nomination.
- Nominees must have received their most recent degree (Master's or Ph.D.) within the previous ten years.
- Employees of TWAS, AAS and Microsoft Research as well as employees of other industry research laboratories and anyone involved in the administration of this award are not eligible.

Nominations are invited from national science academies, previous winners, senior academics (heads of departments, heads of universities), members of TWAS and AAS, academics invited by Microsoft, etc.
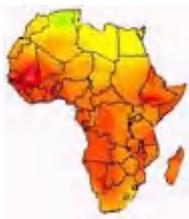
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Nominations of women scientists are particularly encouraged. Please download the nomination form and infosheet at: Nomination form and infosheet (Word file). Deadline for submission: 31 July 2011. Contact TWAS-AAS-Microsoft Award for Young Scientists, ICTP Campus, Strada Costiera 11, I-34151 Trieste, Italy, Phone: +39 040 2240-387, Fax: +39 040 2240-689, E-mail: prizes@twas.org.

TWAS-COMSTECH Joint Research Grants

The programme aims at encouraging the pursuit of scientific excellence in OIC countries by identifying and supporting the best young scientists in these countries; reinforcing and promoting scientific research and strengthening the endogenous capacity in science and technology; and counteracting the brain drain and reducing the exodus of scientific talent from the OIC countries.

- COMSTECH-TWAS Joint Research Grants are awarded to high-level and promising research projects carried out by young individual scientists in OIC countries.
- A Research Grant amounts to a maximum of US$15,000.
- A grant is normally provided for a period of 18 months and is renewable once.
- A grant may be used to purchase scientific equipment, consumables and specialized literature (textbooks and proceedings only). The grant does not cover salaries of researchers and/or students, field expenses, travel expenses and/or participation in international conferences.
  Individual applicants must be nationals of OIC Member States, with a PhD and some research experience, but at the beginning of their careers. They should hold positions at universities or research institutions in one of the OIC countries. As a general rule, the grants are awarded to competent scientists under the age of 40 years.
- Scientists who submit a satisfactory final report on a previous grant may apply for a renewal.
- Complete the electronic application form (see link at the bottom of this page, under 'related content') using Microsoft Word or any other word-processing programme.
- The first page of the application must be signed.
- If extra space is needed, please attach separate Word documents.
- Applicants should send separately, as an attachment, a detailed CV with the full list of publications.
- Incomplete and/or unsigned applications cannot be considered.
- Completed application form (together with CV and list of publications) should be sent by email to mahdavi@twas.org
- TWAS will acknowledge receipt of an application within two weeks. If you do not receive an acknowledgment within this period please contact: Mrs M.T. Mahdavi, TWAS, ICTP Campus, Strada Costiera 11, 34151 Trieste, Italy. Phone: +39 040 2240325, Fax: +39 040 224559, e-mail: mahdavi@twas.org.

Please be aware that a researcher who has applied for the TWAS Research Grants Programme (either for individual grants or for grants for research groups) cannot apply for the COMSTECH-TWAS Joint Research Grants Programme in the same year and vice versa. The deadline for receiving applications is 31 August each year.

Academy of Sciences for the Developing World (TWAS) -- Grants for International Meetings 2011

TWAS makes grants to support the organization of high-level international and regional scientific activities in developing countries by offering financial assistance for conferences, workshops, symposia, and special meetings held in these countries. Application deadlines are: 1 June and 1 December each year.

2012-2013 Fulbright Program for Post Graduate Studies for South Africans

The Fulbright Foreign Student Program offers grants to pursue academic courses, for credit, at post-graduate level, or to engage in research or projects supervised by an approved institution, or to do coursework for non-degree purposes.

- Master's studies: Must have completed a Bachelor (Hons) or an equivalent four-year university or technikon (B.Tech) degree
- PhD studies: Must have a Master'sdegree
- Non-degree studies: Must be registered for PhD in South Africa

Applications for the 2012-2013 academic year are now open.
Length of grant: Two years
Start of grant: 13-15 months after application deadline
Average number of grants per year: 20
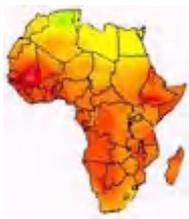
Must be a South African citizen
For application Documents (Guidelines, Application, Letter of reference). Closing date: 20 April 2011.

The Ramsar Convention's Small Grants Fund 2011

Open to individuals, government agencies, and NGOs for carrying out small-scale projects in the field of conservation and wise use of wetland resources, with a strong human and social dimension. See website for details. Closing date: 30 April 2011.

IUCN Small Grants for the Purchase of Nature

Provides funding to local NGOs to purchase and protect threatened wildlife habitats and vulnerable ecosystems around the world. For more details visit website. Closing date for pre-proposals: 1st May 2011.

Scientists Fellowship Program: African Forest Research Network

The African Forest Research Network, a network of African forest research scientists is operating research grants scheme with the aim of promoting and strengthening individual scientists' research capacity. The call for proposal covers the following two programs: Junior Scientists Fellowship Programme and Senior Scientists Fellowship Programme.
The closing dates for submission of applications and proposals are 31st March and 30th September of each year.

Funding Opportunities for Small Scale Initiatives: French GEF

Programme is designed to support civil society organisations in Africa which are actively working on biodiversity protection and climate change action to undertake field projects in West and Central Africa, Madagascar and Mozambique. See more details here. Closing date: Applications accepted on a rolling basis.

2011-2012 Fully Funded CARTA PhD Fellowships, Africa

The CARTA program draws together disciplines required to address the complex processes that influence health. These disciplines include Epidemiology, Psychology, Biostatistics, Anthropology, Health Economics, Health Promotion; Demography, Sociology, Health Systems, Health Policy, Development Studies, and their interfaces with the biomedical sciences. The CARTA multidisciplinary approach will prepare its graduates to better address questions of contemporary policy relevance such as the social determinants of health, and the limited impact of technological advances on health in Africa.

CARTA is currently offering a fully-funded, collaborative doctoral training program in public and population health. This program has been developed in response to the great challenges faced by Africa's institutions of higher education in addressing the training and retention of the next generation of academics in the region. Women are particularly encouraged to apply. CARTA has also reserved a small number of scholarships specifically for doctoral students conducting research on issues of sexuality and reproductive health and rights.

Participating African Universities
- Makerere University, Uganda
- Moi University, Kenya
- National University of Rwanda
- Obafemi Awolowo University, Nigeria
- University of Dar es Salaam, Tanzania
- University of Ibadan, Nigeria
- University of Malawi
- University of Nairobi, Kenya
- University of the Witwatersrand, South Africa

Participating Research Institutes
- African Population & Health Research Center (APHRC), Kenya
- Agincourt Population and Health Unit, South Africa
- Ifakara Health Institute, Tanzania
- KEMRI/Wellcome Trust Research Program, Kenya

Deadline for application: 15 July 2011.
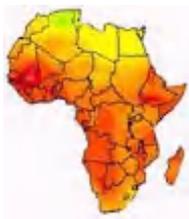
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International ReSource Award for Sustainable Watershed Management

The International ReSource Award for Sustainable Watershed Management is a prize for leadership in implementing sustainable watershed management in developing countries. Applications are invited from NGOs, private, scientific, and public institutions -- and combinations of them. Applicants need to be strongly linked to the communities where the water projects are located. The prize money of US$150 thousand is used to build the capacity of the implementing organizations. The application deadline: 30 April 2011.

African Research Grants programme issues first call for proposals

The African Union (AU) Research Grants programme, a project under the Africa-EU partnership has announced its first call for proposals (http://www.africahrst.org/stict/rgp/call2011.aspx). The AU is seeking proposals that focus on post-harvest and agriculture, renewable and sustainable energy, and water and sanitation in Africa. It is expected that the move will foster the implementation of Africa's Science and Technology Consolidated Plan of Action, and ensure more involvement from African scientists in solving the continent's problems. The First Call for Research Projects and Proposals will be limited to the following science and technology strategic priority actions:

- Post-harvest and Agriculture (Food security and productivity, Crop-livestock integration, Agricultural policy and commercialization, marketing of agricultural produce)
- Renewable and sustainable energy (Sustainable energy at a local and regional level, Renewable energy use and its impact on the environment, Innovative approach to Renewable and sustainable energy, Measures for making sustainable energy more widespread)
- Water and sanitation (Water for livelihood, Water for agriculture, Social and economic dimensions of water resources management)

Submission deadline: 30 April 2011. Download ALL files [1552 KB].

Employment Opportunities

Remote Sensing Analysts (2 posts), Plymouth Marine Laboratory, UK

Plymouth Marine Laboratory (PML) is a dynamic, highly innovative, independent and impartial provider of scientific research and advice on the marine environment. PML is looking to appoint two enthusiastic and highly motivated technical analysts to work on three key remote sensing projects: the ESA funded Ocean Colour Climate Change Initiative (OC-CCI) to improve the error characteristics of global ocean colour data for use in climate studies and oceanographic research; the NERC Earth Observation Data Acquisition and Analysis Service (NEODAAS) to provide remote sensing data in support of UK environmental research primarily in the marine area; and the EC funded Europe Africa Marine EO Network (EAMNet) that is providing EO data over Africa via the web and novel Digital Video Broadcast technology.

If successful you will undertake remote sensing data processing and analysis with NEODAAS users (post 1) or with OC-CCI and EAMNet colleagues (post 2). The work ranges from large scale (100s TB) computation through to implementation of experimental algorithms for processing satellite data. The posts will also assist with development and maintenance of the automated data processing systems; assist with remote sensing research; assist with maintenance and development of the group data dissemination tools; and develop software in a Linux environment in a variety of languages appropriate to application, e.g. Python, Java, C, Perl, PHP, Unix scripts.

You will have a degree, or equivalent level experience, in a numerate or computer based discipline with good experience and skills in computer programming in Python, C, C++, IDL, Java or Perl preferably in a Linux environment. Experience in image processing or remote sensing would be valuable.

Both appointments are full time, permanent positions. The application deadline is 1200hrs on 18 April 2011 Interviews will be held on Monday 16th May 2011, to start as soon as possible. For additional information and an application form, please contact: Mrs E Matthews, Human Resources Group, Plymouth Marine Laboratory, Prospect Place, Plymouth, PL1 3DH, UK T: +44 (0)1752 633100 E: vacancies@pml.ac.uk, Quoting reference number: PML35611.

Population, Health and Environment Advisor, Vila Gorongosa, Mozambique

The Population, Health and Environment (PHE) Advisor will work with GRP's partners, stakeholders and staff to achieve this integrated approach to community and ecosystem health. This approach will target the population in the buffer zone communities, working primarily through their community leadership councils. Also involved will be local health volunteers, GRP staff, the Provincial Directorate of Health, the District
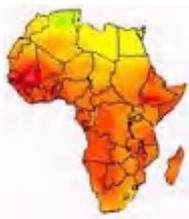
Health Offices, Mount Sinai Hospital's Global Health Center, Population Services International, the Peace Corps, USAID, and other health resource partners. The PHE Advisor will work under the health programs of the Community Relations Department of Gorongosa National Park, receiving day-to-day guidance from the EcoHealth Project Manager. The PHE Advisor will periodically meet with technical staff on the health and environment teams at USAID/Mozambique.

- Master's degree in public health or a related field
- Minimum five years' experience implementing family planning and public health activities in Africa with at least two years' experience implementing community based family planning, or experience in implementing community level health BCC and service delivery in a resource challenged setting
- Experience with or knowledge of natural resources management, environmental management, and conservation strategies desirable. Demonstrated passion and interest for conservation required
- Experience with PHE integration highly desirable
- Knowledge of and experience with monitoring and evaluation of health activities
- Proven strong cross-cultural and interpersonal skills and ability to work effectively in a cross-cultural team environment
- Demonstrated flexibility and openness in responding to changing work priorities and environment
- Excellent oral communication and writing skills
- Proficiency in Portuguese highly preferred or advanced Spanish required
- Ability to obtain a medical clearance to live and work in rural Mozambique required
- Due to the remote location of this fellowship, no minor dependents will be allowed
- US citizenship or US permanent residency required

All applicants are required to apply for this position through GHFP's online recruitment system at https://www.ghfp.net/recruitment/, Application deadline: April 18, 2011.

Research Analyst, International Flows and Environment Project, Washington

The Research Analyst will support IFFE's work on climate change and clean energy financing. Responsibilities will include research and analysis to advance our work on ensuring new and existing public international financial institutions, including the new and existing climate change funds channeling international climate finance, establish governance structures and institutions that are widely perceived to be legitimate by stakeholders. Specific responsibilities include:

- Conduct research and analysis on international climate finance including:
- Institutional arrangements and design elements of the Green Climate Fund
- Investments in creating enabling policy and regulatory environments, and early stage investments
- Climate change financing from private and public financial institutions, including the role of public international financial institutions in leveraging private capital
- Assist in fundraising and grants management
- Assist in project management work as needed
- Support other activities as needed
- Professional and/or research experience in one or more of the following topic areas is essential:
- Public and private financing in a major environmental or natural resource sector
- Designing and implementing national-level climate change mitigation and adaptation plans or programs
- International climate policy processes such as the UNFCCC negotiations
- Environmental and social policies and practice of one or more of the above mentioned IFIs, including World Bank safeguard policies and the Equator Principles

Required qualifications include:

- Advanced degree in international affairs, economics, finance, public policy, environmental management or similar required. Master's preferred.
- 1-3 years of relevant work experience
- Excellent writing and research skills
- Excellent computer skills in Microsoft Office and internet research
- Strong interpersonal skills and the ability to work with teams of individuals and colleagues
- Flexibility to travel (a must)

Closing Date: Tuesday, 31 May 2011.

Other
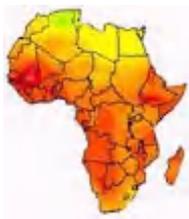
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ERMIS Climate Challenge for Schools and Youths in Kenya: Education, Training and Public Awareness

Global Climate Change mitigation and adaptation strategies can only be realized through concerted efforts by involving all sectors, at the national and local levels. ERMIS Africa with financial support from Barclay s Bank (UK) and technical assistance from the Ministry of Education and NEMA , is mentoring more than a 100 Secondary Schools in Rift Valley, Nyanza, Eastern, Central and Nairobi provinces to development climate change mitigation and adaptation innovations. See more on Climate Challenge for Schools and Youths project.

Proactive Afri Youth Geographic Information Systems
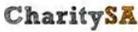
Proactive AfriYouth Geographic Information System is a non-profit organization established in South Africa with the vision to reshaping and restoring the face of Africa through GIS (Geographic Information Systems) technologies, awareness and education. The mission is to sustain and upgrading Africa's liveliness through the dynamics of Spatial technologies, while shaping our landscape with substantial and spatial clued-up solutions and to be an advanced transforming geospatial platform of Africa's young generations. For further information, contact: Tsakane Mathebula, Phone: 079 383 7745, Email: hlamalane@vodamail.co.za.

Conferences, Events	

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

Date	Location	Event
April 2011		
5-6 April 2011	Khartoum, Sudan	**15th Regional EuroAfrica-ICT FP7 Awareness Workshop**
6- 8 April 2011	Stellenbosch, South Africa	**4th IUPAP International Conference on Women in Physics**
10-15 April 2011	Sydney, Australia	**34th International Symposium on Remote Sensing of Environment (ISRSE2011)** Contact: Ian Dowman, idowman@cege.ucl.ac.uk.
18- 21 April 2011	Exeter, UK	**8th International Symposium on Weather Radar and Hydrology (WRaH 2011)** - User applications of weather radar for flood forecasting and water management
May 2011		
2-5 May 2011	Addis Ababa, Ethiopia	**2nd Session of the Committee on Development Information Science and Technology (CODIST- II)** Contact: Thierry Amoussougbo at codist@uneca.org or Andre Nonguierma at codist@uneca.org.
3-8 May 2011	Antalya, Turkey	**Gi4DM 2011 – GeoInformation for Disaster Management**
9-13 May 2011	Sun City, South Africa	**5th International Wildland Fire Conference (WildFire 2011)** Contact: info@wildfire2011.org.
11-13 May 2011	Orlando, USA	**2nd International Conference on Disaster Management and Human Health: Reducing Risk, Improving Outcomes**
18-20 May 2011	Morelia, Mexico	**3rd. International and 12th. National Socioeconomic and Environmental Research Conference on Livestock Farming**
18-22 May 2011	Marrakech, Morocco	**FIG Working Week & XXXIV General Assembly** Contact: FIG Office, fig@fig.net.
20-22 May 2011	Agadir	**Climate Change, Agri-Food, Fisheries, and Ecosystems: Reinventing Research, Innovation, and Policy Agendas for an Environmentally and Socially-Balanced Growth** Contact: Dr. Mohamed Behnassi at behnassi@gmail.com.
22-26 May 2011	California, USA	**World Environmental and Water Resources Congress**

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25-27 May 2011	Dar es Salaam, Tanzania	**6th International Conference on ICT for Development, Education and Training** Contact: info@elearning-africa.com.
31 May- 2 June 2011	Capetown, South Africa	**AfricaGEO2011**
June 2011		
3-5 June 2011	Bonn, Germany	**Resilient Cities 2011 congress**
July 2011		
3-7July 2011	Windhoek, Namibia	**2011 World Conference - Windhoek, Namibia**, **Sustainable Value Chain Agriculture for Food Security and Economic Development**
3-7 July 2011	Cape Town, South Africa	**Call for Papers: 9th Colloquium on Environmental Law** Contact: Glaudin Kruger at kruger@kruger-associates.com or Tumai Murombo at Tumai.Murombo@wits.ac.za. Deadline for abstracts submission: 28 February 2011.
3-8 July 2011	Paris, France	**25th International Cartography Conference (ICC 2011)**
11-14 July 2011	Lisbon, Portugal	**Global Conference on Global Warming (GCGW-11)**, Contact: Conference Secretariat at info@gcgw.org.
18-21 July 2011 * NEW *	Tunis, Tunisia	**4th IAA African Conference & 2nd Mediterranean Conference: Youth & Space Application**
July 29- 4 August 2011	Banos, Ecuador	**2011 International Biodiversity Conference**, Contact: Dr. Barker at barkerb@wildspotsfoundation.org.
August 2011		
3-4 August 2011 * NEW *	Kampala, Uganda	**1st Conference on Advances in Geomatics Research (AGRC2011)**
21-25 August 2011	Merida, Mexico	**SER2011 World Conference on Ecological Restoration**
15-19 August 2011	Nairobi, Kenya	**Applied Geoinformatics for Society and Environment (AGSE) 2011 Conference** Contact: Franz-Josef Behr at franz-josef.behr@hft-stuttgart.de
22-26 August 2011	Wellington, New Zealand	**5th International Symposium on GIS/Spatial Analyses in Fishery and Aquatic Sciences**
23-25 August 2011	Perth, Australia	**The 7th International Symposium on Digital Earth (ISDE7)** Theme: 'The Knowledge Generation', Contact: melissah.johnston@walis.wa.gov.au or walis@walis.wa.gov.au Abstract submission deadline: 28 February 2011.
September 2011		
4-8 September 2011	Cape Town, South Africa	**The 6th Science Centre World Congress**
12-16 September 2011	Denver, USA	**Call for presentations for FOSS4G 2011**
12-16 September 2011	Ticino, Switzerland	**3rd Symposium on Environmental Weeds & Invasive Plants (Intractable Weeds and Plant Invaders)**
26-28 September 2011 * NEW *	Mombasa, Kenya	**Call for papers and exhibitors** - **4th African Leadership Conference on Space Science and Technology for Sustainable Development (ALC2011)**: Building a shared vision for space in Africa,
26-30 September 2011	Aberdeen, Scottland	**World Conference on Marine Biodiversity**
October 2011		
3-7 October 2011	Cape Town, South Africa	**International Astronautical Congress 2011** Contact: enquiries@iac2011.com.
4- 6 October 2011 * NEW *	Saly, Senegal	**Call for Abstracts and Scientific Symposium on "Contribution of ocean data and information to sustainable development in Africa"**
5-6 October 2011	Port Harcourt, Nigeria	**Seventh International Conference on Sustainable Development**

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GSDI — Global Spatial Data Infrastructure

5-7 October 2011	Beach Resort, Zanzibar	**6th ESRI Eastern Africa User Conference** Submit abstract by 29 July 2011 on any of the available tracks at events@esriea.co.ke.
10-14 October 2011	Kimberley, South Africa	**International Wildlife Ranching Symposium**
10-21 October 2011	Changwon, Korea	**UNCCD COP 10**, Contact: UNCCD Secretariat at secretariat@unccd.int
12-14 October 2011 * NEW *	Coimbra, Portugal	**WG II/4 & ICWG II/IV 7th International Symposium of Spatial Data Quality**
16-21 October 2011	Cairo, Egypt	**AfricaGIS 2011 Conference** Contact: africagis2011@narss.sci.eg or info.africagis2011@narss.sci.eg.
19-21 October 2011	Bloemfontein, South Africa	**1st International Conference on Clays and Clay Minerals in Africa and 2nd International Conference on Geophagia in southern Africa**
November 2011		
7-12 November 2011 * NEW *		**1st Call for Papers: Worldwide Online Climate Conference (CLIMATE 2011/KLIMA 2011)**
16 - 18 November 2011 * NEW *	Delft, The Netherlands	**2nd International Workshop on 3D Cadastres**, Contact: P.J.M.vanOosterom@tudelft.nl
28 November- 9 December 2011	South Africa	**17th Conference of the Parties to the UNFCCC and 7th Meeting of the Parties to the Kyoto Protocol** Contact: UNFCCC Secretariat, secretariat@unfccc.int.
December 2011		
13-15 December 2011	Shah Alam, Malaysia	**Third International Conference on Management of Natural Resources, Sustainable Development and Ecological Hazards**
2012		
21-27 May 2012	Vilnius, Lithuania	**12th World Congress on Environmental Health: New Technologies, Healthy Human Being and Environment**
2-6 July 2012	Galle, Sri Lanka	**MMM3 : Meeting on mangrove ecology, functioning and management**
8-12 July 2012	San Diego, California USA	**ESRI User Conference**
8-12 July 2013	San Diego, USA	**ESRI International User Conference**
5-10 August 2012	Brisbane, Australia	**34th Session of the International Geological Congress (IGC 34)** Enquiries: info@34igc.org.
2015	Durban, South Africa	**14th World Forestry Congress for SA**
1-31 August 2016	Cape Town, South Africa	**35th International Geological Congress** Registration deadline: 30 June 2016.

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Global Spatial Data Infrastructure Association
http://www.gsdi.org