

# Spatial Data Infrastructure – Africa Newsletter

SDI-Africa Newsletter

November 2004

Vol. 3, No. 11

Spatial Data Infrastructure - Africa (SDI-Africa) is a free electronic newsletter for people interested in GIS, remote sensing, and data management issues in Africa. It aims to raise awareness and provide useful information to strengthen national SDI initiatives and support synchronization of regional activities. The [Executive Working Group of CODI-Geo](#) and [EIS-AFRICA](#) are regional fora that are promoting SDI development.

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Please mention SDI-Africa as a source of information in correspondence you may have about items in this issue.

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. I'd be happy to include your news in the newsletter.

I encourage you to forward this newsletter onto colleagues who may find the information useful, and ideally they will subscribe themselves.

Back issues of the newsletter are at the GSDI website: <http://www.gsdi.org/newsletters.asp>

Best regards, Kate Lance, Editor, [lancekt@aya.yale.edu](mailto:lancekt@aya.yale.edu)

## Input to this Issue

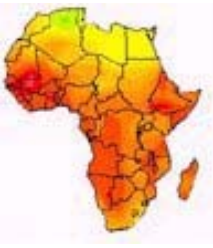
Thank you to Antony Cooper, CSIR (South Africa); Kwabena Asante, USGS/EROS Data Center (USA); and Rashid Azzan, Zanzibar Sustainable Management of Land and Environment (SMOLE) Programme (Tanzania) for their input to this issue of the newsletter.

## GSDI8 – Call for abstracts – Deadline for abstracts is November 20, 2004

[Call for papers - 8th International Conference on the Global Spatial Data Infrastructure \(GSDI-8\) and FIG Working Week 2005](#), Cairo, Egypt, April 16-21, 2005. Deadline for abstracts is 20 November 2004.

FIG and GSDI invite abstract submissions from those in government, industry, non-government organizations (NGOs), and academia involved in the planning, development, management, application, evaluation and conceptual advancement of local, regional, national and trans-national spatial data infrastructures and surveying. In the interests of fostering lively debate, we encourage presentations that:

- describe and critically assess current spatial data infrastructure initiatives;
- describe existing alternative approaches or models for planning, financing and implementing SDI initiatives in different countries or regions of the world and assess the effects of policy and technical choices in addressing cultural, social, and economic issues;
- critically examine purported "SDI best practices" in terms of their policy, technological, institutional and financial approaches and their ultimate effects on economic advancement and improving quality of life;
- highlight successes and challenges to be found in case studies, data harmonization efforts, and standards efforts,
- identify implications of various approaches for local, state, provincial, national, trans-national, and global stakeholders with a particular focus on the needs of people in developing nations;
- explain new technologies, programs and research initiatives that may provide better guidance in SDI implementation;
- suggest and discuss possible future technological scenarios for SDI developments;
- discuss the role of SDI best practices and capabilities as an integrated part of the broader IT enterprise architecture;
- explore SDI application models to support decision makers in the areas such as sustainable development, natural resources management, land administration, disaster management support, economic/business activities.

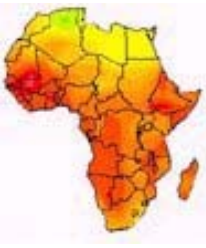


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## Major Themes and Topics

Presenters should indicate under which of the following topics their presentation might be most appropriately presented.

1. Physical Infrastructure – Tools, Procedures and Systems
  - 1.1 Surveying from the Pharaohs – History of Surveying
  - 1.2 Surveying and GIS in Archaeology
  - 1.3 Affordable Housing and Upgrading of Informal Settlements
  - 1.4 Utility Infrastructures (Including Telecommunication and Energy)
  - 1.5 Traffic Network and Management Systems
  - 1.6 Mobile Mapping Systems for Highway Inventory Applications
  - 1.7 Geographical Names and Address Systems
  - 1.8 Global Navigation Satellite System Reference Stations and Infrastructure
  - 1.9 Engineering Surveys for Construction Works and Structural Engineering
  - 1.10 Financing Information Technology and SDI in Developing Nations
  - 1.11 Cost Effective Technology and Techniques for Developing Countries
  - 1.12 Real Estate Management
  
2. Virtual Infrastructure – Tools, Procedures, and Systems
  - 2.1 Spatial Information Management
  - 2.2 Harmonization of SDIs – Obstacles and Solutions
  - 2.3 Define and Produce Fundamental Geographic Data
  - 2.4 Benefit of SDI's Interrelations with Land Administration
  - 2.5 Land Administration, Cadastre and Land Registries
  - 2.6 Marine, Urban and Rural Cadastres
  - 2.7 Government and Land (Policy, Tax, Valuation, Regulations and Compulsory Acquisition)
  - 2.8 Efficient and Effective Authorities (e-Government / Access to Information)
  - 2.9 Standards in Operation and Interoperability
  - 2.10 Professional Standards: Education, Licensing and Access to Markets
  - 2.11 Web Application Development
  - 2.12 National Progress Reports on SDI Developments
  - 2.13 Trends and Case Studies in Design and Implementation of Portals and Clearinghouses
  - 2.14 Trends and Case Studies in Metadata Development
  - 2.15 Case Studies in SDI Components (Geodetic Datum, Data Transformations, Cadastre, Planning etc.)
  
3. Welfare, Life Security, Social and Legal Frame
  - 3.1 Privacy and Security in the Use of SDI (Personal / National)
  - 3.2 Land Rights to Reduce Poverty and Informal Settlement
  - 3.3 Risk and Disaster Management (Environmental and Economical)
  - 3.4 Integrated Water Management
  - 3.5 Land Use and Land Resource Management
  - 3.6 Access to Information: Legal, Economic and Social Aspects and Policies
  - 3.7 SDI in Poverty Eradication
  
4. Investing in the Future
  - 4.1 Capacity Building, Education and Training – Trends and Case Studies
  - 4.2 Human Resource Assets in Merging Economies
  - 4.3 Urban and Rural Planning
  - 4.4 Improving Technologies (Surveying, Navigation, Photogrammetry etc.)
  - 4.5 Improving Business Approaches and Administration
  - 4.6 Making SDI Useable and Affordable at the Grassroots Level
  - 4.7 Multi-dimensional Information Systems (3D Cadastre)



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4.8 Design and Development of GIM/GIS

4.9 New Mapping Techniques for Sustainable Development

This event brings together GSDI-8 and the FIG Working Week 2005 in Cairo, which is the ancestral home of geomatics and land information systems. The technical program of the conference includes plenary sessions with high-profile international speakers addressing topics of interest both for SDI experts and surveyors. The technical conference includes almost 40 technical sessions offering space for almost 300 papers. In addition there will be pre-conference tutorials and workshops. For detailed information about this joint GSDI and FIG conference, see <http://www.fig.net/cairo>; for the conference brochure, see <http://130.11.63.121/GSDI8/images/1stann.pdf>

## SDI News, Links, Papers, Presentations

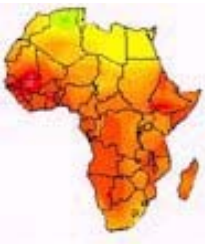
**[Summary of Geospatial Data Standards Workshop and AARSE Conference Plenary session: Spatial data standards and specifications](#)** The workshop was held at the premises of the Regional Centre for Mapping of Resources for Development (RCMRD) in Nairobi, Kenya, on October 17, 2004, and the results of the workshop were then presented at Plenary at the end of the AARSE Conference. Approximately 80 geospatial specialists participated in the workshop -- a good representation of leading professionals from across Africa, and it was clear that data standards are very much on the agenda. See [Status of the Standardisation of Geographical Information in Africa](#), one of the presentations given at the workshop. Also note results from the Pre-ICC workshop, sponsored and organized by UNECA, EIS-AFRICA, USGS/EDC, GSDI, "[Implementing Standards for Geographic Information in Africa](#)", Durban, South Africa, 10 August 2003.

### **[Opportunities and challenges for SDI development in developing countries – a case study of Uganda](#)**

Developments in Spatial data collection and use have led to what are currently known as Spatial Data Infrastructures (SDIs). SDIs are technologies, policies, standards, and human resources to acquire, process, store, distribute, and improve utilisation of geo-spatial information. SDIs are generally believed to play a big role in optimising the utilisation of spatial data, which in turn leads to the development of a nation. SDIs are currently benefiting developed countries, which are characterised by high levels of IT, adequate financial resources and huge quantities of spatial data. However, SDI concepts are now being disseminated into developing countries whose levels of IT do not match those of the developed countries; where most mapping and GIS programs are funded through foreign aid and huge quantities of spatial data are still kept on paper maps. There is still uncertainty as to whether developing countries are ready to utilise the benefits of SDI. Like many developing countries, Uganda is in the processes of developing a national spatial data infrastructure. Initial studies for developing a National Spatial Data Infrastructure and a National Land Information System have been carried out. Data was collected from different institutions, compiled in a CRUD Matrix and analysed using a methodology of assessing individual SDI components. The experience from these studies gives us an insight into what opportunities and challenges are ahead of developing countries trying to develop SDI. Whereas most of the challenges are similar in developed and developing countries, the unique challenges in developing countries are those associated with under-development and multiple donor aid. These challenges require that the components of SDI in developing countries take a slightly different shape but should serve the general purpose of establishing SDI. [Presented at Geoinformatics 2004, Proc. 12th Int. Conf. on Geoinformatics –Geospatial Information Research: Bridging the Pacific and Atlantic, University of Gävle, Sweden, 7-9 June 2004]

### **[First computerized weather stations planned for Malawi](#)**

Malawi's run down meteorological infrastructure will be given a major technological boost over the next three years, according to a plan launched last week by Donald Kamudonyo, director of the country's Department of Meteorology (DoM). The DoM's 'information and communication technology strategic plan' outlines a range of upgrades intended to improve weather forecasting, principally to aid agricultural planning and disaster management. For the first time, Malawi's weather stations will be completely automated and updated with modern computerised equipment to improve recording and monitoring of weather data. Under the plan, the DoM will also use geographical information systems (GIS) technology to map disaster prone areas and analyse meteorological and agricultural information from them so that early warnings of extreme weather conditions can be given. The DoM plan will cost US\$1 million to implement, and will be funded jointly by the Malawian government and international donors.



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## [Nigeria is to launch its second satellite in 2007](#)

The satellite, christened "NigeriaSat-2" is coming after the pioneer "NigeriaSat-1" was launched on Sept. 27, 2003 at Plesetsk Cosmodrome in Russia. The NigeriaSat-2, a 2.5-metre high-resolution satellite is presently at the design stage. NigeriaSat-1, a medium resolution and disaster observing and monitoring spacecraft with a life expectancy of about five years, has capability to conduct agricultural monitoring, hydrological mapping and assess damage through hazard mapping. The National Space Research and Development Agency (NASRDA) is working on the new satellite as part of African Resources and Environmental Management Constellation (AREMAC) satellite. The satellite is being developed in the interest and in line with the objective of the New Partnership for Africa's Development (NEPAD) for the sustainable development of the continent. When launched, NigeriaSat-2 will also cater for the wider interests of geo-information stakeholders. It would serve as sources of geo-information data acquisition for both core and thematic data sets for the National Geospatial Data Infrastructure (NGDI) project. [Source: AllAfrica.com]

## **2<sup>nd</sup> General meeting for Tanzania GIS Users Group**, October 29, 2004, Arusha, Tanzania

The [TZGIS User Group](#) organized their 2nd general meeting on October 29, 2004 from 3-5pm at the Everest Chinese Restaurant in Arusha. It was an informal meeting to discuss the following topics: future direction and activities of the group; more "formal" multi-day GIS/RS workshops; collaboration with the Kenya GIS users group and other regional groups; Tanzania GIS/RS data collection and on-line access; funding opportunities; website development; and other items of business. For more information, contact Lara Foley, Wildlife Conservation Society (WCS), [foley@bushlink.co.tz](mailto:foley@bushlink.co.tz)

## [Rwanda Development Gateway Graduates GIS Trainees](#)

The Rwanda Development Gateway Group, in partnership with the Research and Training Centre in Geographic Information systems & Remote Sensing of the National University of Rwanda, recently graduated its first group of trainees. The participants of this introductory training program now have basic theoretical and technical skills for implementing geographic information systems (GIS) projects. The partners' objective is to offer introductory and advanced training twice a year, to develop a capability as a regional center of expertise in GIS. [Source: Development Gateway Newsletter, October 2004]

## **Comments/Suggestions sought for [Zanzibar Sustainable Management of Land and Environment \(SMOLE\) Programme](#)**

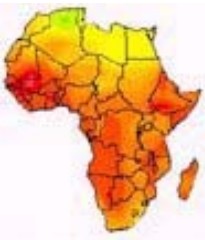
Cooperation in the area of land and environmental management between the Governments of Zanzibar and Finland started in 1989 with the Zanzibar Integrated Land and Environmental Management Project, ZILEM. The Sustainable Management of Land and Environment (SMOLE) is a continuation of the ZILEM activities. The current Preparation Phase of the SMOLE Program started September 2003. The main objective of this Preparation Phase is to support the three departments involved in preparing a Strategic Plan for 2005 to 2009 to develop the management of land and environment in Zanzibar. The implementing departments are the Department of Surveys and Urban Planning and Department of Land and Registration from the Ministry of Water, Construction, Energy and Lands, and the Department of Environment from the Ministry of Agriculture, Natural Resources, Cooperatives and Environment. This document provides a summary on how the development of digital land information, land registration and environmental information are to be incorporated into the project. A detailed Strategic Plan is under preparation. Comments/suggestions are welcomed and should be sent to Rashid Azzan, [rashidazzan@hotmail.com](mailto:rashidazzan@hotmail.com).

## [Web Based Egyptian GIS Database Project](#)

This is a collaborative project to develop a web-based GIS relational database for geological data sets for Egypt. It will comprise digital topographic, geologic maps, and remote sensing, seismic, geochronologic, geochemical, and isotopic data. The project will compile and organize datasets, develop metadata files, and assemble online tools for visualization. Scientists from the Department of Geology, University at Buffalo, and the Egyptian Geological Survey jointly will conduct the tasks.

## **Development Information Conference (highlighted in the October 2004 SDI-Africa issue) has been postponed**

Regrettably, due to circumstances beyond the control of the organizers, the Development Information Conference has been postponed. The conference will now take place in the first quarter of 2005. An exact date will be communicated to you as soon as it has been confirmed. They regret any inconvenience that this may have caused and look forward to seeing you early in 2005. For any queries please contact the Event Managers: Cynthia Rauch or Georgina Leffi



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with Bonisiwe, [cynthia@conferencedynamics.co.za](mailto:cynthia@conferencedynamics.co.za) or [cynthia@bonisiwe.com](mailto:cynthia@bonisiwe.com). You may also try contacting National Spatial Information Framework (NSIF), [NSIF@CSG.pwv.gov.za](mailto:NSIF@CSG.pwv.gov.za).

## [Worldwide GIS Revenue Forecast to Top \\$2.02 Billion in 2004, up 9.7% over 2003](#)

Cambridge, MA, October 19, 2004 -- Daratech, Inc. forecasts total GIS core-business revenue to top \$2.02 billion in 2004, an increase of 9.7% over 2003. In 2003, core GIS revenue reached \$1.84 billion, up 5.1%, by Daratech estimates. Core-business revenue includes software, hardware, services and data products. Of core-business revenue, Software accounted for the lion's share, comprising approximately two-thirds (64%) of the pie, with revenues from GIS software vendors reaching \$1.175 billion. Environmental Systems Research Institute, Inc. (ESRI) and Intergraph Corporation led the market in 2003, accounting for nearly half of the industry's total software revenues. Other software leaders in 2003 included Autodesk, Inc., IBM's GIS Business Unit, GE Energy, Leica Geosystems, and MapInfo Corporation. Services were the second-largest component, accounting for 24% of total core-business revenues, or \$447 million. Hardware, a declining component of core-business revenues for many years, accounted for just 4% of total core-business revenues in 2003, or \$70 million. Data products accounted for 8% of total core-business revenues. Industries in the regulated sector of the GIS market accounted for close to half (44%) of total GIS core-business revenues in 2003, or an estimated \$815 million. By comparison, the public sector accounted for just over one-fourth (29%) of total revenue, or \$533 million, while the private sector contributed 24%, or \$437 million. In-depth analysis of the structure and composition of the GIS market, a detailed description of Daratech's GIS market model, profiles of major core-business participants and their product lines, and other background information is available (for a price) in the just-released publication "2004 GIS Markets and Opportunities." Contact: Sue Churchill, Daratech, Inc., tel. (+1) 617.354.2339, ext. 2601, email [sue@daratech.com](mailto:sue@daratech.com).

## [OGC Announces Call for Input on Geospatial Digital Rights Management](#)

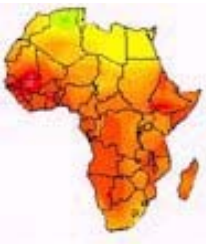
Wayland, MA, October 21, 2004 --The Open Geospatial Consortium Inc. (OGC) launched a digital rights management (DRM)-related project aimed at collecting essential information from governments, businesses, and academia. The data gathered through the [five-minute survey](#), available for the next 30 days, will help to shape the development of open standards to manage digital rights for geospatial data and services. DRM is a technology for describing, identifying, trading, protecting, monitoring and tracking all forms of rights usages, including management of rights-holder relationships. Geospatial DRM manages all rights, not only the rights applicable to permissions over digital geographic data. The current inability to control the flow of such information activities has been a barrier to broader adoption of Web-based geospatial technologies. Some government data has been withheld from public release over the Web because of an inability to manage owner rights after the data is released. The GeoDRM initiative, a partnership of the GeoData Alliance and OGC, will rely on the survey data in working to validate a standards-based interoperability framework. This framework is comprised of OGC Web services specifications and related standards developed by the broader information technology industry.

-- SDI highlight from Europe

[European Umbrella Organization for Geographic Information \(EUROGI\) Second Newsletter - Sept 2004](#) is available online.

-- SDI highlight from Canada

[A Developers' Guide to the CGDI: Developing and publishing geographic information, data and associated services](#) GeoConnections' GeoSkills program recently developed an online training course for the Canadian Geospatial Data Infrastructure (CGDI) and updated the [CGDI technical manual](#) (now called "A CGDI Developers' Guide: Developing and publishing geographic information, data, and associated services"). The online training course has been focus group tested with users and provides an authoritative "How to" source for the CGDI. It introduces users to the various components of the CGDI, their functionality, and the standards and specifications that were used to implement them. The course is divided into modules that correspond to different elements of the CGDI. A CGDI Developers' Guide accompanies the online training modules, and it is intended for web developers with varying levels of geomatics expertise, and for managers and other users. Development of the technical manual responds to consistent client feedback that has asked for additional detail and examples of how to become more involved and how to benefit from the CGDI. The new technical guide informs organizations on how to make geospatial data and services more visible and accessible on the CGDI, and explains how to build applications with



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CGDI-endorsed standards and specifications. It contains four sections and seven appendices, each of which describes different aspects of the CGDI and how it can benefit data suppliers and users:

Section 1 explains the CGDI;

Section 2 focuses on how to discover geospatial resources;

Section 3 describes how to search other databases, as well as how to make a database searchable; and

Section 4 features how to use CGDI web resources.

To access both the [online training course](#) and A CGDI Developers' Guide, please visit the [Key Documents page](#) of the GeoConnections web site. Contact: GeoConnections Secretariat, [info@geoconnections.org](mailto:info@geoconnections.org)

## [Le manuel pour les développeurs et la formation de l'infrastructure canadienne de données géospatiales \(ICDG\) en ligne sont maintenant disponibles](#)

Le programme GéoCompétences de GéoConnexions a récemment mis au point une formation en ligne sur l'Infrastructure canadienne de données géospatiales (ICDG). Il a de plus mis à jour le manuel technique de l'ICDG (maintenant intitulé «Manuel pour les développeurs de l'ICDG : produire et publier l'information, les données et les services géographiques »). Le cours « Formation en ligne de l'ICDG » a été testé auprès d'un groupe cible. Il constitue la ressource officielle sur toute question touchant l'utilisation de l'ICDG. Il initie les usagers aux diverses composantes de l'ICDG, à leurs fonctionnalités et les renseigne sur les normes et spécifications qui les sous-tendent. Les divers modules du cours correspondent aux divers éléments de l'ICDG. Le Manuel pour les développeurs de l'ICDG qui accompagne les modules de formation en ligne s'adresse à tous les développeurs Web, gestionnaires ou autres usagers, quelle que soit leur degré d'expertise en géomatique. Il s'agit d'un manuel technique mis au point afin de répondre à la demande constante de la clientèle de l'ICDG pour une information plus détaillée et des exemples sur les façons de s'impliquer davantage dans cette infrastructure et d'en tirer parti. Le nouveau Manuel pour les développeurs de l'ICDG vise à informer les organisations sur la façon de rendre les données et les services géospatiaux plus visibles et accessibles au moyen de l'ICDG. Il explique aussi comment construire des applications basées sur les normes et spécifications adoptées par l'ICDG. Le Manuel comprend quatre sections et sept annexes, dont chacun décrit divers aspects de l'ICDG ainsi que la façon dont les fournisseurs et les utilisateurs de données peuvent les utiliser:

La section 1 décrit l'ICDG;

La section 2 est axée sur la découverte des ressources géospatiales;

La section 3 porte sur l'exploration des autres bases de données et explique comment rendre une base de données consultable

La section 4 traite de l'utilisation des ressources Web de l'ICDG.

Vous trouverez la « [Formation en ligne de l'ICDG](#) » et le « [Manuel pour les développeurs de l'ICDG](#) » parmi les [Documents clés](#) du site de GéoConnexions. Contact: GeoConnections Secretariat, [info@geoconnections.org](mailto:info@geoconnections.org)

## [Proceedings are online from the 3rd FIG Regional Conference for Asia and the Pacific: Surveying the Future - Contributions to Economic, Environmental and Social Development](#)

The conference was organised by FIG, Ikatan Surveyor Indonesia and Bakosurtanal in Jakarta 3-7 October 2004. More than 350 delegates from 33 countries attended including more than 120 international participants.

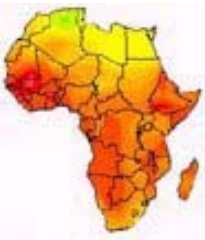
## [Call for Papers - Twenty-Fifth Annual ESRI International User Conference](#)

ESRI is now accepting abstracts for user paper presentations for the 2005 ESRI International User Conference. The abstract deadline is December 3, 2004. Abstracts should be not more than 150 words. Users who present their papers at the conference can have them published on the Web and in the conference proceedings on CD-ROM.

## [Call for Abstracts - 7th AfricaGIS Conference](#)

[AfricaGIS '05](#) will be held at the Sandton Convention Centre in Johannesburg, South Africa from 29 August to 2 September 2005. The conference theme is: Beyond Talk: Geo-information working for Africa, with sub-themes:

- Local integrated socio-economic development
- Spatial data infrastructure facilitating development
- Development through partnerships
- African action for global impact
- Business geographics



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- Facilitating access for socio-economic and environmental empowerment

Note that the final date to submit abstracts has been extended to 31 December 2004. If you have questions or suggestions, contact [info@africagis2005.org.za](mailto:info@africagis2005.org.za).

[Resolutions from the 19th ISO/TC 211 \(Geographic information/Geomatics\) plenary meeting](#), Pallanza, Italy, 7-8 October, 2004.

## [Draft plan for global earth observation system](#)

The US White House Office of Science and Technology Policy (OSTP) is requesting comments on its draft ten-year Strategic Plan for the US Integrated Earth Observation System. The Strategic Plan reflects the coordinated efforts of 18 federal agencies under the auspices of the National Science and Technology Council. The Plan is intended to represent an important element in the third Global Earth Observations Summit to be held February 2005 in Brussels, Belgium. The concept of integration is at the heart of the draft Strategic Plan, which emphasizes that the earth is an integrated system that contains linked ecological, biological, and geological systems. Ongoing development of the Global Earth Observation System ([earthobservations.org](http://earthobservations.org)) is critical to the health of the planet. Review the text of the draft Strategic Plan and send comments, by 8 November 2004, to [iwgeocomments@noaa.gov](mailto:iwgeocomments@noaa.gov).

## GIS Tools, Software, Data

### [Canadian Space Agency \(CSA\) offering access to RADARSAT-2 data at no cost for research and testing purposes](#)

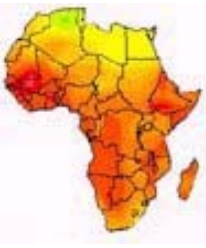
-- once the satellite is launched (expected end 2005). The Science and Operational Applications Research (SOAR) Program is accepting Letters of Interest. \* Be one of the first to use [RADARSAT-2 data](#) \*. The SOAR program for RADARSAT-2 is a joint partnership program between RADARSAT International (RSI) /MacDonald Dettwiler and Associates (MDA) and the Canadian Government through the Canadian Space Agency (CSA) and the Natural Resource Canada's Canada Centre for Remote Sensing (CCRS). The RADARSAT-2 satellite incorporates state-of-the-art technology and will provide the most advanced commercially available radar imagery in the world. The design of RADARSAT-2 has been driven by the needs of the global Earth Observation market, providing users with high-quality data products. RADARSAT-2 will be able to image at spatial resolutions ranging from 3 to 100 meters with nominal swath widths ranging from 10 to 500 kilometers. In addition, RADARSAT-2 is the first commercial radar satellite to offer multipolarization and fully polarimetric data. The satellite is designed to be operational for a period of seven years. The SOAR program provides access to RADARSAT-2 data (following the launch of the satellite) for research and testing purposes. Letters of Interest are being accepted until December 2004. For more information on the program please visit [http://www.radarsat2.info/soar/rs2\\_soar\\_info.asp](http://www.radarsat2.info/soar/rs2_soar_info.asp) where documentation for the proposal submission process is available for downloading. Contact: [soar@space.gc.ca](mailto:soar@space.gc.ca), Tel: (450)926-6611, Fax: (450)926-4449.

### [L'Agence spatiale du Canada \(CSA\) propose un accès gratuit aux données RADARSAT-2 pour une utilisation à but de recherche ou d'essai](#)

-- après le lancement du satellite prévu pour fin 2005. \* Soyez parmi les premiers à utiliser les images de RADARSAT-2. \*. Le Programme d'accès aux données de RADARSAT-2 pour la Recherche d'Applications Scientifiques et Opérationnelles (SOAR) est une collaboration entre RADARSAT International (RSI), MacDonald Dettwiler et associés (MDA) et le gouvernement canadien dont l'Agence spatiale canadienne (ASC) et le Centre canadien de télédétection (CCT) de Ressources naturelles Canada. RADARSAT-2 assurera la continuité des données aux utilisateurs de RADARSAT-1 pendant sa durée de vie prévue de sept ans. En réponse aux besoins de nouveaux marchés d'observation de la Terre, le design de RADARSAT-2 fournira aux utilisateurs du monde entier une gamme de produits de très haute qualité. La résolution au sol du capteur variera entre 3 et 100 mètres et les utilisateurs pourront choisir des largeurs de faisceau variant de 20 à 500 km. De plus, RADARSAT-2 sera le premier satellite radar commercial à offrir la multi-polarisation, et des données polarimétriques. Le programme SOAR permet d'accéder aux données RADARSAT-2 (suivant le lancement du satellite) pour des buts de recherches et d'essai. Vos lettres d'intérêt seront acceptées jusqu'à la fin décembre 2004. Pour plus d'information sur le programme visitez le site: [http://www.radarsat2.info/soar/rs2\\_soar\\_info.asp](http://www.radarsat2.info/soar/rs2_soar_info.asp) où la documentation sur le processus de soumission de proposition est disponible pour téléchargement. Contact: [soar@space.gc.ca](mailto:soar@space.gc.ca) Tel:(450)926-6611, Fax(450)926-4449.

### [KaR Metadata Toolkit](#)

The British Geological Survey, through funding by their Department for International Development, have developed a metadata collection and publishing system associated with their "Kar" project for use by organizations interested in a



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no/low-cost metadata management system. The project includes tutorial materials and a software system that can be installed using commercial no-fee software (Cold Fusion Express and Access) and for-fee software (Oracle, full Cold Fusion) for the collection of "Core" ISO 19115 metadata. An option is included to export the metadata into a recent draft form of ISO 19139, the XML representation of ISO metadata. The system uses a Web interface for the entry and search of metadata, but it does not yet include a standards-based search API such as Z39.50 or OGC Catalog Services for use within a federated clearinghouse. Metadata may be exported to XML for harvest or indexing in clearinghouse/portal systems. Contact: John Laxton, [jll@bgs.ac.uk](mailto:jll@bgs.ac.uk).

## [Tools for Agrometeorology and Agricultural Modelling](#)

ISCI-Agronomy, in cooperation with other institutions (i.e., Department of Biological Systems Engineering - Washington State University, Biotechnology and GMOs - Institute for Health and Consumer Protection - Joint Research Centre, Sustainable Development Department - Food and Agriculture Organization of the United Nations, Department of Agronomy and Agro-Ecosystem Management - University of Pisa), develops and maintains software and component tools for Agrometeorology and Agricultural Modelling. The component tools include sample applications. The software is made available free of charge to non profit users by dedicated pages. All updates are also available. Before installing the software, you can browse the help of each application. For programs which involve a database, users can download updates made available from other users from the programs home page on the web. We will post the dataset made available. You are invited to register (this can be done from the programs), and it is hoped that you will provide ISCI-Agronomy with feed-back about the programs.

As part of the **Eastern Arc Mountains Strategy of the Project Conservation & Management of the Eastern Arc Mountain Forests**, the following consultancies are being undertaken with support from GEF/UNDP (tenders have already gone out). [Forest area baseline for the Eastern Arc Mountains](#) and [Hydrological analysis for the Eastern Arc Mountains](#). These include:

- Updating with CARE and WCST GIS map of the Uluguru Mountains
- GIS/Remote sensing of forest cover on the Eastern Arc Mountains and changes over time, which may go as far back as the 1950s if the old 1:50,000 maps allow for that.
- Compiling all GIS data for various Eastern Arc mountain districts into a single source.
- Getting any GIS shape file updates of protected areas for the World Database on Protected Areas.
- Working with WWF to update their existing GIS for the coastal forest regions of Kenya, Tanzania and Mozambique.

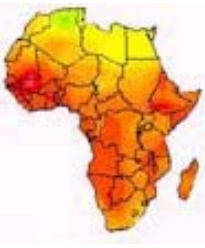
## Geospatial Research, Applications, Reference Material

### [GIS and remote sensing for urban planning: a case of Festac Town, Lagos, Nigeria](#)

[Proc. 12th Int. Conf. on Geoinformatics –Geospatial Information Research: Bridging the Pacific and Atlantic, University of Gävle, Sweden, 7-9 June 2004] This study assesses the extent of encroachments into the original acquisitions of Festac town using SPOT XS satellite imagery and also investigates the extent of conversion of open spaces in the developed area of Festac town to other land uses using GIS techniques. Original Masterplans were digitally converted and integrated with remote sensing and field work data. The results show that encroachments into the original Festac acquisition have already been noted towards the west and north of the area. About 1.42 km<sup>2</sup> (142 ha) has already been affected. For the developed area of Festac, open green spaces reduced from about 0.2 km<sup>2</sup> (20 ha) to only 0.003 km<sup>2</sup> (0.3 ha). Residential houses and shops/shopping malls have virtually taken over the designated open spaces accounting for 35% and over 30% of the original areas allocated for open spaces. Only 1.6%, 4.9% and 1.4% respectively of the designated land area for open spaces still serve the purpose of functional open spaces, functional playground and open green spaces as opposed to their original allocations of 32.5%, 2.6% and 64.3% respectively. The implication of these on the liveability of Festac town, and city/urban planning is also examined.

### [Accurate mapping: this first step to better spatial information management by African utilities](#)

[Mulaku, G.C., 2004 (Department of Surveying, University of Nairobi). African Journal of Science and Technology (AJST) Science and Engineering Series Vol. 5, No. 1, pp. 29 – 33] African utilities, faced with the challenge of providing diverse services to some of the fastest growing urban areas in the world, have to improve their management systems, especially the management of their spatial information if they are to rise to this challenge. This



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paper argues that for this to happen, urgent revision and expansion of large scale base mapping, more investment in thematic mapping by the utilities themselves, plus greater commitment to digital management support systems such as Geographic Information Systems (GIS) are necessary. Reviews of the status of large scale mapping in Kenya's major towns and the level of map usage at Nairobi's major utilities are presented as examples to support this argument.

## [Managing informal settlements : a study using geo-information in Dar es Salaam, Tanzania](#)

Sliuzas, R.V. (2004). The research is significant in two distinct ways: i) It demonstrates how geographic information technologies can be used to improve the knowledge and understanding of informal housing processes which, in the long term, is believed to be an important prerequisite for the development of more effective strategic interventions related to informal settlements; ii) It will enhance the ability of the urban planning community in developing countries to apply Geographic Information Technologies within planning processes that are intended to regulate informal housing development.

## Funding Opportunities, Awards, Support

### [UNESCO Small Grants Programme on Poverty Eradication: Call for applications](#)

The overall goal of this programme is to encourage mid-career professionals and their institutions to contribute to poverty eradication strategies and national action plans that are based on a human rights framework. The new deadline for submission of applications has been extended to 31 March 2005 (before, the deadline was 31 October 2004). UNESCO contribution under this programme is aimed at strengthening national capacities for research and policy analysis on poverty eradication, thus, assisting selected Member States in developing anti-poverty strategies and action plans based on human rights and in monitoring their implementation. This programme targets researchers in selected Member States in sub-Saharan Africa, South Asia and parts of Latin America and the Caribbean – the regions or sub-regions, according to prevailing trends, least likely to achieve the United Nations Millennium Development Goal on halving extreme poverty by 2015. For more details, see [programme document](#).

### [Call for Proposals – Poverty Research in Developing Countries](#)

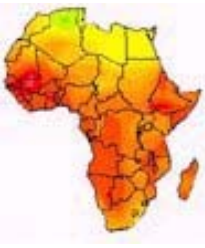
The [Poverty and Economic Policy \(PEP\) Research Network](#) invites research proposals from developing-country researchers on poverty monitoring, measurement and analysis, or on modeling and poverty impact analysis. Deadline: November 30, 2004.

### [Appel de Propositions – Recherches sur la pauvreté dans les pays en développement](#)

[Le réseau de recherche Politiques Économiques et Pauvreté \(PEP\)](#) invite les chercheurs des pays en développement à soumettre des propositions de recherche sur la pauvreté. Les thèmes doivent porter sur le suivi, la mesure et l'analyse de la pauvreté ou sur la modélisation et l'analyse des impacts des politiques. Date limite : le 30 novembre 2004.

### [START Fellowship/Visiting Scientist Program \(13<sup>th</sup> round\)](#)

This program, funded by DGIS, the Netherlands, is designed to increase the number of developing country scientists who serve as active partners in global change research in START regional networks and in the Joint and Core Projects of the Earth System Science Partnership (IGBP, WCRP, IHDP, and DIVERSITAS). Through this effort, these scientists will also be able to contribute to related aspects of sustainable development for their respective countries and regions. START Fellowships are offered at the graduate and post-graduate levels to young scientists from Africa, Asia, and Oceania. START fellows may work under senior mentors in leading laboratories or institutions in any part of the world, where research is conducted on relevant regional aspects of global change. Long-term collaboration between the individuals and institution involved is one important preferred outcome of the programme. The duration of these fellowships is ordinarily one or two semesters (i.e. typically 4-8 months). A parallel activity, the START Visiting Scientist Award, allows more senior scientists from developing countries the opportunity to undertake short-term visits to major international laboratories to become acquainted with recent advances in research and develop long-term programmatic linkages and partnerships. The duration of these awards is usually 1-2 months. Both the fellowship and visiting scientist awards will provide economy-class, roundtrip airfare and a modest subsistence allowance. Deadline for the thirteenth round of awards is December 1, 2004.



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## [START/PACOM Call for Proposals 2005](#)

A Call for Research Proposals related to Environmental Change tendered to the African Global Change Research Community. START, through funding from the United States Climate Change Science Program, is pleased to announce the attached Call for Proposals. Proposals are being solicited from scientists based at African institutions for research projects related to:

- 1) Climate Variability and Climate Change in Africa
- 2) Impacts/Adaptations/Vulnerability to Global Change
- 3) Land Use and Ecosystem Change
- 4) Bio-geochemical Fluxes, and
- 5) Biodiversity.

Proposals must fall within the research frameworks of START's sponsoring programs (IHDP, IGBP, and WCRP). Proposals should also address the joint research issues of the Earth System Science Partnership: Water Systems, the Global Carbon Cycle, and Global Change and Food Security. International collaboration is encouraged. Proposals will be accepted until 17 December 2004 as per the instructions at the link above. The intent is to make approximately 15-20 awards in this round; previous award levels have been in the range of \$15,000 – 20,000USD.

## [A call for research proposals from young scientists](#)

The International Foundation for Science (IFS) and the CGIAR Challenge Program on Water and Food (CPWF) are pleased to issue a call for research proposals open to young scientists. The purpose of the grants is to provide opportunities for young researchers to contribute to the generation of scientific knowledge relevant for achieving food security and poverty alleviation as expressed in the formulation of the Challenge Program on Water and Food. For information regarding the call, please access the [CPWF web page](#) for a copy of the guidelines, or the [IFS website](#).

Applicants should be at the beginning of their research career, have a minimum academic degree of an MSc/MA or the equivalent, and preferably be younger than 40. Researchers from natural science and social science disciplines are welcome to apply. Applicants must be associated with a national university, a research institute or a research-oriented NGO. Priority will be given to good applications from researchers based at institutions in countries adjacent to selected river basins which are part of the Challenge Program. Research grants are awarded up to a maximum value of USD 12,000 for a period of one to three years. Applications for this first round of research grants must be received by IFS no later than 31 December 2004.

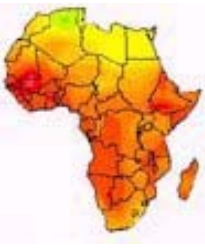
## [Support for International Scientific Meetings](#)

The Academy encourages the organization of international scientific meetings in Third World countries by providing financial support in the form of travel grants for principal speakers from abroad and/or participants from the region. Important: TWAS can only provide support to organizers of scientific events held in Third World countries to enable scientists from developing countries to attend their meetings. In other words, TWAS does not provide support to individual scientists wishing to attend a scientific event, even if the event is taking place in a developing country. Deadlines for applications: 1 December for meetings to be held during July-December of the following year.

## [Grants to Institutions in the South for Joint Research Projects](#)

The programme awards grants to joint research projects with well-defined objectives to be undertaken jointly by two to three research institutions from developing countries. Only joint projects involving institutions with well-established expertise and adequate basic equipment will be considered for those grants. The selection of projects for the grants will be based on scientific merit and on the benefits of the project to the industrial and socio-economic development of the countries concerned. A Research Grant will amount to a maximum of US\$ 30,000 and will be provided for up to 2 years. The Research Grant can be utilized for purchasing scientific apparatus, consumable materials, specialized literature and any other items needed for the joint project by any of the cooperating institutions. Part of the grant can be allocated for exchange visits of personnel and for organizing small research and training workshops at any of the institutes involved. Local expenses, such as staff salaries and routine expenses, will not be covered by the grant. Completed forms should be sent to the TWNSO Secretariat by 1 December of each year.

## [TWAS-UNESCO Associateship Scheme at Centres of Excellence in the South](#)



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The aim of the scheme is to counteract the brain drain by alleviating the problem of isolation of talented scientists in developing countries, and strengthen the research programmes of Centres of Excellence in the South. Within this scheme, a number of associates will be selected for each of the collaborating Centres from among the most eminent and promising researchers in developing countries, working in the fields of interest of each centre. The selection will be highly competitive and the appointment will be made on the basis of merit. Special consideration will be given to scientists from isolated institutions in developing countries. The appointment will be made for a fixed period of three years, during which the associate is entitled to visit the Centre twice for a period of two to three months each time. Subject to the availability of funds, the appointment may be renewed for a further term of three years. During the visit the associate may pursue his/her own research interests and/or collaborate with the research teams at the Centre in programmes of common interest. The associateship will cover travel and provide a small contribution of US\$ 200.00 per month towards incidental local expenses. The host centre will cover accommodation and food and provide all the necessary research facilities. Applications must reach the TWAS Secretariat by 1 December of each year

## [American Association of University Women \(AAUW\) Educational Foundation Fellowships and Grants 2005-06](#)

International Fellowships are awarded for full-time study or research to women who are not U.S. citizens or permanent residents. Both graduate and postgraduate study at accredited institutions are supported. Application postmark deadline: December 15, 2004.

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

Each September, 16 to 18 World Fellows come to Yale's campus in New Haven, Connecticut, for a concentrated 13-week program designed specifically for those leading and refining the critical institutions in societies around the globe. To augment their accelerating careers, the World Fellows Program provides a lively intellectual setting within which to analyze issues, debate goals, define strategies, reexamine values, and undertake a unique set of professional development opportunities. Recognizing that contemporary issues and problems defy easy categorization, the scope of the World Fellows Program is deliberately interdisciplinary, flexible, and capable of meeting the needs of Fellows across a wide range of fields. The Program also provides participants with an expanding network of contacts and connections both on campus and off to further enhance their future effectiveness. All nominations must be postmarked or electronically submitted by January 1, 2005. All applications must be received or electronically submitted by 14 January 2005.

## Training Opportunities

### [Virtual University of Geoinformatics](#)

The number of projects in the Finnish Virtual University grew by one, when the Virtual University of Geoinformatics came into being. At the moment, there is no official website in English, but at least some of the on-line courses offered will be conducted in English. The first courses started in September 2004. Contact: Hely Lahtinen, Education Coordinator, [hely.lahtinen@virtualuniversity.fi](mailto:hely.lahtinen@virtualuniversity.fi)

**Holistic Information Systems in Harare, Zimbabwe is offering training courses in GIS.** See [courses overview](#), [schedule](#), [registration form](#). Contact: [his@ecoweb.co.zw](mailto:his@ecoweb.co.zw), [kingrayg@yahoo.com](mailto:kingrayg@yahoo.com)

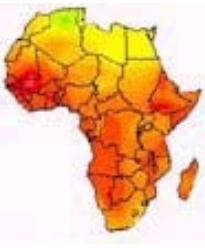
### **Regional Training Workshop on GIS & Hydrological Modeling**, 8-19 November 2004, Niamey, Niger

The purpose of the workshop is to train participants on the use of remotely sensed data and GIS-based hydrologic models (SFM) for forecasting floods in the Sahel. It will be conducted at AGRHYMET Regional Center, and is sponsored by AGRHYMET / USAID, USGS/FEWS Net, USAID/EMIS. Participants will come from CILSS Nine Countries, NBA, OMVS, OMVG, CBLT and Guinea. For more information contact AGRHYMET at [admin@agrhytmet.ne](mailto:admin@agrhytmet.ne) and Kwabena Asante, [asante@usgs.gov](mailto:asante@usgs.gov)

## Employment Opportunities

### **Spatial Data Infrastructure Administrator**, Gauteng, South Africa

The Drake International group, a specialist recruitment consultancy based in Sandton, Johannesburg is seeking for a client based in Gauteng a suitably qualified Spatial Data Infrastructure Administrator to perform the following: enterprise spatial database administration (ArcSDE), web map server/service administration (ArcIMS, MapServer),



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desktop software license administration, metadatabase administration, development and implementation of interoperability standards; assist with the design, development and implementation of generic and domain specific data models and applications; manage geomatics infrastructure budget; support all spatial technology users. Applications must have a BSc degree (minimum) with two of the following majors: GIS/Geomatics/remote sensing, computer/information science, geography, applied maths. Honours degree highly advantageous. Also required, at least two years of experience in Database Administration, Spatial Database Administration, System architecture, spatial data modelling, database design, web map service admin and development exp. It would be an advantage. ESRI Oracle / MS SQL Server, and Open Source Spatial Software. The salary offered is R150 to R170.000 per annum. Contact: Erica, Drake International Associate, [erica@drake.co.za](mailto:erica@drake.co.za).

### [Programme Officer for Conservation Programme](#), Tanzania

The Frankfurt Zoological Society is now recruiting a Programme Officer to join our Africa Department and to provide management and technical support for our range of conservation projects and support activities in Africa, from the design stage through to implementation, monitoring & evaluation. Responsibilities include the design, launch and management of FZS Africa projects and support activities; building up the FZS Africa Department's business management systems, as well as the representation of the FZS Africa Department internally within the FZS network as well as externally to government departments, donors, partner organisations and the general public. Essential qualifications include: At least 5 years' practical work experience in conservation and/or natural resources management in developing countries, preferably in Africa; Practical project and office management, administration and financial skills; Previous experience with project design and fund-raising as well as Postgraduate training to MSc level. Applications should be emailed to [jobs@fzs.org](mailto:jobs@fzs.org) to arrive by 3 November 2004.

### [Programme Officer](#), Third World Academy of Sciences, Trieste, Italy

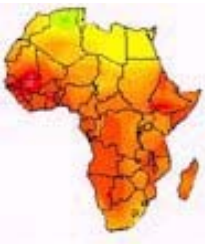
The incumbent will be required to assist in the design, implementation and coordination of the programmes of TWAS, the Third World Network of Scientific Organizations (TWNSO) and the Third World Organization for Women in Science (TWOWS). Ph.D. or equivalent doctoral level in a scientific field, at least six years of relevant professional experience in the design, development and implementation of scientific programmes in and for developing countries, experience in planning and organizing international/regional conferences, workshops and training courses, particularly in developing countries, and the ability to work in a team and in a multicultural environment. Deadline: 22 November 2004.

### [Director of the ICSU Regional Office for Africa](#) (pdf), Pretoria, South Africa.

The International Council for Science (ICSU) invites applications from citizens of countries in Sub-Saharan Africa for the post of Director of its Regional Office for Africa (Sub-Saharan Africa), which is being established at the National Research Foundation (NRF) in Pretoria. This Regional Office will be responsible for the promotion of increased participation of African countries and scientific organizations in ICSU programmes and activities. It will also assist ICSU and its Unions in their strategic planning to ensure that regional priorities are taken into account when setting their agendas. Thus, the Office will assist in strengthening science and scientific capacity building in Africa. An ICSU Regional Committee for Africa has been established, which will develop strategic plans and approve workplans for the Office. Members of the Regional Committee are nominated by ICSU National Members in Africa. Applications should be received no later than 1 December 2004. It is expected that the Director will start his/her appointment as soon as possible and no later than 1 April 2005.

### **Remote Sensing and Spatial Analysis Assistant or Associate Professor** University of Wisconsin-Madison, USA

The [Department of Forest Ecology and Management](#) is seeking a full-time (12 month), tenure-track faculty member in remote sensing of forest resources, beginning July 1, 2005. UW will focus on candidates for Assistant Professor, but may also consider a hire at Associate Professor for an exceptional candidate. UW expects candidates to have a strong research and teaching interests in remote sensing topics such as natural resource management, land use and global change, forest and resource sustainability, spatial modeling of natural resources, or disturbance ecology. Candidates should also have an interest in using spatial environmental and socio-economic data for policy planning, and collaboration with colleagues from other disciplines. A demonstrated ability to develop an innovative, extramurally-funded research program that complements existing programs on the Madison campus is essential. The appointment includes research (approx. 60%), undergraduate and graduate instruction, and public service (approx.



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40%). Teaching responsibilities include an undergraduate course emphasizing remote sensing and spatial analysis of forest resources, and a graduate course in the candidate's area of expertise; advising of undergraduate and graduate students, and relevant outreach. A Ph.D. in a discipline emphasizing remote sensing, spatial analysis, and modeling of natural resources is required; post-doctoral experience is preferred. Knowledge of advanced concepts and techniques in remote sensing, spatial analysis, and modeling is expected. To apply, send a detailed resume, cover letter, and separate research and teaching statements (electronically, as separate pdf files preferred) to: Ms. Marilyn McDole [msmcdole@wisc.edu](mailto:msmcdole@wisc.edu), 608-262-3073. Include in the letter the names and full coordinates of three potential references. Paper documents may be required later. For information regarding the position, contact David Mladenoff, Search Chair, [djmladen@wisc.edu](mailto:djmladen@wisc.edu), 608-262-1992. Further information and links can be found at both the Forestry Department and the [UW-Madison](http://UW-Madison) web pages. Applicants are encouraged to apply by December 1 2004, at which point review of candidates will begin. Salary is competitive and dependent on qualifications. The University of Wisconsin-Madison is an equal opportunity/affirmative action employer. We promote excellence through diversity and encourage all qualified individuals to apply.

[German and Canadian trained remote sensing and GIS expert looking for a related establishment with whom to work.](#)

## Other

[WSIS: Online Consultation on Financial Mechanisms for ICT for Development](#), Oct 25, 2004 - Nov 12, 2004

The Task Force on Financial Mechanisms (TFFM) was launched on 4 October at the United Nations Headquarters, to assess existing financial mechanisms in meeting the challenges related to promoting investment in and the use of information technologies to enhance development in developing countries. The establishment of the Task Force was requested last December at the World Summit on the Information Society (WSIS). The TFFM invites the public to join the online forum on Financial Mechanisms for Information and Communication Technologies for Development, which will be hosted on WSIS-online between October 25th and November 12th, 2004. A review of the adequacy of existing financial mechanisms in meeting the challenges of ICT for development is expected to be completed by the end of December 2004. The basic issues to be addressed by the Task Force on Financing Mechanisms (TFFM) can be summed up in one overriding question: *How can financial resources be most effectively mobilized to help harness the potential of ICT to promote human development throughout the world?*

[The Social and human sciences documentation centre launches its Africa South of the Sahara Database](#)

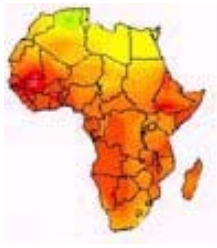
This new database provides information on the region's social and human sciences research and training institutes and periodicals. It is searchable by record type, institution, country, specialist, periodical title, ISSN and keyword. Contact the [Social and human sciences documentation centre](#) at [dare@unesco.org](mailto:dare@unesco.org) if you have any comments or suggestions for additions to the database.

**UNEP Africa Environment Outlook Report 2004: Environmental Assessment of the Lake Victoria Basin Workshop.** A stakeholders workshop on an "Environmental Assessment of the Lake Victoria Basin as a Contribution to the UNEP Africa Environment Outlook (AEO) Report 2004" was co-organized by the Pan-African START Secretariat on 2-4 September 2004 in Kisumu, Kenya. The workshop examined the state of the Lake Victoria basin environment over the past 30 years. It included the driving forces behind environmental change and the consequences for social and economic development, in terms of impacts on ecosystems, and vulnerability of human populations. The final report, to be submitted to UNEP, will cover all subjects discussed and include policy options and recommendations. For more information contact: Prof. Eric Odada, Pan African START Secretariat (PASS), University of Nairobi, Department of Geology, [pass@uonbi.ac.ke](mailto:pass@uonbi.ac.ke)

## Conferences, Events

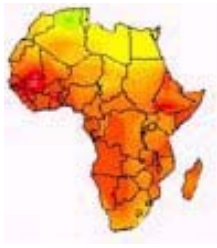
Items newly added to this listing of events since the last SDI-Africa issue are marked \* **NEW** \*

Date	Location	Event
<b>November 2004</b>		
<b>3-5 November</b>	Johannesburg, South Africa	<a href="#"><u>Emergency Services World Africa 2004 - 1st Annual Conference</u></a>



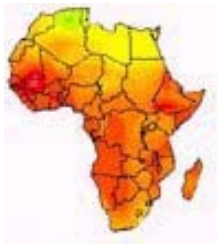
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3-5 November	Stellenbosch (Cape Town), South Africa	<a href="#">AfriGraph 2004 - 3rd International Conference on Virtual Reality, Computer Graphics, Visualization and Interaction in Africa</a>
8-10 November	Edinburgh, Scotland	<a href="#">Global Partnership for Sustainable Development: The role of academic institutions and societies in achieving the Millennium Development Goals</a>
8-10 November	Berlin, Germany	<a href="#">19th CODATA International Conference</a> (Committee on Data for Science and Technology)
8-10 November	Pretoria, South Africa	<a href="#">TIGER 2004</a> . This effort is aimed at providing the use of Earth observation data from ESA's Envisat satellite and other ESA missions to assist in managing water resources, primarily in Africa. Co-hosted by the South African Department for Water Affairs and Forestry (DWAF) and the Council for Scientific and Industrial Research (CSIR). Contact: <a href="mailto:josef.aschbacher@esa.int">josef.aschbacher@esa.int</a>
8-11 November	Cape Town, South Africa	<a href="#">IAPSO International Workshop on Forecasting and Data Assimilation in the Benguela Current and Comparable Systems</a>
8-11 November	Loskop Dam, South Africa	<a href="#">Workshop on Water Resource Management for Local Development: Governance, Institutions and Policies</a> . This workshop will convene researchers and policy and development agents to discuss issues relating to water management for local sustainable development, with a focus on rural development. For more information, contact Sylvain Perret: <a href="mailto:sylvain.perret@cirad.fr">sylvain.perret@cirad.fr</a>
10-13 November	Laghouat Algeria	<a href="#">L'eau et le risque dans le contexte saharien</a>
12-13 November	Washington, DC, USA	<a href="#">12th International Symposium of ACM GIS</a> . The symposium will provide a forum for original research contributions and practical system design, implementation, and applications of GIS. ACM-GIS 2004 will be held in conjunction with the <a href="#">13th International Conference on Information and Knowledge Management (ACM-CIKM 2004)</a>
17-18 November	Toulouse, France	<b>Forum ISSAT 2004 - Training for Space-Related Applications</b> <a href="#">Call for papers</a>
17-18 November	Nairobi, Kenya	<a href="#">First Annual Conference of the ESRI-Supported Kenya User Group (KUG)</a> . The theme of the conference is "GIS in conservation, planning and management of resources in a changing world". Contact: KUG Secretariat, <a href="mailto:kug@esriea.co.ke">kug@esriea.co.ke</a>
21-23 November	Annaba, Algérie	<a href="#">Colloque international : Terre et Eau - Informations et ressources scientifiques sur le développement des zones arides et semi-arides</a> Contact: Pr L. Djabri, <a href="mailto:terre.eau2004@yahoo.fr">terre.eau2004@yahoo.fr</a>
26-27 November	Ouagadougou, Burkina Faso	<a href="#">10th Summit of the Francophonie</a> This summit will convene under the theme "La Francophonie, a community that supports sustainable development."
29 November – 1 December	Hamburg, Germany	<a href="#">Ocean Biodiversity Informatics: International Conference on Marine Biodiversity Data Management</a>
29 November – 1 December	Addis Ababa, Ethiopia	<a href="#">International Conference on African Conflicts: Management, Resolution and Post-Conflict Recovery and Development</a>
<b>December 2004</b>		
1-4 December	Cape Town, South Africa	<a href="#">Third African Evaluation Association (AfrEA) Conference</a> The theme of the conference is proposed to be Evaluation for Effective Development in Africa. Contact: <a href="mailto:info@afrea.org">info@afrea.org</a>
2-3 December	George, South Africa	<a href="#">UNIGIS 2004 - 'GIS Strategies for Africa'</a> . Organized by <a href="#">UNIGIS</a>
4-6 December	Jeddah, Saudi	<a href="#">PERSGA Second Regional Forum 'Sea to Sea' Regional Organization for</a>



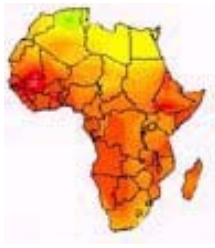
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* <b>NEW</b> *	Arabia	<a href="#">the Conservation of the Environment of the Red Sea and Gulf of Aden</a> , Contact: <a href="mailto:persga@persga.org">persga@persga.org</a>
<b>6-9 December</b> * <b>NEW</b> *	Cairo, Egypt	<a href="#">Energy For Sustainable Development: Technology Advances &amp; Environmental Issues</a> Organised by: Arab Academy for Science & Technology and Maritime Transport and National Renewable Energy Laboratory
<b>7-9 December</b>	United Arab Emirates	<a href="#">Seventh ESRI Middle East &amp; Africa User Conference</a>
<b>9-10 December</b> * <b>NEW</b> *	Bamberg, Germany	<a href="#">Workshop on standardization in the cadastral domain</a> organized jointly by COST Action G9 and FIG Commission 7
<b>11-12 December</b>	Khartoum, Sudan	<a href="#">GEOSUD 2004 workshop</a> on "The Geographic Information System (GIS) between theories and practice in the Sudan." Participants invited are researchers, practitioners and affiliated organizations in GIS related disciplines.
<b>January 2005</b>		
<b>10-14 January 2005</b>	Port Louis, Mauritius	<a href="#">International Meeting for the 10-year Review of the Barbados Programme of Action for the Sustainable Development of Small Island Developing States</a> (BPoA +10). Contact: <a href="mailto:mauritius2004@sidsnet.org">mauritius2004@sidsnet.org</a>
<b>14 January 2005</b> * <b>NEW</b> *	Athens, Greece	<a href="#">ePSINet Policy Conference on re-use of Public Sector Information in Europe</a> The aim of the conference is to provide a forum for policy makers, public content providers, re-users and international experts to discuss the prospects for adding value through commercial exploitation of public sector information.
<b>24-28 January 2005</b>	Paris, France	<a href="#">International Conference on Biodiversity</a> Sponsored by UNESCO, this conference is organized by the French Ministry of Research and New Technologies. Contact: <a href="mailto:biodiv2005paris@recherche.gouv.fr">biodiv2005paris@recherche.gouv.fr</a>
<b>February 2005</b>		
<b>9-11 February 2005</b>	Toro, Bauchi State, Nigeria	<a href="#">1<sup>st</sup> International Workshop on Geodesy and Geodynamics and Commissioning of the Centre for Geodesy and Geodynamics Office Complex</a> Directions; Call for Papers – abstracts due November 9, 2004
<b>21-23 February 2005</b>	Paris, France	<a href="#">New Space Services for Maritime Users: The Impact of Satellite Technology on Maritime Legislation</a>
<b>23-25 February 2005</b>	Bonn, Germany	<a href="#">International Conference on Integrated Assessment and Management of Water Resources: A North-South Analysis</a> The main objective of the conference is to analyze the challenges that are encountered in the integrated assessment and management of water resources in large river basins. By bringing together scientists and managers from North and South, it is expected that the present international research efforts concerning water related issues can be translated into practical methods and coherent approaches. The following themes will be addressed explicitly: data, stakeholders, scaling, integration, and policy. Contact: Nick van de Giesen, <a href="mailto:nick@uni-bonn.de">nick@uni-bonn.de</a>
<b>March 2005</b>		
<b>2-4 March 2005</b>	Johannesburg, South Africa	<a href="#">First Annual Southern African NGO Network (SANGONeT) "ICTs and Civil Society" Conference</a> The conference will focus on ICT challenges facing the Civil Society Organization (CSO) sector, highlighting and promoting practical benefits, opportunities and lessons learned to date. It will provide an opportunity to both CSOs that are ICT-enabled, as well as those organizations which are considering introducing ICT solutions to their work, to discuss critical issues of common concern and learn from one another's experiences. This conference is aimed at leadership staff and technical



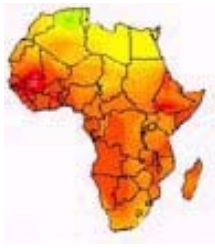
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		employees in CSOs, and individuals who work with these organizations, including donor agencies, the private sector and the government. Contact Refilwe Rakhibane at SANGONeT: <a href="mailto:mtintern@sangonet.org.za">mtintern@sangonet.org.za</a>
6-9 March 2005	Denver, CO, USA	<a href="#">Geospatial Information &amp; Technology Association (GITA)'s 2005 Annual Conference and Exhibition</a> . This prestigious event will present an exciting technical program, including one-and-a-half days of in-depth seminars followed by two-and-a-half days of educational sessions. This year's conference theme, Crossing Boundaries, is designed to address the boundless opportunities that geospatial information technology presents to organizations.
7-9 March 2005	Morogoro, Tanzania	<a href="#">East African Integrated River Basin Management Conference</a> - to bring together river basin professionals and researchers to critically discuss the tools of IWRM applied at the basin level.
21-23 March 2005	Delft, the Netherlands	<a href="#">First Symposium on Geo-Information for Disaster Management</a> <a href="http://www.gdmc.nl/qi4dm">http://www.gdmc.nl/qi4dm</a>
28-31 March 2005	Minato-ku, Tokyo region, Japan	<a href="#">4<sup>th</sup> International Symposium on Digital Earth</a>
<b>April 2005</b>		
3-7 April 2005	Yaounde, Cameroon	<a href="#">"Building Civil Society Through Community Development" Conference</a> Organized by International Association for Community Development (IACD); Government of Cameroon. The conference will be highly relevant to all those concerned with the role that community development can play in building or rebuilding the structures and processes of civil society. Contact: Jean Marie Minkoulou, <a href="mailto:minjm@camnet.cm">minjm@camnet.cm</a>
16-21 April 2005	Cairo, Egypt	<a href="#">FIG Working Week &amp; 8<sup>th</sup> International Conference on Global Spatial Data Infrastructure</a>
17 & 21 April 2005	Cairo, Egypt	<a href="#">12<sup>th</sup> International Steering Committee for Global Mapping Meeting</a>
<b>May 2005</b>		
16-18 May 2005	Los Angeles, CA, USA	<a href="#">GeoSpatial World 2005</a>
24-27 May 2005	Sesimbra, Portugal	<a href="#">ISESS 2005 (International Symposium on Environmental Software Systems)</a> ISESS 2005 is the latest in a series of conferences and workshops that, since 1995, have provided a forum for presenting and discussing effective information processing techniques for environmental prediction and monitoring. Deadline for abstracts: <u>November 5, 2004</u> .
<b>June 2005</b>		
<b>July 2005</b>		
3-6 July 2005 <b>* NEW *</b>	Southampton, UK	<a href="#">Cambridge Conference: The Exchange</a> – to be held at Ordnance Survey's head office in Southampton, UK. With a greater emphasis on networking and round-table discussions, CC:The Exchange is designed to strengthen relationships between national mapping organization senior representatives and to complement the 2007 Cambridge Conference. Contact: <a href="mailto:nmonetwork@ordnancesurvey.co.uk">nmonetwork@ordnancesurvey.co.uk</a>
9-16 July 2005	La Coruña, España	<a href="#">XXII ICA International Cartographic Conference</a> . <a href="#">Call for abstracts</a> . Abstracts due <u>1 November 2004</u> . A limited number of <a href="#">travel awards</a> will be made to young cartographers who are nationals from developing countries.
18-23 July 2005	Tours, France	<a href="#">International Union for the Scientific Study of Population - XXV International Population Conference</a> PERN invites abstract submissions for a special population-environment session at the XXV IUSSP Population Conference. The session aims at improving scientific understanding of



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		population-environment relationships by seeking interdisciplinary analyses that incorporate mediating factors, such as technology, markets, society, and politics. Papers may also address the following: (1) human impacts on land-use and land-cover change; (2) the role of population variables in greenhouse gas emissions and global warming; (3) effects of air and water pollution on health; (4) the likely impacts of global climate change and sea-level rise on population displacement and the spread of disease; and (5) theories or methods linking population and the environment.
<b>19-23 July 2005</b>	Elmina, Ghana	<a href="#"><u>1st Regional Biannual Conference of Africa Chapter of International Association of Landscape Ecology (Africa-IALE)</u></a> Changing Landscapes of Africa: A Common Approach to Diverse Challenges (Paysages Changeants de l'Afrique: Une Approche Commune aux Défis Divers). Contact: <a href="mailto:hbulley@calmit.unl.edu">hbulley@calmit.unl.edu</a> ; <a href="http://calmit.unl.edu/africa-iale/cd/">http://calmit.unl.edu/africa-iale/cd/</a> ; <a href="http://calmit.unl.edu/africa-iale/index.html">http://calmit.unl.edu/africa-iale/index.html</a> ; <a href="#">Africa-iale mailing list</a>
<b>24-29 July 2005</b>	San Diego, CA, USA	<a href="#"><u>ESRI International User Conference</u></a>
<b>August 2005</b>		
<b>29 August – 2 September 2005</b>	Sandton, Joburg, South Africa	<a href="#"><u>AFRICAGIS '05</u></a> 7th bi-annual Africa GIS Conference. Theme: Beyond Talk: Geo-information working for Africa. This conference aims to take people beyond talking about what can be done with geo-information, to sharing information and experiences about what is being done on the continent and to showcase examples of where geo-information has made an impact on people's lives, particularly through local development and partnerships. Deadline for submission of abstracts: <u>30 November 2004</u> .
<b>September 2005</b>		
<b>6-8 September 2005</b> <b>* NEW *</b>	Bologna, Italy	<a href="#"><u>River Basin Management 2005</u></a> River Basin Management 2005 is the third conference in the series which marks the growing international interest in the planning, design and management of river basin systems -- including all aspects of hydrology, ecology, environmental management, flood plains and wetlands.
<b>25-27 September 2005</b>	Magdeburg, Germany	<a href="#"><u>Second International ICSC Symposium on Information Technologies in Environmental Engineering (ITEE'2005)</u></a> The deadline for submission of papers is: <u>February 28, 2005</u> .
<b>October 2005</b>		
<b>9-13 October 2005</b>	Bonn, Germany	<a href="#"><u>6th Open Meeting of the Human Dimensions of Global Environmental Change Research Community</u></a>
<b>November 2005</b>		
<b>12-14 September 2005</b>	Bologna, Italy	<a href="#"><u>2nd International Conference on Sustainable Planning and Development (Sustainable Planning 2005)</u></a> The papers presented at Sustainable Planning 2005 will be published in volume 83 of <i>WIT Transactions on Ecology &amp; the Environment</i>
<b>16-18 November 2005</b>	Tunis, Tunisia	<a href="#"><u>World Summit on the Information Society</u></a> – 2 <sup>nd</sup> phase
<b>20-24 June 2005</b>	St. Petersburg, Russia	<a href="#"><u>31st International Symposium on Remote Sensing of Environment "Global Monitoring for Sustainability and Security"</u></a> <a href="#">Call for papers</a> Deadline for submission of abstracts: November 1, 2004.
<b>December 2005</b>		
<b>16-21 December 2005</b>	Cairo, Egypt	<a href="#"><u>13th International Conference of the Geological Society of Africa on Geology and Development</u></a> . Local lead organisation, the Egyptian National Authority for Remote Sensing and Space Sciences (NARSS). Contact: Dr Mahmoud Abdeen, GSAf Vice-President (North Africa),



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		<a href="mailto:m_m_abdeen@hotmail.com">m_m_abdeen@hotmail.com</a>
<b>2006</b>		
<b>9-15 July 2006</b>	Philadelphia, PA, USA	<a href="#"><u>IUSS 18th World Congress of Soil Science</u></a>
<b>13-17 July 2006</b>	Wollongong and Sydney, Australia	<a href="#"><u>COAST - GIS 06 - 7th International Symposium on GIS and Computer Cartography for Coastal Zone Management</u></a> . GIS for the coastal zone: Spatial Data, Modelling and Management; Extending the Spatial Data Infrastructure. Collaboration between the International Cartographic Association's Commission on Marine Cartography and the International Geographical Union's Commission on Coastal Systems

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