

Global Spatial Data Infrastructure Latin America and the Caribbean Newsletter

SDI-LAC

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Spatial Data Infrastructure-Latin America and the Caribbean (SDI-LAC) is a regional, monthly, and free, electronic newsletter from the Global Spatial Data Infrastructure Association (GSDI). It focuses on aspects related with Spatial Data Infrastructure, and on GIS, remote sensing, and data management issues, related with SDI in Latin America and the Caribbean. It aims to raise awareness, provide useful information to strengthen national SDI initiatives, and support synchronization of regional efforts.



GSDI Definition

The [Pan-American Institute of Geography and History](#) (PAIGH), member organization of GSDI, and the [Permanent Committee on Geospatial Data Infrastructure for the Americas](#) (PC-IDEA now UN-GGIM-Americas), promote SDI development in the region. The newsletter is prepared by PAIGH for GSDI.

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Message from the Editor

This SDI-LAC number highlights the following updates: The **Global and Regional SDI** section comprises notes on the New Officers of PAIGH elected or ratified for 2013-2017 and Report of Santiago Borrero, Secretary General (2003-2013) to the 20th General Assembly; A New Map that Details Global Deforestation; Resolutions from the ISO Technical Committee 211 Geographic information/Geomatics Plenary Meeting; the New OGC Working Group in the Health Domain; the EarthCube initiative to improve geosciences cyberinfrastructure; and the OGC ILAF Corner. The **IGS section** includes comments on IGS Membership Renewal.

The **National SDI** segment informs on the Report of the 8th IDERA Meeting, Argentina; the Public Consultation of Six Projects on Bolivian Geographic Information Standards; the Training Workshop in Galapagos for managing Continuous Monitoring GNSS data of Ecuador; and Launching of the Panamanian-IPDE first website. **Articles and Publications** of the month include the Recent Documents / Manuals Made Available by PC-IDEA (UNGGIM Americas); A Vision for Global Research Data Infrastructures; and the Nation-Wide, Web-Based, GIS for the Integrated Surveillance and Control of Dengue Fever in Mexico. **Geospatial Research and Applications** underline the SPOT Vegetation New portal for free satellite data; ESA satellite flood maps; and the Geographic Data Portal of Puerto Rico.

The **Training and Funding Opportunities** section encompasses calls for the Regional URISA Caribbean Workshop on Open Source Technologies and Web Mapping; An Internship in Remote Sensing

(Vienna Office); A PhD Assistantship on Geospatial Analytics of Human Responses to the Environment; and FIG Foundation Opportunities. Finally, several **Events taking place in the Americas** are listed in the last section.

Translation of SDI-LAC Portuguese is possible thanks to undergrad students **Esrom A. Rissate Jr.** and **Caroline Martins**, the geographer **Alexandre Scussel**, editorial assistant (MundoGEO) and cartographer engineers: **Alison Galdino**, Analyst (Navteq – Recife); **Antonio J. Fazan**, Analyst (AMS Kepler Engenharia de Sistemas); **Annette Pic**, MSc in Remote Sensing; **Camila B. Guedes**, Operations Department Advisor (DECEA); **Edilce F. Burity**, Technologist (IBGE/PE); **Edmilson M. Volpi**, Natural Resources Secretary in SP; **Eduardo Freitas**, editor (MundoGEO portal and magazine); **Flávio Porfírio**, Geoinformation Unit (ITEP); **Juan Carlos G. Mamani**, consultant in Geoinformation Technology; **Rodrigo Quirino** Technologist (IBGE/RJ); **Silvana Camboim** Professor (UFPR); **Silvane Paixão**, GIS Project Coordinator; **Tatiana Mendes**, Professor ICT (Unesp); Verônica Azevedo, Analyst (Navteq- Recife); **Vivan Fernandes**, Professor (UFBA). Under the general coordination of **Silvane Paixão** and review of **Eduardo Freitas**.

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

Editor, **Nancy Aguirre**, Pan-American Institute of Geography and History (PAIGH), <http://www.ipgh.org>, cnaguirre@ipgh.org

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Input to this Issue

Thanks for their contributions to this SDI-LAC Newsletter issue to:

Temenoujka Bandrova	President, Local Organizing Committee, 5th ICC and GIS Conference
Santiago Borrero	Secretary General, Pan-American Institute of Geography and History, PAIGH, Mexico
Arturo Brun-Martinez	Architect, Colombia
Joan Capdevila-Subirana	Regional Service of the National Geographic Institute in Catalunya, Spain
Kate Lance	GSDI listserv moderator, USA
Ragnvald Larsen	Senior Engineer, Mindland consulting, Norway
Darla K. Munroe	Associate Professor, Chair of Graduate Studies, The Ohio State University, Department of Geography, USA
Valéria Oliveira de Araújo	Management of Institutional Relations - GERI / CDDI , Brazilian Institute of Geography and Statistics (IBGE), Brazil
Imma Serra	National Geographic Information Center, National Geographic Institute, Spain
Jordan W. Smith	Assistant Professor of Natural Resource Social Science and GIS, North Carolina State University, USA
Eric van Praag	Regional Coordinator, GeoSUR Programme- CAF, Venezuela

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Global and Regional SDI, News, Presentations

New Officers of PAIGH: Report of the Secretary General (2003-2013) to the 20th General Assembly

The 20th General Assembly and the Meetings of Consultation of the Commissions of the Pan American Institute of Geography and History were held on November 18 to 22, 2003 in Montevideo, Uruguay. In addition to the activities that are commonly developed in these meetings, the election of new Officers of the PAIGH took place: Secretary General, President and Vice President, and the Chairperson of Commissions of Cartography, Geography, History, and Geophysics.

Reports of the Secretary General 2003-2013, and President 1999-2013 to the 20th PAIGH General Assembly
Santiago Borrero (Colombia), who served as PAIGH Secretary General from 2003 to 2013 will be succeeded by Rodrigo Barriga (Chile) who will undertake this commitment in February 2014. With emotional statements, delegates of member countries participating in the Assembly unanimously applauded and described as "reengineering" the management by the outgoing Secretary General after a very successful run manifested in a renewed PAIGH. Santiago Borrero, in addition to a detailed presentation of his activities in office accompanied by interesting anecdotes, distributed his 2003-2013 report to the 20th General Assembly of PAIGH entitled "Challenges and Achievements of a Decade: Memory of a Pan-American Management."

Hector Pena, former President of PAIGH for four years (1999-2013) was widely praised for its dedicated service and in turn, with a sensitive speech, also distributed his report entitled "The Pan-American Institute of Geography and History: Four Years Participating in its History."

New PAIGH Officers

Vice President (El Salvador)
Rigoberto Magaña

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Officers of the Commissions for 2013-2017 were elected and ratified:

Cartography Commission (Uruguay)

President: Carlos López-Vázquez

Vice President: Yuri Resnichenko

Geography Commission (United States of America)

President: Jean Parcher

Vice President: Patricia Solis

History Commission (Mexico)

President: Patricia Galeana

Vice President: Adalberto Santana

Geophysics Commission (Costa Rica) - endorsement

President: Walter Fernandez

Vice President: Walter Montero

Finally, representatives of Member States expressed unanimously their decision to continue fostering the development of PAIGH 2010-2020 Pan American Agenda adopted by Resolution No.4 of the 19th General Assembly (Ecuador, 2009).

The Terra-I Initiative, Developed by the CIAT, Has Been Granted the 2013 GeoSUR Award

Source: Eric van Praag and Santiago Borrero

Of the 17 initiatives submitted for the second edition of the GeoSUR Award, bestowed by the CAF (Development Bank of Latin America) and the Pan American Institute of Geography and History, the project entitled "Terra-i, The First System to Monitor the Loss of Habitat in Latin America and the Caribbean" presented by the International Center for Tropical Agriculture (CIAT), headquartered in Cali, Colombia was selected the winner.

The jury highlighted the following merits of the winning project:

- Terra-i is the first regional system to monitor loss of habitat in real time. This is particularly important for Latin America as it is the world's most biodiverse region and is currently undergoing considerable loss of habitat.
- The system assists in planning for infrastructure projects so they may have less impact on the environment because it can measure the potential impact in zones of influence.
- The system has highly innovative components, such as automated learning techniques and Bayesian and neural networks to determine habitat changes by combining climate data with shifts in vegetation.
- Publication of the system's data and results via social networks extends its sphere to the general public.
- The system enables environmental preservation policies to be drawn up based on reliable and updated scientific information.

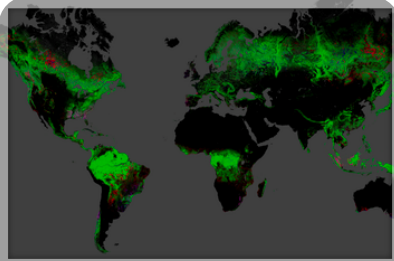
Honorable mention was given by the GeoSUR Program to the following projects: "Computer Platform to Develop Monitoring, Analysis and Warning Systems for Environmental Extremes", submitted by the National Institute for Space research (INPE) in Brazil and "System to Register Geographic Items" submitted by the Spatial Data Infrastructure for the Capital District (IDECA), Special Administrative Unit for District Cadastre (UAECD), for their merits.

The jury found all the initiatives submitted for this year's edition have important merits of their own and believes the work underway contributes significantly to the use of geospatial information for multiple development purposes in the countries and region thus, as they continue to progress, reach their goals and have concrete results they will very likely be more competitive in future editions of the GeoSUR Award. What is more, the winning application this year was submitted to the previous edition of the Award and successfully competed once again this year.

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[New Map Details Global Deforestation](#)

Source: Arturo Brun-Martínez



A new global map of deforestation reveals 888,000 square miles (2.3 million square kilometers) lost between 2000 and 2012.
CREDIT: Image courtesy Matt Hansen, University of Maryland

A new global map of deforestation reveals that 888,000 square miles (2.3 million square kilometers) of forest has vanished since 2000. The [interactive map \(viewable online\)](#) is based on satellite data and is the first of its kind. The calculations are accurate down to about 100 feet (30 meters), enough detail to provide useful local information while still covering the whole globe. "We say that it's globally consistent but locally relevant," said Matt Hansen, a geographer at the University of Maryland who led the mapping effort. "We can describe a global dynamic and compare regions as apples to apples, but if you cut out any particular corner, it would be accurate and have meaning." The map covers the time frame from 2000 to 2012, and includes both forest losses and forest gains. During that time, 309,000 square miles (800,000 square km) of new forests were gained. Of the 888,000 square miles lost and 309,000 square miles gained, about 77,000 square miles (200,000 square km) were areas that were lost between 2000 and 2012 and then re-established. The rest of the loss and gain occurs in tandem all over the globe. For example, Brazil's [efforts to slow deforestation](#) have paid off, with about 500 square miles (1,300 square km) less loss each year. But the rest of

the tropics more than made up for Brazil's improvements with rapidly increasing losses. Humans are the main driver of deforestation, through logging and clear-cutting, Hansen told LiveScience. Forest fires come next, mostly in the boreal forests of temperate regions. Storm damage also harms forests. [[7 Ways the Earth Changes in the Blink of an Eye](#)]

[Resolutions from the ISO Technical Committee 211 Geographic information/Geomatics Plenary Meeting](#)

Source: Santiago Borrero

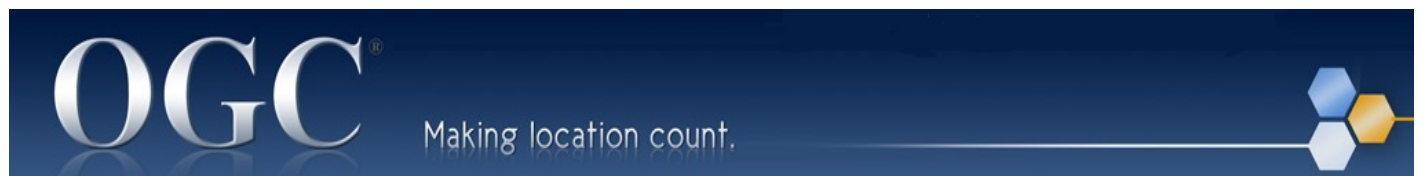
During the week of November 11-15, 2013, the Technical Committee 211 Geographic information/Geomatics (TC 211, <http://www.isotc211.org/>) of the International Organization for Standardization (ISO) had its 37th plenary meeting and associated meetings at the Esri campus in Redlands, California, USA. All the WGs met, as well as all the maintenance groups and other groups. Delegates and experts from 20 nations participated. The resolutions from the plenary meeting have been published online. The 38th ISO/TC 211 meeting will be held in Berlin, Germany, June 2-4, 2014 (http://www.isotc211.org/Berlin/Berlin_2014.pdf)



- Resolutions from the 37th ISO/TC 211 plenary meeting in Redlands, CA USA, November 15, 2013: http://www.isotc211.org/opendoc/211n3671/ISO-TC211-N3671_Resolutions_37th_meeting_Redlands_2013-11-15.pdf
- Presentations from Standards in Action Workshop, 13 November 2013, Redlands, CA USA: http://www.isotc211.org/Workshop_Redlands/Redlands-Standards_in_action_workshop.pdf

The OGC forms working group to advance spatial standards in health domain

Source: OGC Press Release



At the Open Geospatial Consortium (OGC®) Technical Committee plenary meeting on 26 September, the Technical Committee approved the charter for a new OGC Health Domain Working Group (DWG). The charter is available at <http://www.opengeospatial.org/projects/groups/healthdwg>. In 2010 the OGC partnered with technological, health, and research organizations on a three-year research project funded through the European Commission's 7th Framework

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Program. The project was called EO2Heaven (Earth Observation and Environmental Modeling for the Mitigation of Health Risks). The open standards-based Spatial Information Infrastructure developed for EO2Heaven was implemented in case studies in Dresden, Germany, the Durban industrial basin in South Africa, and Uganda. Open standards were vital to this project, supporting cross-domain communication among partners in diverse fields and locations and facilitating the integration and analysis of spatial, temporal, and epidemiological data. The project also addressed privacy issues and intellectual property implications. See <http://www.eo2heaven.org/> for more information. Seeing the success and potential of this project and the growing need for interoperability in the healthcare and public health fields, a group of OGC members formed the Health DWG. This working group will articulate spatial interoperability requirements in a wide range of health applications, such as: telemedicine, bio-medical research, in-hospital navigation, wearable devices, epidemiological surveillance integrated with related environmental and socioeconomic data; and modeling and responding to cross-border health risks. The group will seek to identify possible health industry "profiles" of standards, and also gaps in current standards. Initiators of the OGC Health Domain Working Group include ESRI; IOSB Fraunhofer; Eddie Oldfield, an Individual Member of the OGC; The SI Organization and the UK Met Office. The University Corporation for Atmospheric Research (UCAR), University of Nottingham, and others (both OGC members and non-members) have endorsed this effort. Eddie Oldfield is the interim chair of the new DWG. Co-chair nominations are welcome. Members of the public can follow the activities of the OGC Health DWG, make comments, and subscribe to the Health DWG listserv at the [OGC Health DWG web page](#).

[EarthCube: NSF funds \\$14.5 million in grants to improve geosciences cyberinfrastructure](#)

Source: Kate Lance



EarthCube is a U.S. National Science Foundation (NSF) effort to create a data and knowledge management system for geosciences in the 21st century. Its objective is to develop new ways of understanding and predicting the Earth system, from the sun to the

center of the Earth. To foster a dialog among geo-, bio- and cyberscientists to create an EarthCube framework, NSF has made 13 new awards totalling US\$14.5 million.

OGC ILAF Corner

Source: Imma Serra and Joan Capdevila



Did you know that...

The specification that allows access to data from sensor network ([Sensor Web Enablement, SWE](#)) aims to standardize the way sensors interact with and obtain the comments made. It consists of a set of interfaces and protocols that allow to develop a virtual "sensor network" through which applications and services of all types of sensors may be accessible via the Web.

The SWE architecture is defined using the following components, some adopted as OGC standards and specifications and other documents of Best Practices:

- Observations & Measurements (O & M) defines a conceptual model for encoding observations and measurements.
- Sensor Model Language (SensorML) defines an XML encoding for describing sensors systems and processes, devices and networks that are connected to the web.
- SWE Common Data Model Encoding Standard specifies the conceptual model and XML encoding for describing the data obtained by the sensors. It sets the syntactic and semantic interoperability for sensor data to be shared between sensor nodes in the web.
- PUCK defines a communication protocol for identifying a metering device and how it stores information about itself.
- Sensor Observation Service (SOS) provides an interface for requesting, filtering, and retrieving observations and sensor system information.
- Sensor Planning Service (SPS) defines an interface to assigning tasks to sensors.

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- Sensor Alert Service (SAS) is a Best Practices document where web service interface is defined to publish and subscribe alerts from sensors.
- Web Notification Service (WNS) is a communication method of client-server asynchronous notifications. It is also a Best Practices document.

OGC News

29/10: [The OGC requests comment on proposal to update ISO 19107:2003 Geographic information – Spatial](#)

30/10: [The OGC Seeks Comments on Candidate GeoPackage Encoding Standard](#)

31/10: [The OGC requests comment on the candidate "I15" standard providing ebRIM extension to OGC Catalog Services Interface Standard](#)

11/11: [The OGC requests comment on the candidate standard, OGC® OpenSearch Geo and Time Extensions](#)

18/11: [The OGC adopts OWS Context Conceptual Model and ATOM Encoding Standards](#)

19/11: [The OGC publishes new conformance tests for existing OGC standards](#)

20/11: [Webinar on Compliance and Interoperability Testing Initiative](#)

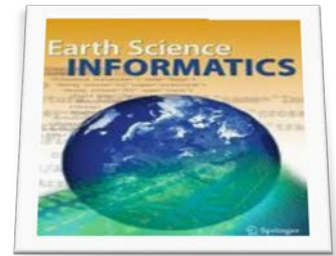
20/11: [OGC and PODS Association signed a cooperation agreement](#)

More on OGC at the [webpage](#) of the Iberian and Latin American Forum of OGC !

Earth Science Informatics, Special Issue – Semantic e-Science - Call for papers

Source: Kate Lance

Full papers due: **March 15**, 2014. As the volume, complexity, and heterogeneity of data resources grow, scientists increasingly need new capabilities that rely on “semantic” approaches (e.g., in the form of ontologies and vocabularies - machine encodings of terms, concepts, and relations among them) to help understand the meaning of data. The field of semantic e-Science fosters the growth and development of data-intensive scientific applications based on semantic methodologies and technologies, as well as related knowledge-based approaches. In recent years, semantic methodologies and technologies have been gaining momentum in e-Science areas such as solar-terrestrial physics, geology, ecology, oceanography, meteorology, and life sciences, to name a few. The developers of e-Science infrastructures are increasingly in need of semantic-based methodologies, tools, and middleware. This infrastructure will in turn facilitate scientific knowledge modeling, logic-based hypothesis checking, semantic data integration, application composition, integrated knowledge discovery and data analysis for different scientific domains, and building systems for use by scientists, students, and, increasingly, non-experts. This special issue invites research papers that demonstrate how semantic methodologies and technologies are currently meeting scientific or engineering goals in Earth and space science domains. Papers should highlight the innovative designs, methods or applications associated with the semantic technologies. Review papers presenting state-of-the-art knowledge about a subject in semantic e-Science and methodology and software papers about a new algorithm or software package are also welcome. Authors should prepare their papers following the instructions for authors provided by *Earth Science Informatics*. Papers should be submitted on-line indicating the special issue “Semantic e-Science”. Authors may contact a guest editor about their intention to submit, including a short description of the intended submission. [Earth Science Informatics](#) is a widely indexed and circulated international journal.



5th ICC and GIS Conference

Source: Temenoujka Bandrova

5th Jubilee International Conference on Cartography & GIS & Seminar with EU cooperation on Early Warning and Disaster/Crisis Management, will take place in June 15-21, 2014 in Riviera, Bulgaria www.iccgis2014.cartography-gis.com Please be aware of the first deadline – **10 January 2014**. Please submit an abstract for conference proceedings or a full paper in case you would like to propose a paper for publishing in a Springer book titled “Thematic Cartography for the Society.”

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IGS News, Links, Publications



International
Geospatial Society



IGS Reminders – Membership Renewal

Source: News from the GSDI Association and the International Geospatial Society, Volume 3, Number 1, 2013

It is time to renew your membership in the International Geospatial Society (IGS). As a member you played a vital role in making the past year a great success.

Activities and Benefits

The International Geospatial Society (IGS) is the global society for geospatial specialists who want to affiliate with, help support, learn from and communicate with peer professionals across the world. Without the base financial support and volunteered personal time and effort of members the numerous activities in which IGS engages would not be possible. See a description of member benefits and the range of activities in which members have been engaged at <http://www.igeoss.org/BenefitsOfJoining>.

In terms of new initiatives, the organization was able to implement a program to allow geospatial specialists in developing nations to provide services in lieu of dues. Those services consist of providing or updating each year a personal professional profile in the geographic knowledge network. This effort has provided a much broader geographic distribution of representation in the organization. See the full list of members at <http://www.igeoss.org/members>.

We also expanded publication of GSDI and IGS Global News so it comes to you through email on a regular basis. The organization continues to advocate open access to geospatial conference proceedings, books, learning materials, newsletters and standards across global geospatial organizations to ensure that all are able to benefit from the resources being developed.

Submitting your Dues or Maintaining Free Membership

In order to renew your membership, please go to <http://www.igeoss.org/join> and pay the dues of US\$50 by credit card (\$25 for students). Dues payment is available only through use of a credit card. In the event that you are a citizen of and live within a qualifying economically disadvantaged nation, the online membership application at <http://www.igeoss.org/join> will provide you with the option of applying for free membership in IGS. The primary obligation is to provide the URL link to your professional profile in the GIKNetwork.

Information provided by Marilyn Gallant, GSDI Business Manager (mgallant@gsdi.org).

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ARGENTINA

Executive Report of the 8th IDERA Meeting

Source: <http://www.idera.gob.ar/>



It is now available the [Executive Report](#) of the 8th Meeting of the Spatial Data Infrastructure of the Republic of Argentina (in Spanish IDERA) and Working Groups, that took place from 6 to 8 November 2013 in San Carlos de Bariloche, Rio Negro Province, Argentina. This type of working meetings have been developed since 2007 with participation of most relevant institutions involved in this field from all regions of the country,

as well as international speakers. These meetings are also an opportunity to sharing knowledge and experiences on similar initiatives in other regions worldwide. Also provide a space for sharing and discussing initiatives, projects and ideas for the development of the Argentinean SDI, and for submission of the proposed IDERA Strategic Plan to the General Assembly. IDERA is an information community comprised of government agencies at different levels, as well as academic and research institutions. Participation of all these jurisdictions is essential to ensure the national and federal aims of IDERA.

BOLIVIA

Public Consultation of Six Projects on Bolivian Geographic Information Standards

Source: <http://geo.gob.bo/blog/>

This year, the Bolivian Institute of Standardization and Quality (in Spanish IBNORCA) Committee 15.10 on Geographic Information is working on the translation, revision and adoption of ISO standards on geographic information (Family 19100). These will allow geographic information production standardization in Bolivia based on the adoption of Bolivian standards. As a result of this work, the Committee composed of representatives from various national institutions passed six Projects on Bolivian standards (in Spanish PNBs). The referred standards are now released for a public consultation phase, which means that people and institutions can request these directly to Cesar Sanjines (cesar.sanjines@IBNORCA.org), Technical Secretary of the Proposed Draft Bolivian Standards, or download them directly from the IBNORCA website at: www.ibnorca.org. Deadline to submit suggestions and/or comments is **December 9, 2013**, as to be considered before approval of the respective Bolivian law.



ECUADOR

[Training Workshop in Galapagos for managing Continuous Monitoring GNSS data of Ecuador](#)

Source: <http://www.geoportaligm.gob.ec/>

The Military Geographic Institute (in Spanish IGM), national governing body for cartography, held the "Workshop on GPS Network Data Collection and Handling for Continuous Monitoring of Ecuador - REGME" on November, 2013 in Santa Cruz Island, Puerto Ayora, at no cost to participants. The Continuous Monitoring GNSS Network Of Ecuador - REGME, was installed and managed by the IGM nationwide since 2008 and includes 32 stations to facilitate downloading and obtaining information through the institutional Geoportal (www.geoportaligm.gob.ec) and the IGM website (www.igm.gob.ec) in which the respective protocols safety.

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PANAMA

The IPDE launches its first website

Source: <http://ignpanama.anati.gob.pa/>

The Panamanian Spatial Data Infrastructure (in Spanish IPDE) has made available to the public their website, in which may be found information of the various activities carried out under this Infrastructure. This website has been designed and developed by Component Technology with input from representatives of member institutions of the IPDE. Also through <http://www.ipde.gob.pa> it may be accessed the GEORED, a platform that allows geospatial collaboration from state institutions.



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Articles and Publications of the Month

Recent Documents / Manuals Made Available by PC-IDEA (UMGGIM AMERICAS)

Source: Valéria Oliveira de Araujo



Documents / Manuals recently made available by PC-IDEA may be of great value to countries of the Americas and the Caribbean. One of main products that may be highlighted is the Americas SDI Manual (Cookbook), which soon will be available elsewhere on the website. For now it may only be found at the meeting's documentation at: <http://www.cp-idea.org/index.php/reuniones>:

- Americas SDI Manual ([English](#) / [French](#))
- Actions taken on resolutions of the Ninth UNRCC -A ([English](#))
- Final Report of Activities 2009-2013 ([English](#))
- Diagnosis on relevant topics of information management and Spatial Data Infrastructure development (SDI) in countries of the Americas 2013 ([Spanish](#))
- Diagnosis on Innovations in National Mapping Agencies in the Americas ([Portuguese](#))
- Vision on the Normative Framework Application of the Americas ([Spanish](#) / [English](#))
- Proposed Standards Core for the Americas ([Spanish](#) / [English](#))
- Geospatial Data Model for the Americas ([Spanish](#))
- Capacity Building Implementation Plan Strategy ([Spanish](#))

[A Vision for Global Research Data Infrastructures](#)

Source: Kate Lance

Author: Costantino Thanos; Data Science Journal Vol. 12 (2013) p. 71-90



New high-throughput scientific instruments, telescopes, satellites, accelerators, supercomputers, sensor networks, and running simulations are generating massive amounts of data. In order to be able to exploit these huge volumes of data, a new type of e-infrastructure, the Global Research Data Infrastructure (GRDI), must be developed for harnessing the accumulating data and knowledge produced by the communities of research. This paper identifies the main challenges faced by the future GRDIs, defines a conceptual framework for GRDIs based on the ecosystem metaphor, describes a core set of functionality that these GRDIs must provide, and gives a set of recommendations for building the future

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GRDIs. Keywords: Information networks, Distributed systems, Distributed databases, Interoperability. [To access full text PDF: https://www.jstage.jst.go.jp/article/dsj/12/0/12_12-043/pdf]

[Nation-Wide, Web-Based, Geographic Information System for the Integrated Surveillance and Control of Dengue Fever in Mexico](#)

Source: Kate Lance

Abstract: Dengue fever incidence and its geographical distribution are increasing throughout the world. Quality and timely information is essential for its prevention and control. A web based, geographically enabled, dengue integral surveillance system (Dengue-GIS) was developed for the nation-wide collection, integration, analysis and reporting of geo-referenced epidemiologic, entomologic, and control interventions data. Consensus in the design and practical operation of the system was a key factor for its acceptance. Working with information systems already implemented as a starting point facilitated its acceptance by officials and operative personnel. Dengue-GIS provides the geographical detail needed to plan, assess and evaluate the impact of control activities. The system is beginning to be adopted as a knowledge base by vector control programs. It is used to generate evidence on impact and cost-effectiveness of control activities, promoting the use of information for decision making at all levels of the vector control program. Dengue-GIS has also been used as a hypothesis generator for the academic community. This GIS-based model system for dengue surveillance and the experience gathered during its development and implementation could be useful in other dengue endemic countries and extended to other infectious or chronic diseases. [Citation: Hernández-Ávila JE, Rodríguez M-H, Santos-Luna R, Sánchez-Castañeda V, Román-Pérez S, et al. (2013) Nation-Wide, Web-Based, Geographic Information System for the Integrated Surveillance and Control of Dengue Fever in Mexico. PLoS ONE 8(8)].



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Geospatial Research, Applications, Software, Data

SPOT Vegetation: New portal for free satellite data

Source: <http://www.un-spider.org/>

The research organisation VITO has launched a new portal that makes accessible SPOT Vegetation data: www.vito-eodata.be. All VEGETATION products older than three months are available free of charge. VITO elaborates: "For SPOT-VEGETATION users, the main difference with the previous portal is, that all VEGETATION products older than three months are freely available: the P-, global S1 and S10 data (as global or regional extract product; large orders, need approval, see FAQ). Also after the end of the SPOT-VEGETATION mission, scheduled for May 31 2014, these products will continue to be distributed through this platform. D10 data will no longer be distributed via this new portal. Users that would like to download these data are kindly requested to contact the VITO Helpdesk. Via this portal VITO will also distribute all Earth observation data and products processed by VITO. This means that you will also be able to request the decadal syntheses of MetOp-AVHRR, Envisat-Meris, and of course all [PROBA-V](#) products via this product distribution portal. Read more: [VITO Product Distribution Portal](#)



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[ESA: Making satellite flood maps easily available](#)

Source: <http://www.un-spider.org/>

The European Space Agency (ESA) has helped to create a [service that makes flood maps available simply via the Internet](#). In a disaster flood situation, ground and airborne sensors often reach their limits due to bad weather, cloud covers or inaccessible terrain. The availability of satellite data is therefore crucial. ESA has collaborated with Capgemini, GeoVille Information Systems, Vienna University of Technology and Luxembourg's Gabriel Lippmann research centre to develop a simple, easy-to-use system that could be available to anyone online, as the agency reported on their website. Near-realtime satellite radar measurements are processed to create location-specific flood maps and deliver them via the Internet. This Fully Automated Aqua Processing Service, or FAAPS, was developed and demonstrated through ESA's Integrated Application Promotion. According to ESA's Olivier Becu, "FAAPS is an excellent example of the added value of satellite data made accessible to crisis management teams for aiding rescue operations." Read more: [ESA](#).



[Puerto Rico: Government Geographic Data Portal](#)

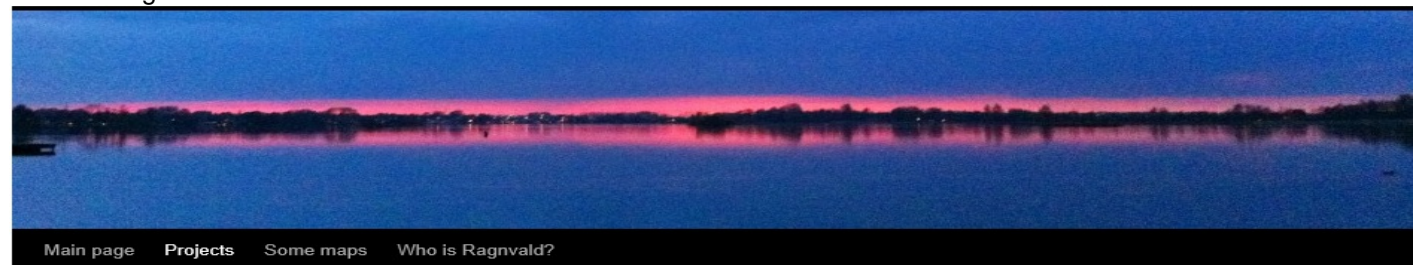
Source: Kate Lance



The integration of government databases is a priority of this administration. GIS data banks are no exception. This integration / centralization will serve to lower operating costs, and provide updated information to agencies and citizens. In this site you will find various resources related to the geography and geographical data of Puerto Rico. This portal (<http://www.gis.pr.gov/>) has been built as part of efforts to centralize digital geographic data produced by central government agencies and public corporations. Data collected through the years 2001-2013 reside in the geographic database. Much of this data has been made available to the public through web services, as well as through direct downloads of these data. Among the most important topics included are: Summary of Puerto Rico Geography, Educational Resources for Students on Geographic Information Technologies, Geodata Download, Census Data Download, Catalogs, ArcGIS Server, GeoServer and Applications

[Quarter Degree Grid Cells \(QDGC or QDS – Quarter degree Squares\)](#)

Source: Ragnvald Larsen



Is a way of dividing the longitude latitude degree square cells into smaller squares, forming in effect a system of geocodes. Historically QDGC has been used in many African atlases. Several African biodiversity projects uses QDGC, among which. The atlas of Southern African Birds is the most prominent one. Information on the distribution of animal populations is essential for conservation planning and management. Unfortunately, shared coordinate-level data may have the potential to compromise sensitive species and generalized data are often shared instead to facilitate knowledge

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discovery and communication regarding species distributions. Sharing of generalized data is, unfortunately, often ad hoc and lacks scalable conventions that permit consistent sharing at larger scales and varying resolutions. One common convention in African applications is the Quarter Degree Grid Cells (QDGC) system. However, the current standard does not support unique references across the Equator and Prime Meridian. We present a method for extending QDGC nomenclature to support unique references at a continental scale for Africa. The extended QDGC provides an instrument for sharing generalized biodiversity data where laws, regulations or other formal considerations prevent or prohibit distribution of coordinate-level information. We recommend how the extended QDGC may be used as a standard, scalable solution for exchange of biodiversity information through development of tools for the conversion and presentation of multi-scale data at a variety of resolutions. In doing so, the extended QDGC represents an important alternative to existing approaches for generalized mapping and can help planners and researchers address conservation issues more efficiently.

[Google Earth reveals untold fish catches](#)

Source: <http://www.spacedaily.com/>

Large fish traps in the Persian Gulf could be catching up to six times more fish than what's being officially reported, according to the first investigation of fish catches from space conducted by University of British Columbia (UBC) scientists. Using satellite imagery from Google Earth, UBC researchers estimated that there were 1,900 fishing weirs along the coast of the Persian Gulf during 2005 and that they caught approximately 31,000 tonnes of fish that year. The official number reported by the seven countries in the region to the United Nation's Food and Agriculture Organization was 5,260 tonnes. The study was published in the ICES Journal of Marine Science. Fishing weirs are semi-permanent traps that take advantage of tidal differences to catch a wide variety of marine species. Used in Southeast Asia, Africa and parts of North America, some weirs can be more than 100 metres long. "This ancient fishing technique has been around for thousands of years," says Dalal Al-Abdulrazzak, a PhD student with the UBC Fisheries Centre's Sea Around Us Project and the study's lead author. "But we haven't been able to truly grasp their impact on our marine resources until now, with the help of modern technology." The study shows the potential for using remote-sensing approaches, such as satellite imagery, to validate catch statistics and fisheries operations in general.



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Training and Funding Opportunities, Awards

[Internship in Remote Sensing \(Vienna Office\)](#)

Source: <http://www.un-spider.org/>



The internship is located at the United Nations Office for Outer Space Affairs (UNOOSA) in Vienna, Austria. The intern will work under the direct supervision of Senior Programme Officer of the Space Applications Section. The internship will include tasks under the overall plan of work of UNOOSA, which is responsible for promoting international cooperation in the peaceful uses of outer space; and others implemented under the UN Programme for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER). UN-SPIDER aims at providing universal access to all types of space-based information and services relevant to disaster management by being a gateway to space information for disaster management support; serving as a bridge to connect the disaster management and space communities; and being a facilitator of capacity-building and institutional strengthening. For more information on UNOOSA and UN-SPIDER, please visit the following websites: www.unoosa.org and www.un-spider.org. Due to the high volume of

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applications received, only successful candidates will be contacted. The United Nations shall place no restrictions on the eligibility of men and women to participate in any capacity and under conditions of equality in its principal and subsidiary organs.

PhD Assistantship: Geospatial Analytics of Human Responses to Environment

Source: Jordan W. Smith

The Center for Earth Observation at North Carolina State University is seeking a highly qualified candidate who is committed to pursuing a Ph.D. focused on the integration of Environmental Social Science and Geospatial Analytics starting Fall 2014. Geospatial Analytics starting Fall 2014. Candidates should have a strong desire to engage in high-quality research that couples social science methodologies with geospatial analytics to address human responses to environmental change. Co-advised by Dr. Jordan Smith and Dr. Ross Meentemeyer, the successful candidate will have the opportunity to work on a variety of interdisciplinary research projects related to: decision making under risk; social and information networks; and integrated social-ecological modeling approaches. The assistantship is a 12-month 20-hour per week position. The position includes a competitive stipend, tuition, and health insurance benefits. Funds for professional development purposes (e.g., conference presentations) are available. This position is funded for 3 years and is renewable each year based on satisfactory progress. Contact Dr. Jordan W. Smith (jwsmit12@ncsu.edu) or Dr. Ross K. Meentemeyer (rkmeente@ncsu.edu) for further information and application instructions. Applications received by **January 5, 2014** will be fully considered.

FIG Foundation Opportunities

Source: FIG e-Newsletter November 2013

The FIG Foundation - 2014 Research Grants

2014 FIG Foundation PhD Scholarships

Scholarships will be provided of up to 4,000 euros to PhD students. Applicants shall be studying for a PhD degree and registered solely in a surveying/geomatics academic programme that teaches surveying in a country listed by the World Bank as a low-income, lower-middle or upper-middle income economy. Deadline **1 February** 2014.

Read more: www.fig.net/figfoundation/2014_phd_scholarship.htm

2014 FIG Foundation Academic Research Grants

Research grants will be provided of up to 20,000 euros spread over two years. Applicants shall be based in a surveying/geomatics academic programme that teaches surveying in a country listed by the World Bank as a low-income, lower-middle or upper-middle income economy. Deadline **31 March** 2014.

Read more: www.fig.net/figfoundation/2014_research_grants.htm

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Employment Opportunities

Associate Professor level in GIScience and Geovisualization

Source: Darla K. Munroe

The Department of Geosciences at Georgia State University invites applications for a tenured or tenure-eligible faculty position at the Associate or Full Professor level in GIScience and Geovisualization of Big Data, effective Fall 2014. Ideal candidates will focus on the geovisualization of social and/or environmental disparities, preferably in urban settings. This position is part of Georgia State University's (GSU) Second Century Initiative (<http://www.gsu.edu/secondcentury/>) to recruit up to three outstanding Big Data faculty in geosciences, business, and disease modeling. The Department of Geosciences (<http://geosciences.gsu.edu/>) offers bachelors and masters degrees in Geosciences, with concentrations in geography and geology, and a Ph.D. in Chemistry with a geology specialization. Applicants wishing to apply should register with <http://academicjobsonline.org/> (the registration is free) and upload their curriculum vita, statement of research and teaching interests, and provide contact information for three references.



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Please indicate that you are applying for the Big Data position in Geosciences. Applicants are required to submit their materials via the online system. Questions about the position can be sent to BDGeosciences@gsu.edu. Review of applications will begin immediately and applicants will be reviewed until positions are filled. Positions are contingent on University budget approval.

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Other

[Underestimated future climate change?](#)

Source: <http://www.terraily.com/>

New model calculations by ETH researcher Thomas Frolicher show that global warming may continue after a stoppage of CO₂ emissions. We cannot rule out the possibility that climate change is even greater than previously thought, says the scientist. Many scientists believe that global warming will come to an end if, some day, human succeeds in stopping the release of greenhouse gas emissions into the atmosphere. It would, indeed, be hotter on Earth than before industrialisation, but nonetheless it would not get even hotter. Climate physicist Thomas Frolicher questions this notion by using model calculations and creates a more pessimistic picture in a study published in the scientific journal Nature Climate Change. According to his model calculations, it is very possible that the Earth's atmosphere could continue to warm for hundreds of years even after a complete stop of CO₂ emissions, and that temperature levels stabilise at an even higher level at a later stage. "In the long term, the temperature increase could be 25 per cent greater than assumed today," says the scientist, who carries out research as an Ambizione Fellow of the Swiss National Science Foundation in ETH professor Nicolas Gruber's group.



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Americas: Conferences, SDI Events

[Regional Caribbean Workshop on Open Source Technologies and Web Mapping](#)

Source: Santiago Borrero



The URISA Caribbean Regional Workshop will be held on February 12-15, 2014, in St Maarten, and aims to:

1. Provide Informative application-driven workshops and sessions geared towards increasing the knowledge of GIS professionals and related disciplines in the area of effective internet mapping technologies and facilitating return on investment.
2. Function as the medium that continues to encourage the regional GIS network of professionals
3. Serve as a forum to discuss progress made towards our Regional Spatial Data Infrastructure (RSDI).

Contact: Valrie Grant urisacaribbean@gmail.com

For more information:

<http://www.urisa.org/chapters/caribbean-chapter/>

This event is an Urban and Regional Information Systems Association (URISA) Caribbean Chapter event. It is

endorsed by the URISA and the International Cartographic Association (ICA). The URISA International Board of Directors approved organizing status for the Caribbean URISA Chapter on August 19, 2007. The Caribbean URISA Chapter is a non-profit organization that provides members with a forum to share real experiences in implementing Geoinformatics/GIS technology in organizations, to present one's work, get constructive criticism, discuss concepts and ideas of how Geographical Information Systems (GIS) can make meaningful contribution to society in general and the Caribbean region in particular. Its Mission is to promote partnerships and teamwork with users of GIS concepts and technology. This will be geared towards the sustainable development of the Caribbean region. Caribbean URISA would strive to be an organization relevant to the needs of GIS professionals in the region with a dynamic committed membership. This organization would also strive to be the leading medium of The Caribbean Geospatial Community providing Geospatial professionals with opportunities for educational development, networking, leadership, coordination and representation.

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DECEMBER 2013

2-4	Lima, Peru	9th Latin American and Caribbean Monitoring and Evaluation Conference
2-4 *NEW*	Aguascalientes, Mexico	Seminar: Innovative Approaches to Turn Statistics into Knowledge.
2-6	Lima, Peru	15th UN Industrial Development Organization (UNIDO) Conference 2013
3-4 *NEW*	São Paulo SP, Brazil	Assembly processes for Georeferencing of Rural Property
3-5	Las Vegas NV, USA	Autodesk University
3-5 *NEW*	Bellevue WA, USA	Precise Time & Time Interval Systems & Applications Meeting
3-6 *NEW*	Havana, Cuba	VII Cuban Congress of Meteorology and first Latin American and Caribbean Conference on the Participation of Women in Meteorology, Hydrology and the Environment
4 *NEW*	El Alto, Bolivia	Conference "Free Software to Change the World"
4 *NEW*	Greenbelt MD, USA	Landsat Public Meeting Notice: Sustainable Land Imaging Users Forum
5 *NEW*	Guadalajara, Mexico	Sixth Meeting of Geographic Information Technologies and the Environmental and Land
9-13 *NEW*	Santa Cruz de la Sierra, Bolivia	Scholarships for the course on Geographic Information Systems and Remote Sensing Technologies Applied to Water resources
10-11	Baltimore MD, USA	Esri Mid-Atlantic User Conference

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JANUARY 2014

5-11	Panama City, Panama	Conference of Latin Americanist Geographers
28-30	San Antonio TX, USA	DistribuTECH 2014 Conference and Exhibition
29-30	Redlands CA, USA	Geodesign Summit Asks Attendees to Reimagine Their World

FEBRUARY 2014

6-27	New Brunswick NJ, USA	ArcGIS: Introduction Learn GIS Mapping System Software Through Hands-On Training Course
9-13	La Jolla CA., USA	MAPPS Winter Conference
10-12 *NEW*	Washington DC, USA	Esri Federal GIS Conference 2014
17-19	Denver CO, USA	International LiDAR Mapping Forum [ILMF] Conference
19-21 *NEW*	Washington, DC, USA	Cloud Computing for DoD & Government
23-26	Annapolis MD; USA	NSGIC National States Geographic Information Council 2014 Midyear Meeting
24-27	Jacksonville FL, USA	18th Annual GIS/CAMA Technologies Conference

MARCH 2014

3-5	Ottawa, Canada	Geospatial Advancement Canada 2014
10-13 *NEW*	Palm Springs CA, USA	Esri International Developer Summit
10-14 *NEW*	The Woodlands TX, USA	24th Annual South Central Arc User Group Conference

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23-27	Louisville KY, USA	ASPRS 2014 Annual Conference- Geospatial Power in Our Pockets
27-29	Malargüe – Mendoza, Argentina	10th Physical Geography National Working days
Mar. 30 – Apr.2 *NEW*	San Diego CA, USA	17th Annual AAAE GIS Conference and Exhibition

APRIL 2014

8-12	Tampa FL, USA	AAG Annual Meeting 2014
14-17	Tampa FL, USA	GEOINT 2014
22-25 *NEW*	Rancho Mirage CA, USA	Field Service 2014
23-25 *NEW*	Houston TX, USA	Esri Petroleum GIS Conference
Apr.27-May 1	Kansas City MO, USA	MAGIC 2014

MAY 2014

6-8	Burlington VT, USA	Geospatial Information Systems for Transportation Symposium
7-9	Sao Paulo, Brazil	MundoGEO#Connect 2014
7-9 *NEW*	Sao Paulo, Brazil	The Latin American and Caribbean qvSIG working days joined with MundoGEO#Connect 2014
7-9	Tandil - Buenos Aires, Argentina	Third National Working days on Argentina Research and Teaching in Geography and Ninth Working days on Research and Extension Center Geographical Research - Geography: the challenge of building inclusive territories
27-29	Guayaquil, Ecuador	Fourth Disaster Risk Reduction Session of the Regional Platform for the Americas 2014

JUNE 2014

2-5	Las Vegas NV, USA	HxGN LIVE 2014 - Hexagon International Conference
10-13 *NEW*	Vancouver BC, Canada	FME International User Conference 2014
To be determined	São Paulo – SP, Brazil	History of Cartography, Historical Cartography and Digital Cartography

JULY 2014

14-18 *NEW*	San Diego CA, USA	Esri International User Conference "United We Map"
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SEPTEMBER 2014

14-18	Charleston SC, USA	NSGIC National States Geographic Information Council 2014 Annual Conference
24-27	Bogotá, Colombia	5th Ibero-American Symposium on the History of Cartography (5siach)

OCTOBER 2014

14-18 *NEW*	Quilmes, Argentina	7th Symposium from the Latin American and Caribbean Society of Environmental History
22-24	Ft. Worth TX, USA	Race, Ethnicity and Place 2014 Conference

NOVEMBER 2014

5-7	Córdoba, Argentina	X Biennial Colloquium of Territorial Transformations
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JULY 2015

12-17
NEW

San Salvador, El Salvador

[55th Americanists International Congress: Conflict, peace and identity construction in the Americas](#)

AUGUST 2015

23-25
NEW

Rio de Janeiro RJ, Brazil

[27th International Cartographic Conference: Maps Connecting the World](#)

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