

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.



Global Spatial Data Infrastructure

GSDI

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), 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 the 1st of GSDI's President "3 Questions with..." Interviews; New OGC members in Latin America; Global Geospatial Information Management and Marine SDI; Beta Release of Collaborate.org; Big data and humanitarianism; OGC ILAF Corner; and notes on worldwide Conferences. The **IGS section** includes comments on IGS Membership Renewal. The **National SDI** segment informs on the 8th IDERA Conference, and National Meeting, Argentina; Release of GeoBolivia-Live Version 1.0; Brazilian SDI Awarded by MundoGeo#Connect; Launching of Map Viewer with Spatial Information, Chile; The new version of Maps Portal of Bogota, Colombia; Updates on the SDI of Guatemala; and the GEOSERVER of Peru. **Articles and Publications** of the month include *Caching Techniques for High-Performance WMS*, and *Mining sensor datasets with spatiotemporal neighborhoods*; SDI GI Production Protocol, Bolivia; IDERA Newsletter Issue 9, Argentina; an article on *Legal issues and validation of VGI*; and a WB report on Climate Change for Africa, Asia and the Coast. **Geospatial Research and Applications** underline a Local spatial planning initiative in El Salvador; CATHALAC analysis of Mangrove Cover in Guatemala; IBGE's image-mosaic of Pernambuco, Brazil; Mobile applications for SDI of Zaragoza City Council, Spain; Land Matrix Partnership Expanding Global Observatory; Funding for Forest Monitoring in the Amazon; Global food to be mapped; Future Surveyor to Control UAV by Thought; and Esri to give mapping a social flavor. The **Training and Funding Opportunities** section encompasses calls for the

COCONet Graduate Fellowships; New Defra's Darwin Initiative funding; Lincoln Institute Research Proposals for the LAC region; and the UN/Nippon Foundation Ocean Affairs Fellowship. 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 from UNESP **Mateus de Barros Manhani** and **Esrom A. Rissate Júnior**, from UFPE **Caroline Martins** and the cartographic engineers: **Alexandre Scussel**, editorial assistant MundoGEO. **Annette Pic**, MSc in Remote Sensing; **Camila Bassetto Guedes**, advisor of the Operations Department of the DECEA; **Edilce Figueiredo Burity**, Technologist of IBGE/PE Geographic Information and Statistics; **Edmilson Martinho Volpi**, Natural Resources Secretary in SP; **Eduardo Freitas**, editor of the MundoGEO portal and magazine; **Flávio Porfírio**, UGP-Dam of the ITEP; **Juan Carlos Gironda Mamani**, a consultant in Geotechnology and IT solutions for Geoinformation; **Rodrigo Quirino** Technologist of IBGE/RJ Geographic Information and Statistics; **Silvana Camboim** Professor at UFPR; **Silvane Paixão**, PhD in Land Administration and Land Information Management. 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:

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
Dieter Fritsch	Organizer of the Photogrammetric Week Series, Institute of Photogrammetry, University of Stuttgart, Germany
Nancy Graff	Program Manager Eastern Caribbean, The Nature Conservancy, USA
Bashkim Idrizi	Chair of Local Organization Committee, International Conference SDI & SIM 2013
Kate Lance	GSDI listserv moderator, USA
Oscar Larson	Conference Director, Association of American Geographers, USA
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F. Javier Zarazaga-Soria	Associate Professor, IAAA laboratory, University of Zaragoza, Spain

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Global and Regional SDI, News, Presentations

AfricaGIS 2013

GSDI 14



UNECA Conference Center, Addis Ababa, Ethiopia
November 4-8, 2013

Messages from our Conference Supporters

Source: GSDI and IGS Global News, Volume 3 Number 4 for 2013

"We appreciate that the intention of the event is to give opportunity to GIS experts from the entirety of the African continent for participation. This Conference can continue the intensive work undertaken by cartographers, GIScientists and researchers of Africa, providing a good opportunity to establish an interdisciplinary environment, where cartography and GIScience is the key scientific area." [Executive Committee of the International Cartographic Association].

Consult the Conference web site at <http://gsdi.org/gsd14/> for latest information and details about the program, facilities and Sponsorship opportunities. Come prepared to engage, learn and enjoy! More news on the conference in future issues. We look forward to seeing you in Addis Ababa in November 2013!

Past GSDI World Conference Proceedings: <http://www.gsdi.org/gsdiconferences>

Past open access Books affiliated with the conference: <http://www.gsdi.org/openaccessbooks>

Other Important Dates: <http://www.gsdi.org/gsdiconf/gsd14/dates.html>

[These news in PDF format are available under <http://www.gsdi.org/newsletters#GSDI> or directly at http://memberservices.gsdi.org/files/?artifact_id=1265]

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[Interview: 3 Questions with Dozie Ezigbalike, UNECA](#)

GSDI President, Prof David Coleman, has initiated a new series of '3 Questions with...' interviews with senior representatives from the GSDI membership. Today we publish the first interview, held with Dr Chukwudozie (Dozie) Ezigbalike of the United Nations Economic Commission for Africa (UNECA).

3 Questions with... DOZIE EZIGBALIKE

Dr. Chukwudozie (Dozie) Ezigbalike is the newly-named Chief of the Data Technology Section for the United Nations Economic Commission for Africa (UNECA). He is a member of the organizing Committee for the GSDI 14/AfricaGIS 2013 Conference and is recognized as one of the world's leading experts on spatial data infrastructure. Prior to joining the UNECA, he lectured in land surveying, GIS, land administration and spatial analysis at the universities of Zimbabwe, Botswana and Melbourne. He holds a PhD in Land Information Management from the University of New Brunswick in Fredericton, Canada; an MSc in Land Surveying from the Ahmadu Bello University in Zaria, Nigeria; and a BSc (Hons.) in Surveying from the University of Nigeria, Enugu Campus. He is also a certified yoga teacher (Yoga Siromani).



(1) Your own education and experience in land information networking and SDI goes back 25 years. Now that many regional and national SDIs are in place and being maintained, how have the key issues changed?

One issue that has not changed is the data custodianship paradigm, as opposed to data ownership. Many data producers still think that they own the data that they produce and that it is from their generosity that they “share” with others. We need to move to complete custodianship principle. Other key issues have now differentiated according to economies. In the advanced economies, the issues have shifted to how to make spatial data and information products transparently ubiquitous so that non experts can exploit them as supporting locational services, without being conscious that they are using SDI services. The less developed economies are still concerned with provision of fundamental data sets on which other products should be based, with emphasis on mechanisms for acquiring high resolution image products as a corporate resource.

(2) What is the best advice you would give to a country or region in Africa still planning how it is going to populate and maintain its SDI?

The assumption is that the SDI principle has been accepted and maybe an SDI committee or body has been established, with some understanding of thematic responsibilities for the data sets. My advice is that the SDI Committee should establish a technical working group (or groups) drawn from the custodians, albeit implicit custodians, to identify the data sets products expected to result from their planned and already-resourced activities or projects. Then they should ensure that the SDI adopted standards are adhered to, and that the resulting data sets are produced in the context of the SDI.

(3) What is the most important advice you would give to development banks looking to fund SDI-related projects and programs in the future?

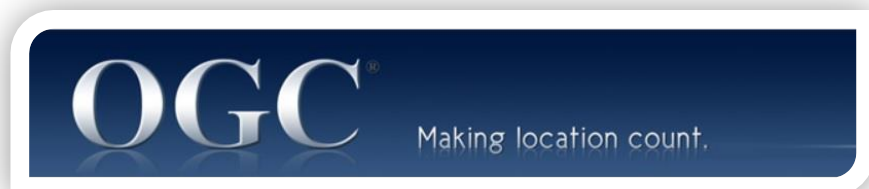
To remember that (i) “everything happens somewhere.” Therefore when funding development projects, to remember to ask the “where” questions when planning development projects, and therefore provide appropriately for the data that will be used to answer them. The “where” questions should also be emphasized when gathering evidence for monitoring and evaluation. And since project proposals now include up front identification of the means of verification, the “where” data should be provided for up front. That way, without specifically talking about “SDI”, they will be providing for the standards-based SDI components, including any necessary management components to ensure that the data are produced and made available.

Interviews may be seen at GSDI President's Corner section at: <http://www.gsd.org/node/580>

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[Condor and Milongas: OGC in Latin America](#)

Source: <http://www.opengeospatial.org/>

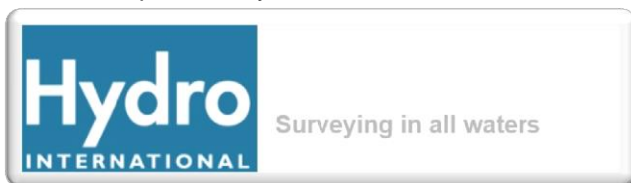


One year ago [Luis Bermudez](#) wrote a blog about Latin American participation in the Open Geospatial Consortium (OGC). Since then, we have seen two more countries join the consortium: Chile, through the Ministry of National Heritage - Executive Secretary ([SNIT](#)) and

Colombia, through the Geographic Institute Agustin Codazzi ([IGAC](#)). These two organizations are responsible for the Spatial Data Infrastructure (SDI) in their respective countries and they see strategic value in joining the OGC. For example, this is what IGAC says: Membership in the OGC enables us to carry out the implementation process of technological standards that guarantee interoperability, access and use of geographic information nationwide. This is framed in the Colombian Spatial Data Infrastructure, the Colombian Commission of Space and policies of electronic government (E-Government) ... It also places the IGAC at the forefront on issues of information exchange in the Latin America and the Caribbean, reaffirming its commitment to make geographic information an element available to citizens, along with information technology and communications. [Written by Luis Bermudez]

[Global Geospatial Information Management and Marine Spatial Data Infrastructures](#)

Source: <http://www.hydro-international.com>



In 2009, the MSDIWG completed a guidance document – IHO Publication C-17 – Spatial Data Infrastructures: ‘The Marine Dimension’ - Guidance for Hydrographic Offices. C-17 provides general information to assist HOs and other authorities in the identification and implementation of their roles in national SDI. The next stage of activity for the MSDIWG is to propose ways for HOs to implement MSDI - using examples where this is already happening successfully.

The MSDIWG is studying the technical, organisational, policy, educational and scientific aspects of MSDI and has identified a number of challenges and opportunities that exist for HOs, together with the role that they can play in supporting socio-economic development worldwide. Key challenges identified for the International Hydrographic Organization (IHO) include:

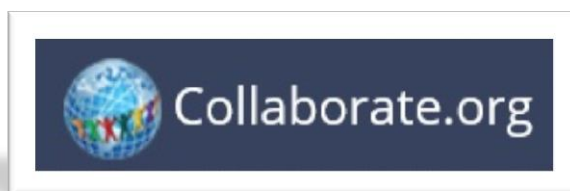
- supporting how IHO Member States can adapt to new ways of working
- sharing existing knowledge and experience across the HO community
- making the case for MSDI.

MSDI developments fit well with national, regional and world-wide initiatives aiming at supporting environmental policies. Although SDI developments are led by the land mapping and cadastral agencies in most countries, the maritime dimension is increasingly acknowledged as an important element, especially to implement integrated maritime policies. The next MSDIWG meeting, to be associated with a second MSDI Forum, has been planned for February 2014, most likely in North America.

[European Beta Release of Collaborate.org at 11th Annual INSPIRE Conference](#)

Source: Arturo Brun-Martinez ; <http://www.prweb.com>

Established in 2007, the Infrastructure for Spatial Information in the European Community ([INSPIRE](#)) Directive was established to provide a consolidated geo-spatial data infrastructure across the European Union. Included in this mandate is the requirement that INSPIRE be fully implemented by 2019. As a result of this initiative, INSPIRE will dramatically redefine how Europeans and the world store, maintain, access, and utilize this valuable data. To help facilitate this effort, members of the European



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Commission, the European Environment Agency and other governmental and non-governmental entities created the INSPIRE conference, and selected this event to announce the European release of [Collaborate.org](http://collaborate.org). When formally released at the end of the year, Collaborate.org intends to become the most advanced geo-spatial social platform on the planet, incorporating NASA's [World Wind](http://worldwind.nasa.gov) technology at the core of the application. Patrick Hogan, Project Director for NASA WorldWind explained how Collaborate.org leveraged the World Wind platform. "Collaborate.org is a great example of how anyone can integrate information with World Wind. Since Collaborate.org's primary purpose is to share information with others from a variety of perspectives, it's clear that they would use it to exchange information and work together more productively."

About Collaborate.org: Developed by engineers from Stanford University, NASA, and other groups in the Silicon Valley, Collaborate.org is the most advanced global collaboration platform on the planet. It is an easy-to-use online community comprised of people working together, sharing their experiences and expertise, empowered with an integrated suite of collaboration tools and all the world's geospatial data at your fingertips. It is an open, inclusive platform of shared resources, abilities and enthusiasm that empowers people to work together to truly accomplish Great Things. The Beta release of Collaborate.org is presently available and is accessible on personal computer (PC or Mac) or mobile device (iOS or Android). For more information, visit the website at <http://www.collaborate.org> or send an email to [info\(at\)intelelense\(dot\)net](mailto:info@intelelense.net).

About NASA WorldWind: Initially released in 2004, [NASA WorldWind](http://worldwind.nasa.gov) is a cross-platform Open Source geo-spatial visualization platform that is developed and maintained by NASA and the open source community. It allows any user to zoom from satellite altitude to any place on Earth, leveraging satellite imagery and elevation data to visually experience Earth terrain in 3D, as if they were really there. While WorldWind currently runs on any desktop computer, efforts are currently being made to support mobile devices.

[Big data and humanitarianism: 5 things you need to know](http://www.unocha.org)

Source: <http://www.unocha.org>



There was more data produced in 2011 than in all the rest of human history combined. Every time we make a phone call, buy something or use social media, we are creating new data. This huge amount of information can, if analysed correctly, be used to answer any number of questions. This massive volume of data created and stored by governments, the private sector (for example telecoms or internet providers) and individuals is known as Big Data. Humanitarian organizations are trying to come to terms with how this ocean of information can help them deliver better services to vulnerable communities. Here are five things you need to know about big data and humanitarianism.

1. "Finding ways to make big data useful to humanitarian decision makers is one of the great challenges, and opportunities, of the network age," says OCHA's [Humanitarianism in the Network Age](#) Report. Access to near real-time information can help humanitarian organizations provide more targeted assistance and become more responsive to needs as they evolve.
2. Humanitarians can draw inspiration from their development partners. There is already a lot of work being done that humanitarians could easily capitalize on. Robert Kikpatrick is the Director of [UN Global Pulse](#). "Global Pulse is an initiative that came out of the global financial crisis," he explains. "There was a recognition that we now live in this hyper-connected world where information moves at the speed of light and a crisis can be all around the world very, very quickly," he said.
3. Getting access to data is not necessarily straightforward. In the case of both Haiti and Côte d'Ivoire, organizations needed to negotiate with private telecommunication providers to access their data. Proprietary and privacy concerns mean that many corporations are reluctant to share their massive data reserves. Similarly, many governments are unwilling to make their data accessible to anyone. Social media is one source of big data in which access is easier because much of the information is already public.

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4. Big data should complement existing sources of information, not replace them. Patrick Meier of the Qatar Computing Research Institute warns that we should not see big data as a cure for all of our information ills. "Big (Crisis) Data from social media can complement rather than replace traditional information sources and methods."

5. We cannot assume that better data will necessarily lead to better decision-making. Big Data, the argument goes, should lead to better and more informed decision-making. But unfortunately, decisions are not always driven by evidence.

OGC ILAF Corner

Source: Imma Serra and Joan Capdevila

Did you know that...

The OpenGIS® Catalogue Services Specification defines an interface: Catalogue Service for the Web (CSW) that allows publishing, browsing and searching of metadata about geospatial data and services.

A web catalog service is an essential service in Spatial Data Infrastructure (SDI) as it allows users to search and locate the resources (data, web services) documented. Also a catalog service allows searching other catalogs from other organizations. The current specification, version 2.0.2, is defined by three levels of detail:

- An abstract model that describes the query language and the basic outline of metadata, providing a common vocabulary and specifies a set of interfaces that support the discovery, access, maintenance and organization, which define a Layout.
- Connection protocols: enables implementation of the General Model to a specific protocol. In this case the connection protocols are provided for CORBA, Z39.50 and HTTP
- Application Profile: a model extending a connection protocol documenting implementation decisions and selecting a concrete representation for catalogs' contents.

On the website of ILAF there is an example of CSW 19115 Profile: Profile over HTTP that uses metadata models ISO 19115/19119.

OGC News

23/05: OGC standards support US President's National Strategy for Civil Earth Observations. [Link](#)

29/05: OGC, SIG 3D, and Technical University of Munich announce workshop to gather CityGML requirements. [Link](#)

30/05: The OGC seeks public input on charter for proposed working group to draft a Point of Interest (POI) encoding standard. [Link](#)

17/06: The OGC wins Sensor Magazine's Best of Sensors Gold Application Award. [Link](#)

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

Establishing, Planning and Managing Protected Areas in Small Islands" - JICZM's Call for Papers

Source: Small Island Developing States Mailing List

GESTÃO COSTEIRA INTEGRADA

Journal of Integrated Coastal Zone Management

Call for Papers - JICZM (Journal of Integrated Coastal Zone Management) Special Issue's in "Establishing, Planning and Managing Protected Areas in Small Islands". Deadline for Full Papers Submission in English (preferably), Spanish or Portuguese: **December 31st** 2013. More info at: http://www.aprh.pt/rqci/callforpapers_epmpasi.html.

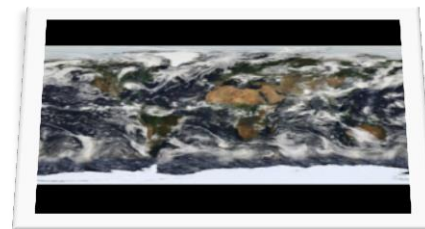
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United Nations International Conference on Space-based Technologies for "Disaster risk identification, assessment and monitoring"

Source: Santiago Borrero

The UN-SPIDER Beijing Office is pleased to announce the United Nations International Conference on Space-based Technologies for Disaster Management - "Disaster risk identification and response" on October 23rd - 25th 2013, in Beijing, China. Please submit your application for participation online until **10 August** 2013: <http://www.un-spider.org/beijingdisasterrisk>.

Despite technological advances in earth observation and the existence of ground-based systems for disaster prediction and monitoring, several countries face challenges to assess and reduce disaster risks. These challenges can be addressed by setting up a mechanism for identifying, assessing, monitoring and responding to disaster risks. With advances in the earth observation technology and increasing access to the space based information, several opportunities are available for disaster managers to use space technology effectively for disaster and disaster risk management. The conference is an opportunity to share information on latest methods, approaches and models used for identifying, assessing and reducing disaster risks. The conference will also focus on how to operationalize technological developments to address challenges at the national level by the national disaster management authorities. The sole purpose of this conference is to bring together the technologists and end users on a single platform to ensure that space-based information is effectively employed in decision-making that saves life and prevents economic losses. In the context of the Conference the International Training Programme "Flood Risk Mapping, Modelling and Assessment using Space technology" will be organised for 25 participants of the conference. The organisers will be able to provide financial support to a limited number of participants. Only participants/experts representing a country and/or an organisation engaged in developing a long-term partnership with UN-SPIDER will be considered for the funding support. Those who request funding support must express their government's or organisation's intention to develop a work programme with UN-SPIDER in the coming years. The support will defray the cost of travel (round-trip ticket – most economic fare – between the airport of international departure in their country of residence and Beijing) and/or room and board expenses during the duration of the event. If you have further questions about the conference, contact Mr. Shirish Ravan, shirish.ravan@unoosa.org Telephone: (+86) (10) 6353 3527. For specific questions related to the registration process contact Ms. Liu Jing, liu.jing@unoosa.org Telephone: (+86) (10) 6353 3527



[International Conference on Spatial Data Infrastructures and Spatial Information Management 2013](#)

Source: Bashkim Idrizi by way of Santiago Borrero



This year, the Annual FIG Commission 3 Workshop and Meeting is joined by the 'FIG Task Force on Property and Housing' (FIG-TF-PH) and the 'South-East European Research Association on Geo-Sciences' (Geo-SEE) to form the first International Conference on Spatial Data Infrastructures (SDIs) and Spatial Information Management (SIM). The conference will be focused on the importance and usage of SDIs and SIM on local, national and regional level, with association to global initiatives. Targeting the process of spatial data sharing through the Internet, as a tool for faster, easier and simpler access to spatial data by all stakeholders, customers and clients; the implementation of International-Global and European criteria for organizing digital spatial data; the impact of spatial information on all application fields; cooperation between stakeholders, such as state institutions responsible for collecting, structuring, archiving, updating and analyzing spatial data, according to their legal mission and obligation. [CALL FOR PARTICIPATION](#) / [CALL FOR PAPERS IS OPEN](#) / [Facebook](#) / [LinkIn](#)

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54th Photogrammetric Week

Source: Dieter Fritsch



The 54th Photogrammetric Week will be held on September 9-13, 2013. For more details please visit www.ifp.uni-stuttgart.de/phowo/index.en.html. It seems that the scientific program and demos of the OpenPhowo Partners will meet again the high expectations of participants coming from many countries. You are invited to revisit Stuttgart, a beautiful city in the Southwest of Germany, and above all, to experience a high standard photogrammetric conference. Please find once more the Second Announcement and Final Program here: <http://www.ifp.uni-stuttgart.de/phowo/programme2013.pdf>

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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.

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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 \$US50 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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National SDI, News, Links, Presentations

ARGENTINA

8th IDERA Conference

Source: <http://www.bariloche2000.com>



The "Rio Negro" Province was chosen to host the 8th Conference of the Spatial Data Infrastructure of the Republic of Argentina (in Spanish IDERA) to be held next year. The meeting will take place on November 7 -8, 2013 in the city of San Carlos de Bariloche, Province of Rio Negro. Spatial Data Infrastructures (SDI) provide platforms for collaborative work and agreement between different levels of government and stakeholders, the academia and research communities, with the goal of providing bases for geographic information exploration, evaluation and use, as relevant tools in decision making processes. In this context, the Government of Rio Negro aims to establish its own SDI with joint participation of all provincial agencies. This is why Rio Negro Province actively engages with this Conference organization; the Province is also committed to training government agents, and to making necessary technical arrangements to pool efforts and guide activities towards consolidation of the Spatial Data Infrastructure of the Province (in Spanish IDERN) and of Argentina (in Spanish IDERA). For registration and more information please log on to: www.idera.gob.ar or contact: contacto@idera.gob.ar.

IDET in the Mendoza National Meeting

Source: <http://idet.tucuman.gov.ar>



A National meeting of Working Groups of the Spatial Data Infrastructure of the Republic of Argentina (in Spanish IDERA) was held on June 13-14. At the Conference opening the Director General of Registration of Mendoza, Gustavo Cruz, explained that the Province of Mendoza seeks to enhance Spatial Data Infrastructure as a major project set by the Governor in cadastre. "The goal is to advance a virtual library with participation of all state agencies to provide

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information to each entity and thereby to achieve action policies using all data we have in our database. This would serve the interaction between all state agencies, to store the information and then dump it on a platform," said Cruz. IDERA Executive Coordinator, Julio César Benedetti, explained that "Responding to this invitation by the Province of Mendoza, we have the opportunity to sit down and work on issues that are of common interest in the subject. It is an opportunity to learn on the advancements of geographic information technology within the scope of the province."

BOLIVIA

Now Available GeoBolivia-Live Version 1.0

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

GeoBolivia-Live Version 1.0 is a DVD, USB drive or Virtual Machine environment based on free software that allows the use of free tools for managing geographic information posted on the Spatial Data Infrastructure of the Plurinational State of Bolivia (in Spanish IDE-EPB). GeoBolivia-Live Version 1.0 is composed entirely of free software, which allows free distribution, dissemination and access; it uses Gnome Classic and Gnome Shell (Gnome is loaded automatically according to capability of the graphics card) and provides a set of applications preconfigured for geographic information management functionality which allows data storage, publication, display, analysis and manipulation. It also includes selected geographic data and respective metadata, along with user manuals upon these tools. For detailed information you may access: <http://geo.gob.bo/?Ya-se-encuentra-disponible>



BRAZIL

[INDE Receives MundoGeo#Connect Award](#)

Fuente: <http://www.inde.gov.br/>



On June 19, the National Spatial Data Infrastructure of Brazil (in Portuguese INDE) was honored as the "Best SDI (Spatial Data Infrastructure) Initiative in Latin America." The MundoGEO#Connect Award recognizes professionals, institutions, companies and brands that are featured in the geotechnology industry. It is offered by MundoGEO, leader in Latin America in integrated solutions for the media and communications sector geospatial solutions, with more than 100,000 registered professionals.

CHILE

[Map Viewer with Spatial Information for Decision-Making Launched](#)

Source: <http://www.ide.cl/>

In front of a group of local businessmen, representatives of academia and Ministers of State, the Minister of National Heritage, Rodrigo Perez, launched on June the Digital Map of Chile with data for investments and decision making aimed at improving development of public policies. This is the SDI Map Viewer, first territorial information web platform that will allow both employers and citizens in general, an easier access to planning tools such as mineral resources, and environmental issues, among other content. This platform and the information it



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contains, is the result of coordinated work with public institutions that are part of the National Spatial Data Infrastructure of Chile. This work, led by the Territorial Characterization Project and the National Land Information System (in Spanish SNIT), follows a presidential mandate to support decision-making on this matter. The viewer is now available on the website <http://www.ide.cl/> including four regions of northern Chile (Arica and Parinacota, Tarapaca, Antofagasta, and Atacama). In the short term it is expected to include a region per month, in addition to incorporating Census data, and emergency protocols, among others.

COLOMBIA

[Mayor presents new version of the Maps Portal of Bogota](#)

Source: <http://www.ideca.gov.co/>



The Maps Portal of Bogota (<http://mapas.bogota.gov.co>) is a tool designed to provide access to geographic information via Internet that are produced by the Capital District's institutions, which is required for the city's development planning and by all citizens.

GUATEMALA

IDE Guatemala

Source: <http://www.segeplan.gob.gt/>

The Spatial Data Infrastructure of Guatemala (in Spanish IDE Guatemala) currently offers aerial ortho-photographs, basic statistics, other geographic information layers produced in the country, and specific territorial indicators to support decision making in the country. It allows geospatial data query, location, connection, and measurement without using specialized programs. It also includes overlapping information layers from different sources in a transparent system to the user, as well as downloadable information layers into Geographic Information Systems (GIS) software for further treatment. IDE Guatemala is used by Development



Councils, Municipalities, State Institutions, NGOs, universities and research centers, the private sector and general public. The Guatemala SDI geoportal may be found at: <http://ide.segeplan.gob.gt/geoportal/index.html>

PERU

Interactive Maps GEOSERVER

Source: <http://geoservidor.minam.gob.pe/>



Through this internet map server you may query a database on the land and environmental situation in the country. The available tools allow enabling and disabling information layers, data or specific location search, zooming in and out, distance measuring, coordinates checking, overlay analysis, and producing specialized maps and reports using existing databases. Users may also explore the database of the Landsat 7 satellite-image 2003 mosaic, and thus will be able to appreciate territorial changes. List of interactive maps, organized according to the Strategic Guidelines of the National Environmental Policy may be found at: http://geoservidor.minam.gob.pe/geoservidor/map_interactivo.aspx

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Articles and Publications of the Month

Caching Techniques for High-Performance Web Map Services

By Stephan Schmid, Alexander Loechel. Article under Review for the *International Journal of Spatial Data Infrastructures Research* IJSDIR, submitted 2013-03-07.



JOINT RESEARCH CENTRE

International Journal of Spatial Data Infrastructures Research

Abstract: The demand for digital maps on the Internet has increased considerably in the last few years. Therefore the performance of Web Mapping Services is becoming more and more important. This article introduces different caching techniques for high performance transfer of data using standardized OGC Web Map Services (WMS). It describes and examines different caching mechanisms based on tile caching, reverse proxy caching and web application acceleration. Furthermore it demonstrates benefits, problems and how data needs to be modified for different caching techniques. The article outlines the advantages of WMS caching systems and investigates the behaviour of these systems with an increasing number of concurrent requests using benchmarking tests. This includes the examination of applicability of the INSPIRE level of service agreement (SLA) for view services. [Full paper may be accessed at: <http://ijmdir.jrc.ec.europa.eu/index.php/ijmdir/article/view/316>]

Mining sensor datasets with spatiotemporal neighborhoods

By Michael Patrick McGuire, Vandana Janeja, Aryya Gangopadhyay. Article published in *Journal of Spatial Information Science* (JOSIS), No 6 (2013).

Abstract: Many spatiotemporal data mining methods are dependent on how relationships between a spatiotemporal unit and its neighbors are defined. These relationships are often termed the neighborhood of a spatiotemporal object. The focus of this paper is the discovery of spatiotemporal neighborhoods to find automatically spatiotemporal sub-regions in a sensor dataset. This research is motivated by the need to characterize large sensor datasets like those found in oceanographic and meteorological research. The approach presented in this paper finds spatiotemporal neighborhoods in sensor datasets by combining an agglomerative method to create temporal intervals and a graph-based method to find spatial neighborhoods within each temporal interval. These methods were tested on real-world datasets including (a) sea surface temperature data from the Tropical Atmospheric Ocean Project (TAO) array in the Equatorial Pacific Ocean and (b) NEXRAD precipitation data from the Hydro-NEXRAD system. The results were evaluated based on known patterns of the phenomenon being measured. Furthermore, the results were quantified by performing hypothesis testing to establish the statistical significance using Monte Carlo simulations. The approach was also compared with existing approaches using validation metrics namely spatial autocorrelation and temporal interval dissimilarity. The results of these experiments show that our approach indeed identifies highly refined spatiotemporal neighborhoods. [Full text may be found at: <http://www.josis.org/index.php/josis/article/view/94>]

SDI Publishable Geographic Information Production Protocol

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



This protocol presents a series of recommendations and conditions for the efficient production of geographic information and its publication in the Spatial Data Infrastructure of the Plurinational State of Bolivia (in Spanish IDE-EPB). Based on a set of quality rules founded on ISO 19113, 19114 and 19138, this defines a set of activities and elements that will give dynamism and ensure the produced geographic information access, use and interoperability,

resulting in a tool for delivery and receipt-control of information created between producers (consultants) and receiving organizations. The protocol is available at: <http://geo.gob.bo/?Protocolo-de-produccion-de>

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IDERA Newsletter Issue 9 now Available

Source: Subscriptions IDERA

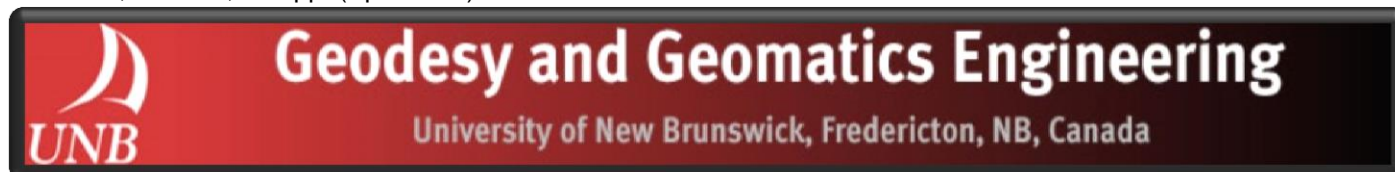
Now is published the IDERA Bulletin No. 9, for April 2013. The IDERA Newsletter is a medium for disseminating news and content of interest to the SDI community in Argentina. It informs on topics related to GIS, SDI, remote sensing, and geospatial data management at global, regional, national, and local levels. Among the published articles, is worth noting the IDERA Working Group Meeting held on June 13-14 this year in the city of Mendoza, and an article on conceptual aspects of Spatial Data Infrastructure initiatives and developments in Argentina. Downloads and geo-events sections are also included.... [Newsletter download](#)



Legal issues and validation of volunteered geographic information

Source: Kate Lance

Rak, Andriy (2013). Legal Issues and Validation of Volunteered Geographic Information. M.Sc.E. thesis, Department of Geodesy and Geomatics Engineering Technical Report No. 283, University of New Brunswick, Fredericton, New Brunswick, Canada, 128 pp. (April 2013)



Abstract: The Canadian Geospatial Data Infrastructure (CGDI) provides access to authoritative geographic datasets of Canada, which are the source of accurate and reliable data. The process of acquiring, updating and maintaining such datasets using traditional approaches, requires both time and costly resources. As a result, in many cases the datasets are out of date because of the high cost of maintenance. An alternative approach to reliably create and update authoritative datasets is linked to its integration with Volunteered Geographic Information (VGI). VGI provides a vast source of spatial information to government, industry and citizens. However, the integration of VGI with CGDI generates several questions, with VGI quality and legal issues at the forefront. This research has investigated methods for assessing the quality of VGI, and describes the importance of a link between VGI and legal liability in the need for integration of VGI with CGDI. This research developed a prototype to validate data quality and examined legal liability issues around VGI to discover a strategy for possible integration of VGI with CGDI datasets. The research also provides four primary risk management techniques for CGDI to manage risks resulted from incorporating VGI into their datasets. [Full text may be found at: <http://gge.unb.ca/Pubs/TR283.pdf>]

[What Climate Change Means for Africa, Asia and the Coastal Poor](http://www.worldbank.org/)

Source: <http://www.worldbank.org/>

A new scientific report commissioned by the World Bank and released on June 19 explores the risks to lives and livelihoods in these three highly vulnerable regions. *Turn Down the Heat: Climate Extremes, Regional Impacts, and the Case for Resilience* (Read it in Issuu, Scribd, Open Knowledge Repository) takes the climate discussion to the next level, building on a 2012 World Bank report that concluded from a global perspective that without a clear mitigation strategy and effort, the world is headed for average temperatures 4 degrees Celsius warmer than pre-industrial times by the end of this century. Communities around the world are already feeling the impacts of climate change today, with the planet only 0.8 °C warmer than in pre-industrial times. Many of us could experience the harsher impacts of a 2°C warmer world within our lifetimes – 20 to 30 years from now – and 4°C is likely by the end of the century without global action. The report lays out what these temperature increases will look like, degree-by-degree, in each targeted region and the damage anticipated for agricultural production, coastal cities, and water resources. The report, based on scientific analysis by the [Potsdam Institute for Climate Impact Research](#) and [Climate Analytics](#), uses advanced computer simulations to paint the clearest picture of each region's vulnerabilities. Please see the [Infographic: What Climate Change Means for Africa and Asia](#).

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Geospatial Research, Applications, Software, Data

El Salvador: Local spatial planning

Source: Kate Lance

Recently Kadaster was selected to execute the 'Participative land management project for the sustainable development on a local level'. The project will be executed in El Salvador, in the municipality of Antigua Cuscatlán. This city is located nearby the country's capital San Salvador. The project will last for three years and is financed by the EU. The purpose of the project is the creation of development plans for the urban and rural areas. The plans will be used for programmes to reduce poverty and to improve development on local level. In order to develop these plans, a Geographic Information System (GIS) will be created.

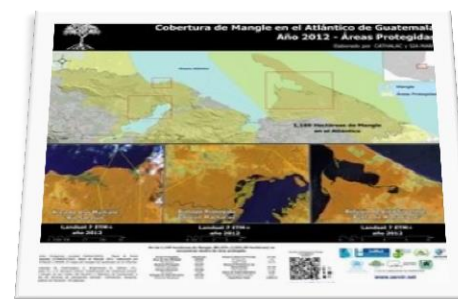
The GIS will contain a land administration system as well as planning information. By realising this purpose, the local authorities will have stronger capacity for establishing planning policy and instruments. This will intensify the interaction between local authorities and citizens. Kadaster is foreseen to guide and accompany all the activities that have to be executed in this project. We make use of the results of a similar project "Integral Management of Lands" that just has been finished in Honduras and Guatemala. Similar activities took place. A special challenge in this project is the collaboration that has to be established with the national cadaster organisation, called Centro Nacional de Registros (CNR), and with the national planning authority. The relation between these national organisations and the municipality of Antigua Cuscatlán will intensify. The municipality has to take responsibility and guarantee up-to-date and approved cadastral and planning information. The municipality of Antigua Cuscatlán is looking forward to the results of this project. They are eager to finally get a transparent land administration and planning system that will enable them to develop their municipality in a more sustainable and fair way. More information at: <http://www.kadaster.nl/web/artikel/download/Abroad-juni-2013.htm>. Kadaster International is a department of the Netherlands' Cadastre, Land Registry and Mapping Agency (Kadaster).



CATHALAC analyses Mangrove Cover of Guatemala

Source: <http://cathalac.org/>

In collaboration with the Ministry of Environment and Natural Resources (in Spanish MARN) in Guatemala, UN-SPIDER's Regional Support Office CATHALAC (Water Center for the Humid Tropics of Latin America and the Caribbean) is carrying out a satellite-based analysis of the current mangrove cover of Guatemala. The experts elaborated several maps showing the cover in 2012. Various remote sensing and field data techniques were applied to conduct this research. The experts used satellite images of the periods from 2011 to 2012 including Landsat-5 TM, Landsat-7 ETM + (NASA / USGS), Hyperion (NASA) and ALOS PALSAR (JAXA). Mangrove forests are a natural protective barrier against tropical storms and hurricanes. This research was conducted of the necessity to quantify and identify the current areas of mangroves on the Pacific as well as the Atlantic coast of Guatemala. The results show that both the Pacific and Atlantic Mangrove forests cover an area of approximately 18,904 hectares (189.04 square kilometers), of these only 27.07% (5117.73 hectares) are regulated and protected by the Protected Areas Act of Guatemala. [The full technical report on this analysis is available online in Spanish language \(2.78 MB\).](#)



IBGE offers image-mosaic of the state of Pernambuco

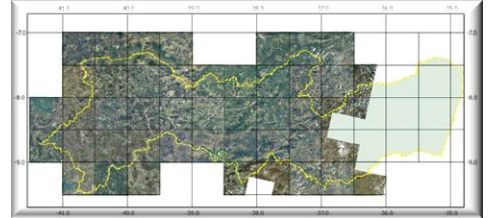
Fuente: <http://www.inde.gov.br/>

Now are available at the Brazilian Institute for Geography and Statistics' (in Portuguese IBGE) website, new images of the state of Pernambuco captured by the AVNIR-2 sensor (ALOS satellite). These images are part of a project being

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developed for the provision of updated orthoimages, mosaics, and image-maps compatible with the scale of 1:100.000. Orthoimages and mosaic quadrats in geotiff format are available at: http://geoftp.ibge.gov.br/imagens_orbitais/. For more information, log on to: http://geoftp.ibge.gov.br/imagens_orbitais/ortoimagens/Descritivo_Projeto_B_C100_PE_situacao2013_maio_v01.pdf

For the state of Pernambuco, IBGE produced orthorectified images as well as orthomosaics to the equivalent of 47 sheets of topographic systematic mapping, which represents 75% of the federation's territory. These images show the interior of the state, which is recurrently hit by drought; and helps locating and measuring terrain elements more precisely. In the remaining 25%, there was a large presence of clouds in AVNIR-2 images, which covered this State's territory. Images of these areas were not used, hence another sensor images will be utilized for a complete coverage. AVNIR-2 sensor operated aboard the ALOS during the period 2006-2011. These images have a spatial resolution of ten meters, in four spectral bands equivalent to blue, green, red, and near infrared. Radiometric enhancements were applied to check the mosaic quadrats and to facilitate visualization and interpretation of pertinent features.



The Zaragoza City Council (Spain) published three mobile applications that work on their Spatial Data Infrastructure

Source: F. Javier Zarazaga-Soria



Zaragoza City Council has published three new applications for mobile devices that operate over the Spatial Data Infrastructure of the City of Zaragoza (IDEZar: <http://idezar.zaragoza.es>). The applications have been developed by GeoSpatiumLab (<http://www.geoslab.com>) and have the mobile display technology developed by the Group of Advanced Information Systems from the University of Zaragoza (<http://iaaa.unizar.es>). "Zaragoza Taxi", "Zaragoza Rutas" and "Zaragoza Estaciona" are available for mobile phones with Android and iOS systems (Apple, in this case also for iPad). They are free of charge.

- "Zaragoza Taxi" allows users to locate the nearest free cab in real time, and to know the available taxis at the nearest taxi-stop.
- "Zaragoza Rutas" ("Zaragoza Routes") allows users to plan their journeys in real time by calculating Zaragoza personalized itineraries, taking into account their preferences regarding the use of bus and/or tram, time of day, etc., and always with the official information and real-time updated.
- "Zaragoza Estaciona" allows users you to display on the map in real-time occupation of the regulated parking areas by a simple color code. It shows, in addition, each track section for parking regulated, identifying him as ESRE (resident mixed-rotating) or ESRO (rotary), and the location of the parking meters. Includes also all kinds of information of interest to the parking users: public parking with detailed information about their access, disabled parking, bicycle parking and parking for motorbikes.

These applications are a clear example of the use of SDIs to generate services of general interest. For more information please log on to: <http://www.zaragoza.es/ciudad/viapublica/movilidad/> and <http://zaragozaprensa.com/2013/06/06/tres-nuevas-apps-para-web-y-moviles-ofrecen-a-los-ciudadanos-informacion-en-tiempo-real-sobre-la-movilidad-en-zaragoza/>

Land Matrix Partnership Expands Global Observatory on Land Acquisition

Source: Arturo Brun-Martinez; <http://larc.iisd.org/>



In an effort to create an open dataset to track large scale land acquisition deals from negotiation to implementation, the Land Matrix partnership has launched the second phase of its Global Observatory. First launched in 2012, the Observatory is a tool to promote transparency and open data collection. The current revision is in direct response to

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comments that have been sought out over the past year from stakeholders. In particular, the revisions relate to the total estimates of the number of land acquisitions and associated land area. The database now differentiates between intended, concluded and failed deals. It also displays the current status of each deal and links information directly to sources. The Land Matrix partnership represents the work of numerous international organizations and donors, including the International Land Coalition. [[ILC Press Release](#)] [[Land Matrix Global Observatory](#)] read more: <http://larc.iisd.org/news/land-matrix-partnership-expands-global-observatory-on-land-acquisition/>

ITTO Announces Additional Funding for Forest Monitoring in the Amazon

Source: <http://larc.iisd.org/>



The International Tropical Timber Organization (ITTO) announced the continuation of the project on 'Monitoring deforestation, logging and land use change in the Pan Amazonian Forest – PANAMAZON II,' which supports monitoring of forest cover in Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, Suriname and Venezuela. According to ITTO, additional project funding is provided by the Governments of the Netherlands and Germany and by the participating countries. In addition, technical support is received from Brazilian institutions and the Ministries of Environment of the participating countries. Over a five year period, the new Amazon Cooperation Treaty Organization (ACTO) project on 'Monitoring of forest cover in the Amazon Region' will build on the work carried out by ITTO to improve access to real time and accurate information on deforestation, logging and land use change. Achievements to date include the establishment of a regional coordination unit, adoption of a regional methodology for forest monitoring to be applied at the national level, and national training in the use and analysis of satellite imagery. The new project will continue support for national monitoring infrastructure and access to monitoring technology, in addition to facilitating the development of national monitoring plans and ensuring the equalization of institutional capacity for land use change monitoring. The above activities are intended to address illegal logging and contribute to reduced deforestation in the Amazon basin. [[ITTO Press Release](#)] read more: <http://larc.iisd.org/news/itto-announces-additional-funding-for-forest-monitoring-in-the-amazon/>

[Putting global food on the map](#)

Source: AAG SmartBrief June 13, 2013

Researchers hailing from Mongolia, India, Turkey, Western Europe, New Hampshire, Maryland and Northern Arizona University (NAU) have just started mapping the world's crops in the finest detail ever. Ultimately, about 20 people will spend the next five years using satellite data to piece together what grows where around the globe, and whether it's irrigated or rain-fed. A handful of the primary researchers have met at the U.S. Geological Survey in June to plot how



they'll proceed with a \$3.5 million NASA grant. The general idea is to look at where the earth grows food now, and where it might come from in the future, when water supplies are more heavily demanded. Worldwide population could grow by about 2 billion from now to 2050, the United Nations projects. One worry: Where will food originate for all these people, particularly a growing global middle class with a taste for diverse and meaty foods? "Everybody's concerned about food security going forward because of population growth," said Prasad Thenkabail, a research

geographer with the U.S. Geological Survey in Flagstaff, and a lead investigator. So researchers are going to take sophisticated software (software that can match areas of corn, for example, and realize it's seeing a crop), and land-based surveys, and make maps of what the world looked like in 2010. "We took the entire planet and divided it into 30-meter (32.8-yard) square chunks or (smaller)," said Mutlu Ozdogan, who studies remote sensing at the University of Wisconsin-Madison. This will allow governments and industries to see what's growing where, what crops have multiplied or shrunk over time in a region, and to plan where best to invest limited aid money for crops in Africa, for example. The data will also feed into bigger forecasts about what could happen amid climate change, with agriculture serving as both a major producer and victim of the gases driving climate change. And the information could be useful in

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forecasting harvests, particularly during severe droughts or storms. "We've got all these national disasters going on these days," said Russell Congalton, who works in geographic information systems and remote sensing at the University of New Hampshire. Teki Sankey, who works in remote sensing and rangelands at NAU, plans to look at where food was produced in the past, and where it might grow in the future, based on where it is right now. "Based on that estimate, we'll be able to project into the next two to three decades," she said. Cyndy Cole can be reached at ccole@azdailysun.com.

[Future Surveyor Will Control UAV by Thought](http://www.gim-international.com/)

Source: <http://www.gim-international.com/>

Surveyors today are already making use of cars with 3D cameras and controlling unmanned aircraft. In the future, however, the cars may not need an operator and unmanned aircraft could be controlled by thought. The first steps have now been taken to enable surveyors to make direct contact with UAVs using their brains and to maneuver them exactly as they wish. Controlling a UAV with the brain works as follows. Members of the test team were connected to a computer via 64 electrodes. Using the brain signals, the computer was then able to fly the helicopter with great precision around an obstacle course in the hall. This gives us a good insight into the way in which the mapping of our world may be done in the future.



Cartography for the Masses: where online maps are taking us

Source: GigaOM WALIS June 2013 eNews

It's now easier than ever to create your own maps - and to pick exactly what you want to feature. That's a good thing, says the founder of one mapmaking firm, because more creative maps will lead to more creative ideas. Geographic information, once difficult to obtain, is now overabundant and driving the way we interact with maps. It took 5,000 years to transition from cave maps, anchored by place names and pictures, to a coordinate system, where a place is simply a mathematical X and Y point on a map, according to renowned data visualiser Edward Tufte. These days, between Street View, social media and loads of geolocated content online, we're dealing with more than we can handle. Instead of worrying about getting from point A to point B, we're bombarded by data that can hide what we're actually looking for. Stamen Design, a studio in San Francisco, last week released Map Stack, a free online platform that allows users to tailor how their maps look. Web link to full article: <http://gigaom.com/2013/06/19/cartography-for-the-masses-where-online-maps-are-taking-us/>



[Air Pollution May Have Suppressed Storms, Research Suggests](http://www.nature.com/ngeo/journal/v6/n7/full/ngeo1854.html)

Source: AAG SmartBrief June 27, 2013

To the ever-growing list of ways humanity seems to have altered the earth, add another candidate: Air pollution may have had a major soothing influence on storm cycles in the North Atlantic. That is the finding of a [paper](http://www.nature.com/ngeo/journal/v6/n7/full/ngeo1854.html) published this week, suggesting that industrial pollution from North America and Europe through much of the 20th century may have altered clouds in ways that cooled the ocean surface. That, in turn, may have suppressed storms, and particularly major hurricanes, below the level that would have existed in a purely natural environment. If the authors are right, the upturn in storms over the last couple of decades may be no accident. It could, instead, be at least partly a consequence of the clean air acts that have reduced pollution around the North Atlantic basin, thus returning the storm cycles to their more natural state. [Anthropogenic aerosol forcing of Atlantic tropical storms: <http://www.nature.com/ngeo/journal/v6/n7/full/ngeo1854.html>]



[Esri looks to give mapping a social flavor](http://www.esri.com)

Source: AAG SmartBrief June 27, 2013

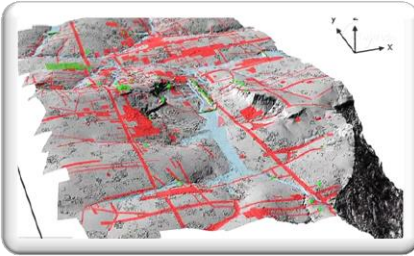
California-based Esri is building a sort of "Facebook for maps" that allows the public and application developers to access enormous troves of geographical data and create their own maps that are in turn searchable by other users.

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The cloud-based maps created on ArcGIS.com are also shareable on social media, and other users can be invited to collaborate on the maps. "This is kind of like Facebook for geography, where our users are sharing their maps, or connecting their maps, into a cloud environment," Esri's Jack Dangermond says.

Lost Medieval City Found in Cambodia Using Revolutionary Scanning Technology and Indiana Jones-Style Jungle Expedition

Source: WALIS June 2013 eNews



A group of daring archaeologists uncovered a lost 1,200-year-old city on a misty Cambodian mountain by hacking through the thick jungle, strewn with live land mines. Mahendraparvata, the city they found, is thought to pre-date the famous site of Angkor Wat by around 350 years and lies only 25 miles west of that huge temple. Archaeologists believe Mahendraparvata was the first city of the Angkor Empire in 802 AD. The Sydney Morning Herald reported the expedition exclusively, which began in earnest after the team used Lidar technology on a helicopter. The Lidar system uses pulsing laser signals to see through the thick undergrowth, where it detected a distinct outline of the long-forgotten city. Web link to full article: <http://www.dailymail.co.uk/sciencetech/article-2342339/Cambodian-lost-city-using-revolutionary-scanning-technology.html>

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Training and Funding Opportunities, Awards

COCONet Graduate Fellowships

Source: NEMO News

The Continuously Operating Caribbean Observational Network (COCONet) project funded by the National Science Foundation seeks applicants for two graduate research fellowships starting in August or September of 2013. The COCONet Graduate Fellowships will provide individual awards between US \$20,000 and US \$40,000 per year for a maximum of 2 years to support solid Earth or atmospheric science graduate research projects conducted at a U.S. institution of higher education. The research projects must be within the COCONet footprint or directly use data from the COCONet GPS stations and/or meteorological sensors. The deadline for the submission of all materials is **15 July** 2013. Questions about the fellowship can be addressed the fellowship email (coconetfellowship@unavco.org) or visit the COCONet Graduate Fellowship webpage for more information <http://coconet.unavco.org/science/coconetfellowship.html>. Please visit the COCONet homepage for more information about the project <http://coconet.unavco.org/coconet.html>



New Defra's Darwin Initiative funding

Source: Carole Martinez



The UK has announced that £8 million will be dedicated to environmental and conservation projects around the world under Defra's Darwin Initiative. Around £6 million will be available for projects in developing countries and up to £2 million from the Darwin Plus fund for projects in UK Overseas Territories. The Darwin Plus funding will go specifically towards supporting environmental and conservation projects in UK Overseas

Territories, which are home to an estimated 90 percent of the biodiversity found within the UK and Territories combined. For more information at: <https://www.gov.uk/government/news/international-conservation-and-environment-projects-receive-8-million>

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Lincoln Institute Accepting Applications for David C. Lincoln Fellowships in Land Value Taxation

Source: Lincoln Institute Fellowships

The Lincoln Institute of Land Policy hereby invites applications for the David C. Lincoln Fellowship Program. The goal of this program is to develop academic and professional



interest in land value taxation through support for major research projects. Projects may address either the basic theory of land value taxation or its application to specific domestic or international issues. Research funding for each approved project will be between \$20,000 and \$30,000 a year, and may be renewed for up to three years. If you are interested in applying for the fellowship, please visit our website at http://www.lincolninst.edu/education/dcl_fellowships.asp to review the Application Guidelines and to see a list of past fellowship recipients. Email applications must be submitted to fellowships@lincolninst.edu by **September 16**, 2013. If you have questions about the application process, please contact fellowships@lincolninst.edu.

Lincoln Institute Call for Research Proposals - Latin America and the Caribbean

Source: Program for Latin America and the Caribbean of the Lincoln Institute of Land Policy

The Program for Latin America and the Caribbean of the Lincoln Institute of Land Policy announces the [annual request for research proposals](#) for studies to be completed by January 2014. The deadline for presentation of proposals is July 8, 2013. The terms of reference are posted on Lincoln's website in the following link: [Land Policy and Urban Development in Latin America](#). If you have any questions, please send an email to lacinvestigacion@lincolninst.edu.

United Nations / Nippon Foundation Ocean Affairs Fellowship

Source: Small Island Developing States Mailing List



DIVISION FOR OCEAN AFFAIRS AND THE LAW OF THE SEA

The United Nations – The Nippon Foundation of Japan Fellowship Programme is a fully funded research Fellowship for developing State ocean professionals. The main objective of the Fellowship is to provide advanced research and training in the field of ocean affairs and the law of the sea, and related disciplines, to government officials and other professionals from developing States. Successful candidates will undertake their research/studies in two back-to-back phases: the first, lasting three months, with the Division for Ocean Affairs and the Law of the Sea (DOALOS), UN Office of Legal Affairs; and the second, lasting six months, with a participating academic host institution. Fellowship application deadline is 15 September, and candidates should forward their applications directly to DOALOS. Additional information, including the application package, detailed application instructions, and a list of participating host institutions, is available on the Fellowship website: www.un.org/depts/los/nippon and www.unfalumni.org

2nd edition of Master Program on Geographic Information Quality Evaluation and Management

Source: Joaquin Segura Martin

This program is organized into two parts:

2013-2014 Course: Diploma on Geographic Information Quality Evaluation (5th Edition)

2014-2015 Course: Diploma on Geographic Information Quality Management (2nd edition). More information may be found at: <http://www.cartocalidad.com/>. Content and form of this course is designed under professional demand, and will take place virtually, relying on a virtual campus platform.

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Employment Opportunities

Program Manager position with TNC in Grenada - apply online by July 11th

Source: Nancy Graff

The Nature Conservancy has the first of three positions posted in our new Grenada office scheduled to open in August. You can view and apply for this job at:

https://careers.nature.org/psp/P91HTNC_APP/APPLICANT/HRMS/c/HRS_HRAM.HRS_CE.GBL?Page=HRS_CE_JOB_DTL&Action=A&JobOpeningId=41183&SiteId=1&PostingSeq=1



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Other

[The Anthropocene: Humankind as a Turning Point for Earth](#)

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

The Anthropocene is the name of a proposed new geological time period (probably an epoch) that may soon enter the official Geologic Time Scale. The Anthropocene is defined by the human influence on Earth, where we have become a geological force shaping the global landscape and evolution of our planet. According to this theory, the present epoch - still known as the Holocene, which started 11,000 years ago -- would have ended somewhere between the end of 18th century and the 1950s (when the Anthropocene began). The earlier time limit considers the increasing amount of carbon dioxide and other greenhouse gases in Earth's atmosphere that is mostly due to the burning of fossil fuels for energy to power our growing industrial technology. We may consider this process to have started in 1784, with the invention of the steam engine by James Watts. The present high levels of greenhouse gases in our atmosphere are probably causing the climate to change to a long warm period. The later time period takes into account the increasing background radiation from the nuclear tests by US and USSR military during the beginning of the Cold War. This new frontier in the geological timeline is potentially more precisely defined than any was before, due to its recent occurrence. It is also supported by increasing evidence of human influence on natural global processes, such as the sediment transport being supplanted by our construction processes; land occupation and transformation; water course deviation and water reserve appropriation; massive extinction and introduction of species into new regions; development and widespread use of previously non-

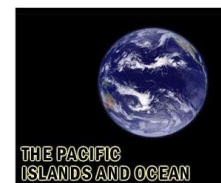


existent chemical substances (eg. plastics and persistent organic pollutants); and even the creation of new elements (the last 20 in the Periodic Table). The Anthropocene concept has slowly emerging in science due to comments from Antonio Stoppani in 1873 (Anthropozoic era), LeConte in 1879 (Psychozoic), Pavlov in 1922 (Anthropogene) and Vernadsky in 1962 (Noosphere). Eugene Stoermer and Paul Crutzen formally addressed the concept and introduced the Anthropocene term in a paper's title for the Global Change Newsletter in 2000. Dr. David Grinspoon, Baruch S. Blumberg Chair of Astrobiology at the Library of Congress and Curator of Astrobiology at the Denver Museum of Nature and Science, talks about a book he is writing on the Anthropocene from an astrobiology point of view. [The complete interview may be found at: http://www.terraily.com/reports/The_Anthropocene_Humankind_as_a_Turning_Point_for_Earth_999.html]

[El Nino, La Nina unlikely to make an appearance in 2013: WMO](#)

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

The Pacific Ocean is unlikely to see either a warming El Nino climate phenomenon or its cooling La Nina opposite number through the end of the year, the UN's weather agency said Wednesday. The World Meteorological Organization (WMO) said forecasts showed that Pacific climate



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patterns were set to remain neutral through the rest of the year, although "a slight chance of La Nina or El Nino development remains." During the past year, indicators in the tropical Pacific, including ocean temperatures, sea level pressure and cloudiness, indicate that neither of the climate patterns has been present, it said. In the first two months of this year, sea surface temperatures did approach "a borderline La Nina level," WMO said, adding though that "the ocean-atmosphere system as a whole did not remain in a La Nina state for long enough to be considered a weak La Nina event." The UN agency said less than a quarter of the climate models it surveys predicted weak La Nina conditions between June and September, while less than one fifth of them expected to see El Nino develop before the end of 2013. The two climate patterns are closely watched by scientists, who say that while they are not caused by climate change, rising ocean temperatures caused by global warming may affect their intensity and frequency.

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Americas: Conferences, SDI Events

[International Geomatic Week 2013](#)

Source: <http://www.igac.gov.co/>



Tecnologías geoespaciales
para ordenamiento
y gestión del territorio

The event will run from September 30 to October 4, 2013 in Bogota, Colombia under the theme "Geospatial Technology for Territorial Organization and Management." Topics of interest include: Geographic Information Systems, Remote Sensing, Geodesy and Global Positioning Systems, Spatial Data Infrastructures (SDI), Geostatistics, Artificial intelligence, Geomatics, Neogeography, and Geomatics Education in Schools and Colleges. The deadline for receipt of abstracts is **July 15**, 2013. Contact: semanageomatica2013@igac.gov.co. More information [here](#).

[Entering and Expanding Global Business Opportunities](#)

Source: <http://www.mappls.org/>

MAPPS, the national association for private sector geospatial firms, today announced it will host the "Geospatial and Engineering International Conference - Entering and Expanding Global Business Opportunities," November 13-14, 2013 in Alexandria, VA, USA. The conference will provide information and practical knowledge to enable firms to export their services, data and products to overseas clients. It will feature agencies and organizations that finance, procure, coordinate, and manage geospatial and engineering projects outside the United States with



presentations on their programs, budgets, requirements, and procurement procedures. Agencies that assist U.S. companies with exporting will inform firms of services available to assist with expansion into the global market. Supporting organizations include Association of American Geographers (AAG), American Society for Photogrammetry and Remote Sensing (ASPRS), Construction Industry Round Table (CIRT), Global Spatial Data Infrastructure Association (GSDI), National Society of Professional Surveyors (NSPS), and the Urban and Regional Information Systems Association (URISA).

[AAG 2014 Annual Meeting Invitation to Tampa, Florida](#)

Source: Oscar Larson by way of Santiago Borrero
The Association of American Geographers invites you and your members to join the next Annual Meeting, to be held on April 8-12, 2014, in Tampa, Florida, USA to learn and share the latest in research, policy, and scientific applications on topics such as: Climate Change, Geography, Education, Physical Geography, Urban Planning & International Development, Cultural Geographies, Human Geography & GIScience, Geographies of Health, Social Justice, And more! Scholars, professionals, and students are welcome to make presentations on these and related topics. Registration and abstract submission will open July, 1 at <http://www.aag.org/annualmeeting/register>. The call for papers will close **October 23**, 2013.



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YEAR 2013

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JULY 2013

Jul.1 – Sep. 30	On line	Learning Course: Integrated watershed management
Jul. 3 – Aug. 3	Fort Collins CO, USA	Protected Area Management Course
3-5	Tegucigalpa, Honduras	14th Iberoamerican Conference on Geographic Information Systems (CONFIBSIG)
4-5	Catamarca, Argentina	7th International Congress of Inner Towns and Cities
6-9	San Diego CA, USA	ESRI Education GIS Conference
6-9	San Diego CA, USA	ESRI Survey Summit
7-9	San Diego CA, USA	ESRI Business and Location Analytics Summit
7-12	East Lansing MI, USA	15th International Medical Geography Symposium (IMGS 2013)
8	Ciudad de Panamá, Panamá	Geocensos Roadshow 2013
NEW		
8-12	San Diego CA, USA	ESRI International User Conference
8-12	Havana, Cuba	9th International Convention on Environment and Development
8-13	Cartago, Turrialba, Costa Rica	IX International Course Tools for Carbon Sequestration Monitoring Systems Land Use
Jul. 8 – Aug. 25	On line	On line course: Environmental Management and sustainability tools (First Version)
NEW		
10	Montreal QC, Canada	CSWS 2013 Fourth Canadian Semantic Web Symposium
15-25	Cartago, Turrialba, Costa Rica	International Course: Extension methodologies for sustainable rural development
16-18	Atlanta GA, USA	Business Continuity & Organizational Resilience for Utilities Conference
16-18	Monterey CA, USA	SCGIS Annual Conference
NEW		
19	San José de Costa Rica	Geocensos Roadshow 2013
NEW		
22-24	San Jose CA, USA	COM.Geo 2013
22-26	San Diego CA, USA	CMSC 2013
22-26	Rockport Maine, USA	2013 MAPPS SummerConference
23-26	Barquisimeto, Venezuela	5th International Congress on Historical Sciences in Venezuela (1st Call)
26	San Salvador, El Salvador	Geocensos Roadshow 2013
NEW		
30	Tegucigalpa, Honduras	Geocensos Roadshow 2013
NEW		

AUGUST 2013

1-4	Denver CO, USA	NCGE 2013 National Conference on Geography Education
11-15	Newfoundland and Labrador, Canada	Canadian Association of Geographers 2013 Annual Meeting More: http://www.mun.ca/caq2013/
12-15	Huntsville AL, USA	Space and Missile Defense Symposium
12-23	Cartago, Turrialba, Costa Rica	14th International Course economic and institutional foundations for the Management and Assessment of Environmental Services
14-16	Cancun, Mexico	LACCEI 2013
16	Santa Marta, Colombia	Geocensos Roadshow 2013
NEW		
21-24	Colorado Springs, CO USA	GeoGathering 2013
25-29	Arlington VA, USA	Advances in Geospatial Technologies for Health
26-27	Raleigh NC, USA	2nd International Conference on Hydrology & Ground Water Expo
26-30	Turrialba, Costa Rica	V Adaptation to Climate Change International Course: The Role of Ecosystem Services
27-29	Victoria BC, Canada	34th Canadian Symposium on Remote Sensing
29-31	Ibagué, Colombia	20th Colombian Congress of Geography

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SEPTEMBER 2013

Sep. 2 – Nov.25	Turrialba, Costa Rica	E-Learning: Land use planning at the municipal level
3-6 *NEW*	Lima, Peru	First International Climate School ACTION / UNESCO on "Climate Variability and Change in the Andes"
4-6	México City, México	SIGSA/ESRI Users National Meeting 2013
7-10	Cambridge MA, USA	International Map Industry Association (IMIA) Americas Annual Meeting and Member Showcase
8-10	Boston MA, USA	Map Conference
8-10 *NEW*	Cambridge MA, USA	MIA (Americas) 2013 Global Conference & Member Showcase
8-11	Daytona Beach FL, USA	Lucity Annual Conference and Training (ACT) 2013
9-13	Turrialba, Costa Rica	International Course of Forest Inventory Analysis Data
9-13 *NEW*	Ciudad de México, México	15th Humboldt International Meeting "Geography and Crisis"
11-13	Rio de Janeiro, Brazil	Latin America Geospatial Forum 2013
11-13 *NEW*	Columbus OH, USA	The 2013 Ohio GIS Conference
16-17	Buenos Aires, Argentina	2nd UNI-COM Latin American Congress: Quality of Life in Latin America and the Caribbean
16-17	Orlando FL, USA	7th Annual Central Florida GIS Workshop
16-17 *NEW*	Williamsburg VA, USA	2013 Virginia GIS Conference
16-19	Providence RI, USA	GIS-Pro 2013: URISA's 51st Annual Conference for GIS Professionals
16-20	Nashville TN, USA	ION GNSS+ 2013
16-20	La Havana, Cuba	Mesoamerican Society for Biology and Conservation Congress
16-27	Turrialba, Costa Rica	International Course: Using the SWAT Model as a tool for Watershed Management
17-20	La Plata, Argentina	7th Argentine Congress on Hydrogeology and 6th Hispano-Latin American Seminar on current topics in Groundwater Hydrology
23-25	Saint John, New Brunswick, Canada	Geomatics Atlantic 2013
23-25	Edmonton Alberta, Canada	Ga3 - Geospatial - anywhere, anytime for anyone
23-27	Iguazú, Provincia de Misiones, Argentina	4th Argentinean Forestry Congress and Latin-American Iguazú 2013
24-26	Atlanta GA, USA	Conferencia Servicio de Campo del Este 2013
25-28	Lake Tahoe CA, USA	AAG Pacific Coast Division Fall Regional Meeting
25-27 *NEW*	Prescott AZ, USA	AGIC Education & Training Symposium
25-27	Manizales, Colombia	2nd Colombian Bioinformatics Computational Biology Congress (CCBCOL)
Sep.30-Oct.4	Turrialba, Costa Rica	Climate-smart Territories at the tropic. Information: conferenciawallace@catie.ac.cr
Sep.30-Oct.4 *NEW*	Bogotá D.C, Colombia	International Geomatic Week 2013
Sep.30-Oct.3 *NEW*	Orlando, Florida	Algae Biomass Summit

OCTOBER 2013

1-4	Manizales Caldas, Colombia	EIISI 2013 4th International Meeting and 7th National Engineering Research and Information Systems Meeting
1-5	Ciego de Ávila, Cuba	11th International Congress on Hydraulics engineering and 7th International Seminary on Integrated Water Use
3-4	Polvorines, Argentina	II National Congress on Geographic Information Technologies and II Days on Geographic Information Systems Deadline for abstracts (300 words): April 30, 2013 . E mail: jicongresotig2013@gmail.com / infosig@unqs.edu.ar
4-5	Entre Ríos-Concordia, Argentina	26th Foresting Working Days from Entre Rios
5-11	Salt Lake City UT, USA	IUFRO World Congress 2014. Sustaining forests, supporting people. The Role of Research
6-9 *NEW*	Santa Clara, CA, USA	IABD 2013 2013 International Workshop on Intelligent Agents for Big Data (IABD)

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6-10	Silicon Valley, CA USA	BigData 2013
7-9 *NEW*	Ciudad de México, México	International Convention on Geography and the Environment 2013 (In Spanish CIGMA)
7-31	Turrialba, Costa Rica	25th Intensive Course International Diversified Management of Natural Tropical Forests: Managing the Challenges of Climate Change
9-10 *NEW*	Denver CO, USA	GIS in the Rockies Conference
9-11	Buenos Aires, Argentina	4th Congress on Environmental Sciences
10-12	Omaha NE, USA	AAG Great Plains/Rocky Mountains Division Regional Meeting
10-13	Oakland CA, USA	North American Association for Environmental Education: 41st annual conference
13-16 *NEW*	Tampa FL, USA	GEOINT 2013
14-17	Belize City, Belize	ICRI 28th General Meeting (ICRI GM28)
15-19	Chillán, Chile	34th National Congress and 19th International Congress on Geography
16-18	Santiago, Chile	GENERA Latinoamérica 2013
16-18	Lima, Perú	Esri Latin America User Conference
16-18	Washington DC, USA	GIS in Transit Conference
17-19	Eau Claire WI, EUA USA	AAG West Lakes Division Regional Meeting
18-19	Worcester MA, USA	New England/St. Lawrence Valley (NESTVAL) Division Regional Meeting
21-23	Panama City, Panama	School on Reference Systems, Crustal Deformation and Ionosphere Monitoring
21-25	Ibagué, Tolima	10th International Course Tools for Carbon Sequestration Monitoring Systems Land Use
22-25	Lima, Perú	5th International Congress on Computing and Telecommunications
23-25	Santiago de Chile, Chile	LARS Latin American Remote Sensing Week - 2013
23-25	Buenos Aires, Argentina	Fifth Latin American and Caribbean gvSIG Conference: "Knowledge gives freedom" and Third Argentine working days of gvSIG
23-26	Mendoza, Argentina	4th National Congress on Geography of Public Universities and 10th Cuyanas Workings day The complexity, permanent attribute of geography science
24-26	Nacogdoches TX, USA	AAG Southwest Division (SWAAG) Annual Meeting
25-26	Toledo OH, USA	AAG East Lakes Division Regional Meeting (jointly with CAG, Ontario)
24-26	Panama City, Panama	SIRGAS 2013 Meeting
27 - 31	Kansas City MO, USA	National States Geographic Information Council (NSGIC) Annual Meeting 2013
Oct. 27 – Nov.1	Burlingame CA, USA	ACM International Conference on Information and Knowledge Management (CIKM 2013)
Oct. 28 – Nov.1 *NEW*	Caracas - Venezuela	IX Conference on Remote Sensing Education in Mercosur
Oct.30-Nov.2	Annapolis MD, USA	AAG Middle Atlantic Division Regional Meeting (jointly with AAG Applied Geography Specialty Group)
Oct.31-Nov.2	Tampa FL, USA	Fifty-fourth Annual Meeting Society for the History of Discoveries
Oct.31-Nov.3	Trevelin – Chubut, Argentina	International Congress of Geography / Geography Week 74

NOVEMBER 2013

4-8	Addis Abbaba, Ethiopia.	AfricaGIS 2013 Conference and the GSDI 14 World Conference
4-8	Turrialba, Costa Rica	Biodiversity Analysis: from Functional Diversity to Ecosystem Services
4-8	New York NY, USA	Geoweb Summit #7
5-7 *NEW*	Québec, Canada	Geo-Services International Conference
5-8	Orlando FL, USA	21st International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL GIS 2013)
6-9	Havana, Cuba	3rd International Congress on Local Development "For Local Sustainable Development"
13-14	Alexandria VA, USA	MAPPS International Market Conference – Entering and Expanding Global Business Opportunities
13-14	Alexandria VA, USA	International Conference on Exporting for Geospatial, Engineering and Related Services
13-16	Atlanta GA, USA	60th Annual North American Meetings of the Regional Science Association International
18-22	Mar del Plata, Argentina	7th Latin America and the Caribbean Meeting for Biotechnology REDBIO Argentina 2013 "Biotechnology and Society: Dialogues for Sustainable Development"

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18-29	Bogotá, Colombia	IGAC Announces a Basic GIS Course
21-24	Chicago IL, USA	38th Annual Meeting of the Social Science History Association (SSHA)
24-26	Roanoke VA, USA	Southeast (SEDAAG) Division Regional Meeting
Nov. 25 – Dec.6	Turrialba, Costa Rica	International Course: Comprehensive Management of Irrigation: Resilience to natural hazards geological and climatic

DECEMBER 2013

2-6	Lima, Peru	15th UN Industrial Development Organization (UNIDO) Conference 2013
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Year 2014

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JANUARY 2014

28-30	San Antonio TX, USA	DistribuTECH 2014 Conference & Exhibition
29-30	Redlands CA, USA	Geodesign Summit Asks Attendees to Reimagine Their World

APRIL 2014

8-12 *NEW*	Tampa, FL, USA	AAG Annual Meeting 2014
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MARCH 2014

23-27 *NEW*	Louisville KY, USA	ASPRS 2014 Annual Conference- Geospatial Power in Our Pockets
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