



"GeoSUR develops geographic services on a free-access web platform"

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- The interview of the month with Carlos Guerrero, Director General of Geography and the Environment at the INEGI, Mexico.
- Antonio Rodriguez, Assistant Deputy Director of CNIG (IGN Spain) shares his views on the role of Geoinstitutes in the 21st century.
- Santiago Borrero, Coordinator of GeoSUR Program, talks about the 8th Meeting held in Cartagena, Colombia.
- Rodrigo Barriga, Secretary General of the PAIGH, highlights results of the "Sponsorship Agreement" signed between the EAD in Abu Dhabi and the PAIGH.

The Editor's Note

We highlight in this issue the Digital Map of Mexico, winner of GeoSUR Award 2015, as well as a specialized-article on the role of geographic institutes in the 21st century. The results of the 8th GeoSUR Meeting held in Cartagena, Colombia, and the "Sponsorship Agreement" signed between the Environmental Agency of Abu Dhabi (EAD) and the Pan-American Institute of Geography and History (PAIGH) are discussed in our permanent columns; these are coupled efforts that bring together both organizations around geoinformation and SDI at different territorial levels.

GeoSUR newsletter seeks to disseminate GeoSUR Program's achievements and characteristics as well as events, projects and best practices for the application of geographic information into sustainable development and decision making in the region, as part of the Geospatial Data Infrastructure of the Americas. The Portuguese translation is performed by **Eduardo Freitas**, Manager of the GEOeduc Institute of Brazil. Please send your contributions and suggestions to: **Nancy Aguirre**, Editor of GeoSUR Newsletter, at: cnaguirre@ipgh.org.



Carlos Agustin Guerrero Elemen, BA in Geography from the UNAM, is Director General of Geography and the Environment at INEGI. Within SNIIEG he holds the Technical Secretariat of SNIGMA and chairs the Specialized Technical Committees on fundamental Geographic Information, and Information on Land Use, Vegetation and Forest Resources. In the UN-GGIM initiative he is part of two working groups; and in the Regional Committee for the Americas (UN-GGIM: Americas) he coordinates the Working Group on Standards and Technical Specifications (GTnet).

Carlos Guerrero, Director General of Geography and the Environment at INEGI talks about the Digital Map of Mexico

The Digital Map of Mexico won the GeoSUR Award in its fourth edition (2015); this is a Geographic Information System (GIS) developed by the National Institute of Statistics and Geography (INEGI), which includes information on natural and cultural elements of the geographical environment of the country, and allows relating them with statistical information. Carlos Guerrero shares with us new features of this initiative:

From the original concept of the Digital Map of Mexico (DMM) to its present achievements, what have been the fundamental changes?

When the Digital Map of Mexico originated, its only aim was making available geographic information generated in the Institute (for viewing) on the Internet; but today, in the Digital Map of Mexico are available geographic, socio-demographic and economic information along with information generated by other institutions.

Technically, the map has also changed; from initially being a monolithic system with slight interoperability and being developed

on proprietary software, it now has evolved into a system with a standards-based service architecture, which facilitates interoperability. It is also now developed using open source components and its own code.

What is the relevance of this map in the context of IDEMEX?

The Digital Map of Mexico is now established as a GIS-type platform through which it is possible to share, disseminate, access and analyze information produced in the Mexican SDI (in Spanish IDEMEX) context, thereby enabling State Divisions to integrate natural and cultural information of the geographic environment of the country and to relate them with statistical information.

This tool is developed under international standards and is distributed by INEGI at no cost, thus allowing its free use and distribution; more so, it is adaptable to the needs of different geostatistical projects, and its users' network allows continuous improvement of the map.



Digital online Map of Mexico

“Another important consequence of this free software licensing flexibility is that we can use the Digital Map of Mexico as a platform for building other projects, both from INEGI or other institutions through cooperation agreements, without depending on that the institution with we collaborate have to worry about purchasing expensive proprietary software licenses.”

“...the platform is already being used in the development of two international projects: The Energy Map of North America, in collaboration with the United States and Canada; and the Digital Map of the Caribbean in the context of UN-GGIM: Americas.”

Carlos Guerrero... continues

Regarding the accessibility and technical dimensions, this map was developed using free software; what is the relevance of this decision?

Besides advantages in terms of licensing costs, one of the strongest arguments is the great flexibility offered by free software licenses.

An example of this flexibility is that in developing solutions for internal production projects we can deploy these software on as many servers as required; for example, the Economic Census 2014 planning, integration and monitoring was performed using a geomatics solution based on the Digital map of Mexico and as the operation progressed, and depending on the workload, the system was either used in a medium server or on more powerful multiple servers, all of this without relying on a software provider who administers licensing use.

Another important consequence of this free software licensing flexibility is that we can use the Digital Map of Mexico as a platform for building other projects, both from INEGI or other institutions through cooperation agreements, without depending on that the institution with we collaborate have to worry about purchasing expensive proprietary software licenses.

The objective of the Digital Map is to provide spatial data of Mexico to serve the citizens, but what about its international dimension?

Flexibility of the platform plus the use of international standards enables the software underlying the system to be applicable in the international context; it is not limited to Mexico. In fact, the platform is already being used in the development of two international projects: The Energy Map of North America, in collaboration with the United States and Canada; and the Digital Map of the Caribbean in the

context of UN-GGIM: Americas. Hence, we have taken a new strategic decision that complements the above mentioned regarding the use of free software components.

This year the Digital Map of Mexico online-version will be released under a free and open source software license, namely the MxSIG (MxGIS) platform, which will enable any user to build projects with georeferenced and statistical information using the full power of the Digital Map of Mexico and to publish these projects on their own web servers.

And as with most important free software projects we expect that the community will contribute to its development, either suggesting improvements, testing and reporting bugs, or even improving parts of the code.

Given an international data platform as that provided by GeoSUR, what links you find possible between this program and the Digital Map of Mexico?

Operation of the Digital map of Mexico is based on international geospatial-information interoperability standards.

In this sense it facilitates the creation of local, national and regional projects to making available geospatial information to the user community as to contribute to planning and decision-making.

The MxSIG may be used by any institution of any country in the region to put both interactive maps and web mapping services; but it can also coexist with existing solutions (provided that these also meet the standard interoperability specification) for producing a regional integrated map and a geographic service catalog that are accessible to society.

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Specialized Contribution:

THE ROLE OF GEOGRAPHIC INSTITUTES IN THE 21st CENTURY

By Antonio F. Rodríguez, Assistant Deputy Director, CNIG (IGN Spain)

The purpose of these modest lines is to reflect on the role to be played by Geoinstitutes in the 21st century, one which has started with radical changes in the way we live and work.

As a significant change-indicator fact, suffice to mention that while the digital mobile phone was born in the 90s, only 25 years ago, it is estimated that since August there are more mobile phones than people on the planet.

Indeed, we are immersed in a technological revolution of profound consequences in all spheres called globalization, which could be summarized very briefly in the following:

Communication and interdependence among all parties; ability to communicate with large audiences; feeling that everything relevant is available on the web, and a very challenging competition to capture the attention and interest of 'Internauts' (internet travelers).

Consequently, many things are changing, business models among others.

New dynamics playing a leading role in almost all sectors, such as crowdfunding, crowdsourcing, the Long-Tail economy or economy of the apparent gratuity have appeared.

Curiously, the most famous and listed companies in the ICT sector, such as Google, Twitter, Facebook or Youtube, offer wonderful and very powerful tools completely free and do their business with a small percentage of almost hidden users.

How this revolution affects the work of Geographic Institutes? The truth is that we

have more questions than answers. We believe there are two major changes that we should face.

On the one hand, strong competitors offering Internet mapping and dragging a huge number of users have emerged.

These can be classified into three groups: the Global Maps (GM) such as Google Maps, Bing and the like which appeared in 2005 and in ten years have grown to over one billion (10⁹) users from smartphones; the Volunteered Geographic Information (VGI) projects including OpenStreetMap, which in 2013 had 1.5 million volunteers who uploaded data at least once into the system and in 2014 had become 2 million, and The Cloud services, for instance, the Software as a Service (SaaS) type such as ArcGIS on-line, CartoDB and the like, which give users the ability to upload their data on a cartographic background and perform the required map at all times.

In general, these solutions have become very popular thanks to its undeniable qualities (service quality, high usability) and the fact that they are global solutions.

It is also true that its drawbacks (limited quality, incompleteness, unsecured information, unknown date and metadata, little synergy with standards) go unnoticed by the non-specialist user.

It seems that in all three cases it is more practical for Institutes to collaborate with them: To developing software and tutorials that easily allow to load standard WMS and WMTS on the Google API; to collaborate with OpenStreetMap to see how Geoinstitutes may harness the enormous potential that involve thousands of people who love cartography that are capturing information every day, and to collaborate with CartoDB for our official



Antonio F. Rodríguez, Assistant Deputy Director of CNIG (IGN Spain), at the 8th GeoSUR Meeting

“New dynamics playing a leading role in almost all sectors, such as crowdfunding, crowdsourcing, the Long-Tail economy or economy of the apparent gratuity have appeared.”

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THE ROLE OF GEOGRAPHIC INSTITUTES... *continues*

data and services (WMS, WMTS) could be offered there as background mapping (base maps or key maps) to users.

However, in order to easily collaborate with such powerful players as the abovementioned, having an open-as-possible data and service policy would greatly facilitate things because that would allow competing on equal terms, at least with regard to use conditions. This is the second major change that Geoinstitutes are facing.

There are many good reasons to release or to open geographic data:

Among others, is a bit contradictory that a public authority which has collected some data with public funds upon exercise of their functions tries to deny such data access to citizens invoking copyright; that having open data is *per se* a development and growth engine for a country as concluded in a long list of studies in recent years and from the famous PIRA (2000) Report; the Open Data Charter promoted by the G8, and its international expansion, the International Open Data Charter (2015) boosted by the G20 and the UN; It is a fact that selling data produces a shrinking benefit (8% of the National Center for Geographic Information - CNIG budget in 2014); it seems logical that the official cartography of Geoinstitutes are open, as the reference (or fundamental) information of a country that everyone should use for thematic applications.

Well, besides the above reasons, it is true that there is a growing demand among users for open data.

Therefore it seems desirable and positive, but we must clarify that all depends on the legislation in each country and on each Geoinstitute's funding model.

In that sense, it is interesting to exploring new business models that allow the opening of data, including:

- I) Increasing the share of state budgets while trying to reduce costs, for example by applying IGV methodologies for information gathering.
- II) Data openness to a certain level, for example up to a scale of 1:25,000; and applying a non-commercial license to higher resolution data in order to generate a return.
- III) Publishing open data and web services whilst providing users with advanced services that can bring compensation: Consultancy and GIS training, releasing of free change-only-mode updates; providing error repair and regular updating warranty, among others.
- IV) Another possibility is that public agencies could fund a portion of the geographic data they need to manage, for example, hydrographic authorities may be interested in funding and operate a LiDAR flight to prevent flooding. However, once produced, the data is opened to all users.

If funding stops, the data are no longer produced.

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Advantages	Drawbacks
Virtual Maps (Google Maps)	
Service Quality	Non-Standard Solution
Usability	Unknown Quality
Global Solution	
VGI (OpenStreetMap)	
Open Data	Completion and Semantics
Quick update	
Global Solution	Non-Standard Solution
SaaS (CartoDB)	
Usability	Do not use Official Data
Final-user Oriented	
Analysis Power	No Synergy with SDI

THE ROLE OF GEOGRAPHIC INSTITUTES... *continues*

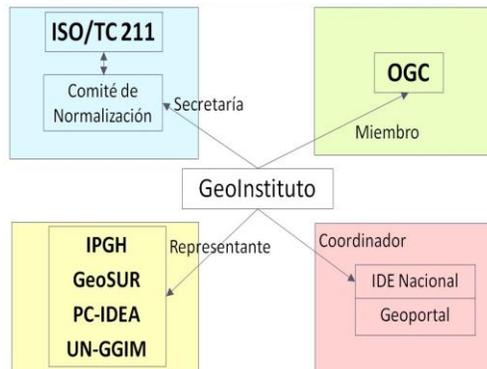
The latter is the business model that has been applied in Spain to generate products such as the PNOA (National Orthophotography Aviation Plan), the SIOSE (Land Use Information System in Spain), the CartoCiudad (digital street and road map), or a national LiDAR flight.

Collaborative mapping production processes in Spain have placed the National Geographic Institute (in Spanish IGN) in a leadership position in the industry and granted it the United Nations Prize in 2013 for best public service in the category of 'Promoting integrated approaches to government in the information age.'

Which brings up the idea that for any of the outlined business models to be successful, it seems important for a Geolnstituto to have the 'reference and coordination body' role in the field of geographic information and to assume four essential functions on a practical level:

Be the SDI coordinator and head of the country's national SDI geoportal; have a leading role in the National Standardization Committee dedicated to Digital Geographic Information, which goes along with the representative role of the country in ISO/TC 211; be member of the OGC, an organization that is really concerned about the low participation of Latin American countries; and be the cartographic community representative in international institutions (e.g. GeoSUR, PAIGH, UN-GGIM).

This situation will allow that institutions, which have more experience and better management of geographic information particularities, are indeed responsible for coordinating main activities related to such information at the highest level.



In addition, this will grant pertinent institutions a deserved protagonist position thus allowing them to lead activities in the field of geographic information in their countries that could facilitate establishing successful new business models.

These, and not others, we think are the major challenges of the role of Geolnstitutes in the 21st century that has just begun. As mentioned above, we have more questions than answers, but also an attractive panorama, full of dares, that make it appropriate to recall some words of Winston Churchill:

"The pessimist sees difficulty in every opportunity. The optimist sees the opportunity in every difficulty."

And we know that the world belongs to optimists.

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What is said from the Coordination of GeoSUR?

By Santiago Borrero

Echoes of the 8th GeoSUR Meeting

Another GeoSUR meeting was held in Cartagena, Colombia, in the framework of the 46th Meeting of the Directing Council of the PAIGH.

After presenting the report on the state of the Program and the details of the Action Plan 2015-2017, currently underway, the editor Nancy Aguirre reported on GeoSUR Newsletter highlighting a growing number of readers following the digital option available in ISUU with an average number of 8,000 visits per publication.

The Secretary General of the PAIGH, Rodrigo Barriga, reported in detail on the activities undertaken as part of the intensive cooperation between the PAIGH and the CAF this year, including the technical and training activities implemented; and the presentation of results of collaboration with AEDI (the Environment Agency of Abu Dhabi) at the Second Summit of "Eye on Earth" in early October 2015 along with projection of a second stage for developing environmental indicators and the placement of related data in The Cloud, for the benefit of the Caribbean region of our continent.

The progress made in the project for developing a seamless database of sub regional digital maps, in compliance with international standards at a scale of 1:250,000 leading to the integration of a new continental map by 2018 was also accurately reported.

Undoubtedly, this project (achieved in stages) is a major contribution to regional development and the fulfillment of the United Nations GGIM

initiative goals. Presentations of Rigoberto Magaña on Central America, and Antonio Rodriguez (CNIG-IGN, Spain) in the case of the integrated map of the northern countries of South America (MIAN), made the above evident.

A new edition of the GeoSUR Prize was awarded this year to the Digital Map of Mexico (DMM) in recognition of the progress and main features developed over several years by INEGI. The DMM is designed based on a free software and open data platform and is available without cost or restrictions for the user.

Annual GeoSUR meetings are the institutional information mechanism on both the progress of the Program and the coordination established to gather the CAF and PAIGH with directors of agencies responsible for the production of fundamental spatial and cartographic data, including national spatial data infrastructure, in member countries.

This is a brief summary of what happened in Cartagena.

Annual GeoSUR meetings began in Brasilia in 2007 and probably next year will take us to the city of Guatemala.

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Santiago Borrero, GeoSUR Program Coordinator

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From the PAIGH's Secretary General

By Rodrigo Barriga

Dear readers, in my capacity as Secretary General of the PAIGH I would like to inform you about activities undertaken during the months of October and November this year.

The PAIGH participated in various international activities for strengthening established agreements, and to raise awareness on the work being done by many professionals and technicians from member countries towards improvement and development of the region, according to guidelines of the Pan-American (PAIGH) Agenda 2010-2020.

Among these, stands out the participation in the Summit of the "Eye on Earth" alliance held between October 6 and 8 in Abu Dhabi, United Arab Emirates, in which the Secretary General of PAIGH was awarded the nomination as Ambassador for Latin America, thereby recognizing the work done by the Institute both in our region and in the search for interregional and interagency agreements.

At the Summit, results of commitments made under the 'Sponsorship Agreement' between the Environment Agency of Abu Dhabi (EAD) and the PAIGH (signed on December 30, 2013) were announced.

In this regard, a reference was made to "GeoSUR, a geospatial regional network model for the Arab region" during the meeting, in which lessons learned and best practices in the case of Latin America were presented, hence showing possibilities of replicating this project in other regions.

During the Summit, also an active participation was manifest through presentations given in the following sessions:

- A session entitled "Connecting networks to support environmental sustainability: What Global Network of Networks can do for you!" in which the relationships of PAIGH at global, regional and interregional levels to contribute to capacity building and institutional strengthening were highlighted.
- The session "Enabling the data revolution in the Americas" was organized by the United Nations Environment Program (UNEP) Regional Office for the Americas. A presentation was given on the scope of the Pan American Agenda and the Joint Action Plan to accelerate the development of SDI in the Americas signed by the PAIGH, SIRGAS, UN-GGIM: Americas, and GeoSUR.
- A session for assessing and establishing mechanisms of interregional cooperation titled "Regional innovative approaches for cross regional cooperation in knowledge sharing," led to reaching an agreement for a permanent communication system between interregional organizations in America, Europe, Africa, the Arab and Asia-Pacific regions.

In parallel, a series of meetings were held with representatives of several specialized international organizations attending the Summit in order to strengthen mutual cooperation with the PAIGH.



Baharoon Ahmed, Director of AGEDI (Abu Dhabi Global Environment Data Initiative) and the Secretary General of the PAIGH at the time of delivery of the project report

"At the Summit, results of commitments made under the 'Sponsorship Agreement' between the Environment Agency of Abu Dhabi (EAD) and the PAIGH (signed on December 30, 2013) were announced."

From the PAIGH's Secretary General... continues

Furthermore, in the context of the **46th Meeting of the Directing Council of PAIGH**, held between October 28 and 30, in Cartagena, Colombia, a series of events took place.

Within this framework, most relevant outcomes include a workshop for executives of Mapping Agencies conducted by the National Geographic Information Center of the National Geographic Institute of Spain (CNIG / IGN) and under coordination of the Commissions of Cartography and Geography of the PAIGH. Likewise, an agreement was reached to recommending Member States a more decided support for strengthening geographic institutes and official mapping agencies in Member States, which are producers and managers of fundamental geographic information needed for decision-making, public determination, planning policies, land management, and sustainable development.

Recommendations were also made for more backing to initiatives promoted by the PAIGH on capacity building in geographic information producer/manager organizations as to consolidate spatial data infrastructure in Member States and in the region at large.

Moreover, it was agreed to call Member States for the consolidation of **integrated mapping in the Americas** through their geographic institutes as a concrete instrument to supporting decision making processes on public policy, planning, territorial ordering, land use, and sustainable development.

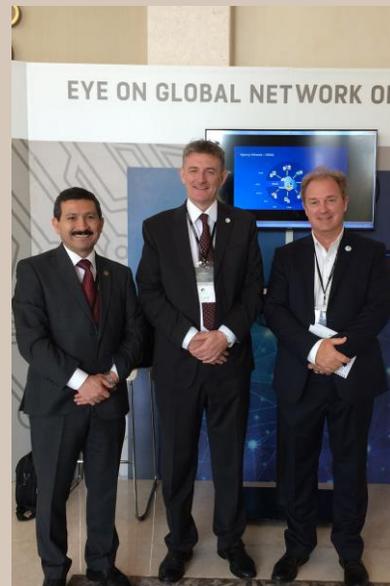
As part of a very productive Directing Council, a total of 22 resolutions perfectly aligned with the Pan American Agenda were approved, among them those related to the following matters:

- Updating of the PAIGH / SIRGAS / UN-GGIM: Americas / GeoSUR Joint Action Plan to accelerate the development of spatial data infrastructure in the Americas.
- ISO / TC 211 Standards.
- PAIGH Editors Working Group.
- Workshop for Officers of Mapping Agencies.
- Updating Member States annual quotas.
- Cooperation agreements with donor agencies in the region.
- Reactivation of the category of 'Cooperating Associate' of the PAIGH.
- Adoption of the PAIGH 2016 budget.

Full text of resolutions may be found at: <http://www.ipgh.org/consejo-directivo/46-rcd/46rcd-p2.html>

The 8th GeoSUR Meeting took place back to back in Cartagena, in which the role of the PAIGH as coordinator of this program in line with CAF was corroborated for the benefit of continental cartographic integration and the continuity of relevant Program activities.

Before concluding, it seems important to highlight the role of the PAIGH as a facilitator and strong contributor to institutional strengthening on geospatial issues in our region with very positive results, outstandingly: The coordination and integration achieved with CAF through the GeoSUR Program; and with CNIG - IGN of Spain and the United States Geological Survey (USGS) for progressing the **Integrated Pan-American Map**.



The Secretary General of the PAIGH and Derek John Gliddon (center), facilitator of the "Global Network of Networks" special initiative

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Attendants to the 46 Meeting of the Directing Council of the PAIGH (Colombia, 2015)

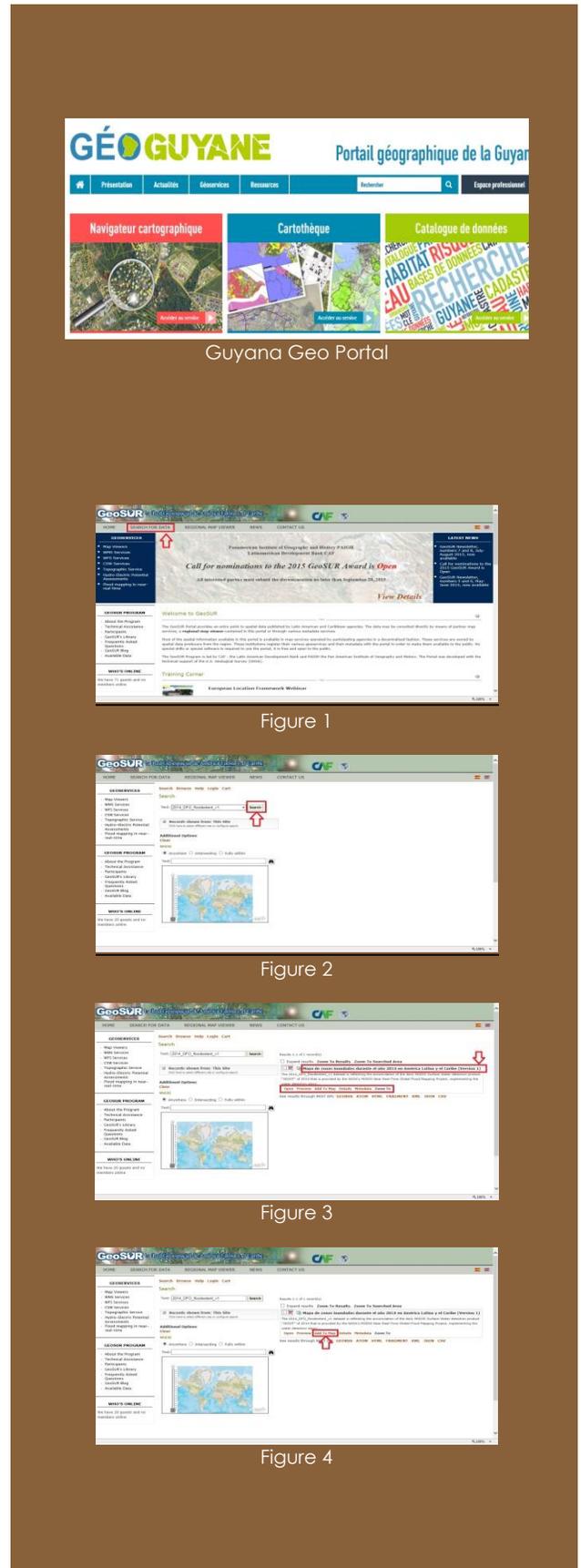
Novelties in GeoSUR

Cooperation between GeoSUR and GéoGuyane

Guyana has joined GeoSUR through GéoGuyane (www.geoguyane.fr), the Geographic Portal of Guyana. This was confirmed by Sébastien Linares, Head of "l'unité information géographique, diffusion de la connaissance DEAL Guyane."

This association is especially important considering is the first Guyana to do so with programs of the kind in the region, says Santiago Borrero, GeoSUR Program Coordinator.

GéoGuyane is a partnership and participation project to facilitate geographic information production and sharing in Guyana. Not replacing the various existing Geographic Information Systems (GIS) services on place, this regional portal offers access to geographic information (maps, data) identified in the territory to the general public and institutional actors. It provides search, map display and navigation, and data download services as well as an editorial collaboration space.



Guyana Geo Portal

How to discover and visualize data in GeoSUR?

Now the sequences to discover and view data can also be seen through videos on the [GeoSUR Channel in YouTube](#). This time we include an example of the WMS linked to flooding in Latin America in 2014.

By Miguel Blanco, Information Technology Consultant for GeoSUR

This example shows the sequence to access data from the **WMS service** as a map service.

Please follow these steps (which may also be reviewed on YouTube):

1. From the GeoSUR Portal main menu, click "Search Data" (Figure 1).
2. In the search box please type "2014_DFO_floodextent_v1" and then click on "Search" (Figure 2).
3. A matching list from which you can choose the layer of interest will be shown, in this example the layer with the title "Map of flooded areas during 2014 in Latin America and the Caribbean (Version 1)" was chosen; a menu of options is displayed after you click it (Figure 3).

Figure 1

Figure 2

Figure 3

Figure 4

How to discover and visualize...continues

4. You may now click on the option "Add to map" to open another window with the GeoSUR Portal Map Viewer (Figure 4 on previous page)).
5. A new window opens with the viewfinder; close the option labeled "Add and remove map services" and click on the "Map layers" button (Figure 5).
6. A list of layers on the map is now visible with a check on the layer we are bringing into the GeoSUR Map Viewer. Note that the icon  to the left of the check can expand or maximize all the layers found in the map (Figure 6).
7. Subsequently, once the layer is enabled, you can zoom in to display flooded sites during 2014 with more accuracy. To do this you can use the icon  to the left of the map, which allows making a box where you need to zoom in (Figure 7).
8. After zooming in you may see in more detail the flooded areas (Figure 8).
9. To visualize changes more easily you can remove the "check" on the visible layer through the "Map Layers" button and then put back the "check"; by doing this you may distinguish changes in flooded areas, for example, nearby the site named "Beni" in Bolivia (Figure 9).
10. You can also change the map background by selecting the "Imagery" option; with this selection you may see a relief background and improve the contrast by swapping the "check" on the selected layer (Figure 10).



Figure 5



Figure 6



Figure 7

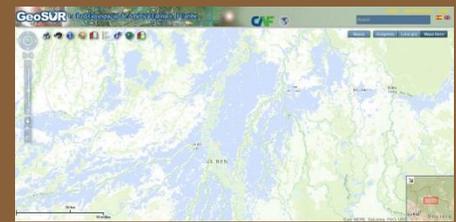


Figure 8



Figure 9



Figure 10

GeoSUR Program: Basic Figures

Years in Operation	8
Participating Institutions	110
Benefitted Countries	26
GeoSUR Network Specialists	550
Officials Trained	
(6 Regional Workshops)	314
CAF Officials Trained	130
Virtual Workshops Offered	41
Available Digital Maps	20,000
Available Metadata	14,000
Map Services (WMS)	310
WFS Services	25

Webpage: <http://www.geosur.info>

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Other events in the region

CAF DAY: OPPORTUNITIES AND CHALLENGES OF CLIMATE CHANGE IN LATIN AMERICA

As part of the activities undertaken during the cop21 in Paris, CAF- development bank of Latin America organized the "CAF Day: Opportunities and challenges of climate change in Latin America" on December 9, 2015 in Paris, France. Representatives of international environmental organizations met to discuss green financing, the Adaptation Projects Fund, cities and climate change. The agenda may be found [here](#).

[Source: [CAF](#)]

GEOGRAPHY IN LATIN AMERICA AND THE CARIBBEAN: COLLABORATIVE DATA COLLECTION PROJECT

Thank you for your recalling in participating in this special effort that is currently underway to collect information about geography, geography organizations, and geographers across the American continent. Our objective is to conduct a type of [general geography census in the Americas](#) with the purpose of facilitating communication between geographers across the hemisphere. This information from 2015 will be utilized to study the trajectory of the discipline, compared with [results from a 2005 study and a collaborative survey from 2010](#).

[Source: Geography Commission, PAIGH]

"CAF- development bank of Latin America organized the 'CAF Day: Opportunities and challenges of climate change in Latin America' on December 9, 2015 in Paris, France."

GROUP ON EARTH OBSERVATIONS ADOPTS MEXICO CITY DECLARATION

The Twelfth Plenary Session of the Group on Earth Observations (GEO-XII) and the 2015 Mexico City Ministerial Summit concluded with the adoption of the [Mexico City Declaration](#) and the approval of the [GEO Strategic Plan for 2016-2025](#). GEO-XII convened from 11-12 November 2015, in Mexico City, Mexico, and was followed by the 2015 Mexico City Ministerial Summit on Friday, 13 November. The events brought together approximately 410 delegates, representing 87 entities, including 41 countries. The opening plenary acknowledged Ecuador, Kenya, Somalia, Viet Nam and Zimbabwe as new Members (Plenary Document 2). The Mexico City Declaration affirms, among other things, that GEO and its Earth observations (EOs) and information will support the implementation of, inter alia, the [Sustainable Development Goals \(SDGs\)](#), the [Sendai Framework for Disaster Risk Reduction \(DRR\) 2015-2030](#), the UN System of Environmental and Economic Accounts, and the [UN Framework Convention on Climate Change \(UNFCCC\)](#).

[Source: [IISD Reporting Services](#)].



GEO-XII and the Mexico City Ministerial Summit, November 9-13, 2015