



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

## Inside this Issue:

- The interview of the month with Sergio Acosta y Lara, GeoForAll Initiative Regional Co-coordinator for South America.
- Antonio Rodriguez, Assistant Deputy Director of CNIG (IGN Spain) discusses open data in the field of geographic information.
- Santiago Borrero, from the GeoSUR Program coordination, refers to the relevance of geographical institutions.
- Rodrigo Bariga, the PAIGH's Secretary General, comments on the MIAN Workshop in Panama and the Iberian SDI Conference.

## The Editor's Note

2015 left us positive experiences. The best part of them was the participation in GeoSUR Newsletter of those who made it through interesting interviews and by sharing their significant initiatives. We included two new sections: "How to discover and view GeoSUR data?" and the "Specialized article." We also created the new GeoSUR channel in Youtube, and our readers progressively increased. THANK YOU!

We wish you happy holidays and a successful, interesting and happy 2016!!

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, [cnaguirre@ipgh.org](mailto:cnaguirre@ipgh.org).



Sergio Acosta y Lara, an architect graduated from the University of the Republic of Uruguay, is the GeoForAll-Initiative Regional Co-coordinator for South America with Silvana Camboim, and Co-editor of Geo4all Newsletter. He is also the Project Coordinator of gvSIG Batoví (design and collaborative development of a GIS applied to educational settings with destination to "Ceibal Plan" based on gvSIG), is in charge of the National Survey GIS Section of the Ministry of Transport and Public Works, and member of the Working Group on Spatial Data Infrastructure (GTIDE) of the Electronic Government Agency (AGESIC).

## Development of GeoForAll is still incipient in the region: Says Sergio Acosta y Lara, Co-coordinator for South America

The motto of the ICA-OSGeo-ISPRS labs is "Geo For All" (<http://www.geoforall.org/>), an initiative which aims to "promote and enhance education, research and services' activities in areas of open science and spatial applications in the world."

A call was launched for nomination of new laboratories in the region to build open principles in geoeducation. As current Co-coordinator for South America please inform us on the progress of this initiative:

### How has been GeoForAll regionalized in the Americas and which advantages has this new structure brought?

The initiative to create a network of Open Source Geospatial Laboratories and Research Centers stems from a Memorandum of Understanding between the International Cartographic Association (ICA) and the Open Geospatial Foundation (OSGeo).

The motto or slogan of the ICA-OSGeo labs initiative is GeoForAll (<http://www.geoforall.org/>).

The objective is to develop global collaboration opportunities for academia, industry and government organizations around free GIS Software and open data. The initiative grew very quickly thanks to efforts of a group of enthusiastic professionals and technicians worldwide.

Soon it seemed necessary to create regional and thematic groups to meet the strong demand for network integration and to optimize its performance and enable a more efficient and effective continuous growth.

Consequently, regional groups for North and South America, Africa, Europe, and Asia and Oceania were created. Three thematic groups are also currently established: Urban Sciences and City Analysis; School teacher training and education; and a focus group for the Spanish-speaking world (see also details in <http://www.osgeo.org/node/1505>).

In the latter group I also participate as co-coordinator with Antoni Pérez Navarro of the Open University of Catalonia (Spain).



GeoForAll South America



gvSIG Batovi

*"To the date, ten laboratories have been established in the South American region (from a total of more than 100 worldwide). This means that this initiative's development in the region is still in its infancy... which is why we promoted the creation of regional and thematic groups."*

*"I think that GeoSUR has done and is doing a great job, for example by providing geographic information that is available to the general public... We hope we will soon be able to agreeing a partnership between the two initiatives ... that will contribute to an open education in the future."*

## Sergio Acosta y Lara... continues

### **How many laboratories have been established in the region and what are their main developments?**

To the date, ten laboratories have been established in the South American region (from a total of more than 100 worldwide). This means that the initiative's development in the region is still in its infancy, which is a big concern for me, and is why we promoted the creation of regional and thematic groups.

You may access a list on laboratories and their developments at: [http://wiki.osgeo.org/wiki/Edu\\_current\\_initiatives#sortable\\_table\\_id\\_0](http://wiki.osgeo.org/wiki/Edu_current_initiatives#sortable_table_id_0).

### **Which geoeducation challenges in Latin America have been positively impacted by this initiative?**

The challenges for Latin America are great considering we are still at the beginning of introducing geomatics topics in education. That is why the importance of this initiative, especially for those countries with limited or insufficient technological development.

Free Geographic Information Technologies (FGIT) significantly facilitate training in all disciplines dealing with a spatial component (not only Geography) due to that major costs are avoided in the acquisition of proprietary software licenses.

Perhaps more important is the freedom that is gained by not being conditioned by the very restrictive requirements that proprietary enterprises usually impose.

And not least is the possibility to modify software (as these are free and open) to suit particular needs, and that these improvements will return to people for their benefit.

It is a virtuous circle that seeks to create a new cooperation paradigm, as opposed to the prevailing competition paradigm.

In my particular experience as the "gvSIG Batoví" Project Coordinator ([http://www.ceibal.edu.uy/art%C3%ADcul\\_o/noticias/docentes/gvsigbatoviresumen](http://www.ceibal.edu.uy/art%C3%ADcul_o/noticias/docentes/gvsigbatoviresumen) , <https://gvsigbatovi.wordpress.com/>) which integrates GeoForAll, I will say that the impact has been very positive.

It is a long-term project but I think we are on the right track.

**The GeoSUR Program performs consistent efforts with geoeeducation because it relates to social development issues of importance to the CAF. Which synergies you think are possible between GeoSUR and GeoForAll?**

Synergies should emerge from what the GeoForAll initiative calls 'Principles in Open Education', which include, open technology tools, open data, open standards, open access (to publications, educational resources, teaching materials).

I think that GeoSUR has done and is doing a great job, for example by providing geographic information that is available to the general public; by promoting the use of open standards (in particular geographic standards established by the ISO TC-211 and by OGC), and by allowing free access to documentation.

All of these make joint projects development possible, both those related to training as well as to research and development.

We hope we will soon be able to agreeing a partnership between the two initiatives for sharing, use and reuse of knowledge and experiences that will contribute to an open education in the future.

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## Specialized Contribution:

### OPEN DATA IN THE FIELD OF GEOGRAPHIC INFORMATION

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

There is a growing demand for public agencies, -and in particular Geoinstitutes-, for publication of open data, a demand that has been voiced in the most varied forums and the most diverse instances. In particular, there is a range of institutional initiatives that support and promote open data.

The most significant and relevant may be summarized as follows:

- The two European Directives 2003/98 /EC and 2013/37/EU for Reuse of Public Sector Information (PSI Directive), which promote the release of public data for re-use in open formats and very favorable dissemination conditions.
- The Open Data Charter signed by the G8 in 2013 recognizing that open data do improve governance and are an innovation driver; giving a special importance to geospatial data; and securing commitment for the implementation of a national plan, a portal and a catalog, specifically devoted to open data by 2016.
- The International Open Data Charter, promoted by the governments of the G20 and the United Nations, which was launched at the Open Government Partnership Global Summit held in Mexico in October 2015. It aims at extending commitments of the Open Data Charter to more countries, and has so far been signed by nine national governments (Chile, Guatemala, France, Italy, Mexico, the Philippines, South Korea, UK and Uruguay) and eight local ones (Buenos Aires,

Minatitlan, Puebla, Veracruz, Montevideo, Reynosa, Morelos, and Xalapa).

- In the field of geographic information, a number of countries, among which are Portugal, United States, Canada and Mexico, amid others, have recently adopted open data policies.
- Other remarkable activities include: the Open Data Foundation dedicated primarily to standards' definition for open statistical data, but which results are valid in general; the Linking Open Data movement connected to Web 2.0 and following the five-star model of Tim Berners-Lee; and the Smart Cities initiatives, which often take open data very seriously.

At this point, it is worth remembering what exactly we mean by open data and in that sense we need to say that definition of the Open Knowledge Foundation (opendefinition.org) seems very appropriate:

Data that can be accessed, used, modified and shared freely by anyone, under conditions of granting authorship (BY) and that oblige their sharing (SA) at least.

With this introduction, we must say that despite the wide range of initiatives to support and recommend open data publication, the actual situation we have in the domain of geographic information is that of a rather partial and irregular establishment of open data.

Let's try to briefly describe this situation in several grounds.

In the case of Spain, in a sample of 50 public agencies of the three existing government levels (national, sub regional and local), about 32% of organizations



Antonio F. Rodriguez, Assistant Deputy Director of CNIG (IGN Spain), at the 46 Directive Council Meeting of the PAIGH

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## OPEN DATA ... continues

publish open data (BY), 20% do not allow commercial uses (NC), 12% publish closed data (all rights reserved) and, surprisingly, 16% do not include explicit conditions or restrictions.

The latter option has a number of drawbacks. There are jurists who interpret that, for example, in this case all uses are allowed, and you may copy, ascribe their authorship and commercialize these data.

On the other hand, there are organizations that do not dare to use the data and disseminate derivatives because they understand that the conditions are not clear. Therefore, it appears that at least some juridical uncertainty is created.

In Europe, in a sample of 14 geographic institutes of countries with highest weight in the European Union, we see that approximately 43% publish open data (BY), 15% publish data not allowed for commercial uses (NC), thus they are not strictly open data, and the remaining 43% publish closed data with all rights reserved.

In Ibero-America, including Brazil, Portugal and Spain, 22 Geoportals of as many GeoInstitutes in total, have been analyzed and the situation regarding data download is that approximately 9% of organizations publish open data (BY), 4% do not allow commercial uses (NC), 26% publish closed data (all rights reserved), 13% do not specify conditions (with the drawbacks mentioned above) and the remaining 48% have not implemented data download services.

That is, 25% of organizations that allow downloading data do not specify which uses are allowed and which are not.

On the other hand, if we assume the Spatial Data Infrastructures (SDI) paradigm in which all activity is oriented to web services and data download would be but

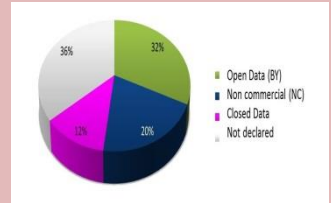
another service, the conditions of use of published services would certainly need more analysis.

These conditions of use are recognized in several of the capabilities file labels (Capabilities), specifically in the <Abstract>, <AccessConstraints> and <Fees>, and in the service metadata.

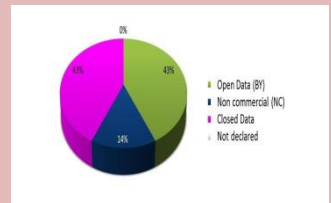
In this sense, we have analyzed the 'Capabilities' of a sample of 83 Web Mapping Services (WMS) of the 1,925 WMS available in the SDI of Spain and the result is that approximately 10% of the services are published as free services (BY), 13% do not allow commercial uses, 8% are closed services (all rights reserved), and nothing less than the remaining 69% either do not describe the conditions of use (<AccessConstraints> do not appear) or declares that there is no condition (<AccessConstraints> = none), with the aforementioned problems arising in the case of the data.

From the above, we may conclude that all aspects and implications related to data policy and licensing are not sufficiently known in GeoInstitutes; thus, to illustrate this situation and to having clearly defined rules of the game, we dare to recommend that:

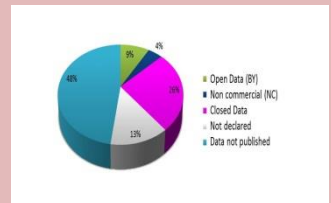
- 1) When an organization allows geographic data to be downloaded it should:
  - Adopt a thoughtful, consistent and conscious data policy and keep it throughout time; and.
  - Give to the above the widest possible publicity and documentation in the metadata, so that it is virtually impossible to download data without realizing their conditions of use.



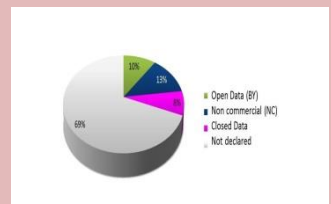
Terms of use of geographic data in Spain on a sample of 50 public organizations



Terms of use of geographic data in Europe on a sample of 14 GeoInstitutes



Terms of use of geographic data in Ibero-America on a sample of 22 GeoInstitutes



Terms of use of services in the SDI of Spain on a sample of 83 of the 1,925 available WMS



## OPEN DATA ... continues

- 2) The same applies to Web services, in which documentation of the conditions of use in the capabilities file and metadata service is recommended.
- 3) In any case it is also recommended to use licenses such as Public Domain (CC0), Creative Commons 4.0 licenses, or copyright © (all rights reserved).

These are standard, well-defined and widely known licenses that allow mixing data with different licenses and to know how to combine the respective licenses. License interoperability could then be achieved.

***"...licenses that allow mixing data with different licenses and to know how to combine the respective licenses. License interoperability could then be achieved."***

## What is said from the Coordination of GeoSUR?

By Santiago Borrero

### RELEVANCE OF GEOGRAPHIC INSTITUTIONS

Regardless of the causes and interests that may arise, in the community is spoken with some regularity about the end of national geographic or cartographic institutions -or at least is called into question their validity or relevance-. This is done based on several arguments where a common denominator is also found.

One such argument - frequently in use -, notes that these organizations spend 95% of their budgets to serve 5% of their users as if this were something terrible, while on the contrary, a business unit in Google spends 5% of its resources to attend 95% of users logging on the Internet for maps.

Thus the saying, "every parrot on his stake".

It is good that Google satisfies millions of searches and related multiple applications associated with addresses, product distribution, tourist information and hundreds of other uses.

Let's say in grace of analysis that this segment corresponds to 95% or more of their users. But specialized spatial information, for example, occupation of informal settlements around the major urban centers, changes in temperature caused by climate change, El Niño,

changes in land cover, spatial distribution of demographics, the location of corals and thousands more spatial databases, are strategic, essential, accurate and quality information that certainly concerns the work carried out by a minority inside geographic institutions to meet demand from scientific, academic and technical institutions, probably less than 5% of their users, relatively speaking, whose work ultimately ends up favoring everyone, or producing an overall benefit.

This does not mean that geographic institutes, such as they are now, do not require adjustments, or that even some of them may disappear. That is something else and a different matter. If they remain as in the past, without dynamically introducing new institutional, technological and budgetary arrangements, they may hardly survive in this world of profound changes.

Moreover, objectives of the UNGGIM, for example, are unlikely to be achieved under institutions characterizing now most of developing countries.



Santiago Borrero, GeoSUR Program Coordinator

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## From the PAIGH's Secretary General

By Rodrigo Barriga

During last period, the PAIGH has sustained its coordinating efforts towards development of the Integrated Northern Andean Map (MIAN).

An opportunity arose for participation in the pertinent workshop that took place in Panama city in the GeoSUR Program context, with support of CAF - Development Bank of Latin America- and the Department of Interior International Technical Assistance Program (DOI-ITAP), as well as with the assistance of the US Geological Survey saliently backed by the technological coordination of the National Geographic Information Center of the National Geographic Institute of Spain (CNIG - IGN).

This workshop was held between November 16 and 19, 2015, under the logistic and administrative coordination of the National Geographic Institute "Tommy Guardia" of Panama (IGNTG) and with participation of technical delegates of the Military Geographic Institute of Bolivia, the Geographic Institute "Agustin Codazzi" of Colombia, the Military Geographic Institute of Ecuador, the National Geographic Institute of Peru, and the National Geographic Institute "Tommy Guardia" of Panama.

The significant progress of this activity support launching of first version of the Integrated Northern Andean Map (MIAN) during first quarter of 2016 as well as publishing a WMS which should be harmonized with the Integrated Central American Map.

Further developments in 2016 are anticipated including a WMTS, the publication of respective metadata,

and download and WFS services, among the most important.

Moreover, it is envisioned that from 2016 onwards, coordination between the Integrated Map of Central America, the evolved MIAN, and the remainder of South America will be reinforced, in order to achieve the Integrated Map of South America (MIAS) -subject to availability of the respective funding.

At the Iberian Conference of Spatial Data Infrastructures (JIIDE), held on November 4-6, 2015 in Seville, Spain opportunities for diffusion of institutional activities were also granted.

This time a presentation was given on "The SDI of Ibero-America"; a short video on this institutional participation may be watched at <https://youtu.be/1DekorfnON0>.

Finally, the PAIGH as an OAS specialized organization became part of the "Inter-American Network of Cadastre and Land Registry".

First meeting of this Network was held on December 2-3, 2015 in Bogota, Colombia under auspices of the Geographic Institute "Agustin Codazzi", with coordination by the OAS and the institutional sponsorship of FAO and the World Bank.

(webpage: <http://reunionredcatastroregistro.igac.gov.co/>)

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Participants to the MIAN Workshop held in Panama City (Photo: PAIGH)



Participation of the Secretary General of the PAIGH in the JIIDE (Photograph by Santiago Borrero)

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## Other events in the region

### CAF: LATIN AMERICA ECONOMIC OUTLOOK 2016: TOWARDS A NEW PARTNERSHIP WITH CHINA

The slowdown in GDP growth in Latin America has increased and is expected to be negative in 2015. For the second consecutive year, the region has lagged behind the average growth of the OECD countries after a decade of convergence with advanced economies, according to the Latin America Economic Outlook 2016 report. In its annual joint report, the Development Centre of the OECD, the United Nations Economic Commission for Latin America and the Caribbean (ECLAC) and CAF- development bank of Latin America call for an improved China-Latin America alliance. As the phenomenon of "shifting wealth" led by China, according to which the center of gravity of the global economy is shifting towards emerging economies is entering a new phase and has an impact on the world economy, Latin America should try to respond to the challenges of an inclusive growth agenda. A shift towards knowledge and technology-intensive industries as well as the optimization of financial flows to fill gaps in infrastructure, could help make the most of the advantages posed by the "new normality" of China.

[Source: CAF]

*"A shift towards knowledge and technology-intensive industries as well as the optimization of financial flows to fill gaps in infrastructure, could help make the most of the advantages posed by the "new normality" of China."*

### OPEN CALLS FOR 2nd DRONESHOW AND MundoGEO#Connect 2016

In 2015 the DroneShow Platform was created, consisting of face and online events, a printed and online magazine, and website and social networks. A whole team worked hard in 2015 to make the first Drones Fair in Brazil, which was a success. The 2nd edition of the DroneShow Fair will be held in May 2016 in conjunction with the MundoGEO#Connect event, one of the largest gatherings of the geospatial community in Latin America.

There are open calls for presentations during May 10-12 in Sao Paulo, Brazil, of projects and works in these two areas: Drones and Geotechnology. You only need to fill out the forms provided at: [www.droneshowla.com/](http://www.droneshowla.com/) and [www.mundogeoconnect.com/2016/](http://www.mundogeoconnect.com/2016/)

Please recall that registrations for participation in these two events are now open. More information and programming may be found on these portals.

[Source: Alexandre Scussel, MundoGEO Editor and Coordinator of the DroneShow events]



2nd DroneShow and MundoGEO#Connect 2016, May 10-12, Sao Paulo