



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

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- The interview of the month with Felipe Fonseca, Director of the Agricultural Rural Planning Unit (UPRA) of Colombia.
- Santiago Borrero, from the coordination of GeoSUR, shares aspects of the GeoSUR Geoportals new version for 2016.
- Rodrigo Barriga, from the General Secretariat of the PAIGH, speaks on the PAIGH and UN 2030 Sustainable Development agendas-alignment initiative.

The Editor's Note

Inside this issue, the interview with Felipe Fonseca focuses on the development of a geospatial application based on SDI for the agricultural sector. In the permanent columns are shared the new geoscientific infrastructure underlying the GeoSUR Geoportals 2016 version that is based on a thorough vision to increasing its usability; as well, as the continuity in efforts to aligning - with relevant detail-, the Pan-American Agenda with that of UN 2030 for Sustainable Development.

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. Please send your contributions and suggestions to: **Nancy Aguirre**, Editor of GeoSUR Newsletter, at: cnaguire@ipgh.org.



Felipe Fonseca, Director General of the Ministry of Agriculture and Rural Development of Colombia Planning Unit for Rural Land, Land Development and Agricultural Uses (UPRA), is a Forest Engineer of the University Francisco Jose de Caldas, and holds both a Master degree in Geography of the Technological and Pedagogical University of Colombia (UPTC) and the Geographic Institute "Agustin Codazzi" (IGAC), and a Master degree in Environmental Management of the Pontifical University Javeriana. He is also a GIS Specialist of the University Francisco Jose de Caldas and IGAC.

In Colombia, rural agricultural development planning decision-making has benefited from the SIPRA, says Felipe Fonseca, Director of the UPRA

The Rural Agricultural Planning Unit of Colombia (UPRA) Information System is based on SDI concepts. The system was oriented towards mission and operational process management; the ICT office, which conceptualized it, deserved the country's ICT Ministry "Excel GEL Prize".

Felipe Fonseca, Director of UPRA, shares their experience:

National organizations in the region have used SDI concepts in their particular thematic geospatial developments. How has the UPRA been doing this?

The UPRA began developing the agricultural sector information system in 2013.

The system was conceptualized as a single system that through process-management and open data principles

involves the entire institutional mission and integrates data, information and technological applications aimed at knowledge management, as to supporting decision-making on rural agricultural development planning.

All information products generated by the UPRA are available both in the web portal and in the Rural Agricultural Planning System interface (SIPRA <http://upra.gov.co/SIPRA>).

This application allows accessing and discovering information and knowledge in three categories: "Land Market Observatory", "Productive System" and "Public Policy Monitoring and Evaluation."

Users may find maps, statistics, thematic analyses, WMS services, metadata and publications at national and departmental levels both in the UPRA web portal and in the SIPRA.

Felipe Fonseca... continues

In relation to supporting decision-making, which are the main challenges faced?

Knowledge management to supporting decision making on the agricultural sector planning is one of UPRA's main challenges.

Diagnosis of sectoral information management on the one hand showed a wide range of data, and secondly, weaknesses in the access and potential use of quality information available for steering rural policy.

Consequently, the decree creating the UPRA (Decree 4145 of 2011) established as one of its functions to manage its information system in a manner consistent with policies of the Colombian Spatial Data Infrastructure (ICDE), as relevant.

What are salient features of the SIPRA and its intended type of users?

The ICT Office conceptualized UPRA's Information System by analyzing users, requirements, guiding principles and impact strategies.

The conceptual framework of the system was defined as "a set of actors, policies and scalable and articulated functional modules that based on process-management supports decision-making in the sector to comply with the institutional mission and to support knowledge creation using the web as a dissemination and exchange strategy."

The system is expected to contribute to public policy drafting and evaluation aimed at rural agricultural planning in the country, by providing data, information, products, services and information analyses.

The primary system-users are policy formulators, implementers and evaluators, and/or land management

planners, and end users are citizens and institutions in general. The information system is constructed non-exclusively for experts and with the purpose of narrowing the gap between information producers and users.

It should allow interaction with systems and applications with useful thematic information for rural planning. To do this, the system is implemented based on principles of interoperability and technological neutrality, thus allowing connectivity and exchange with other existing applications in the country.

The Information System includes six strategic operations: Process management, storage and safekeeping of information, implementation of standards, policy compliance information management, and analysis and use of information.

Analytical functions of SIPRA go beyond a conventional GIS: These provide spatial modeling capabilities with techniques for structuring, designing, evaluating and prioritizing decision alternatives. These are aimed at reducing complexity of recurring tasks through analytical models that enable decision makers to control variables and parameters throughout the process.

What is envisioned for SIPRA?

Plans for the short and medium terms are that the system could support decision making through more complex capabilities for querying and doing advanced analysis.

In the long term it is expected to involve "business intelligence" which proposes a more analytical and less operative environment in which the system users may generate data from existing data in a very short response time, and define new key indicators, as well as planning or generating possible scenarios.



SIPRA's Web Interface

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Felipe Fonseca... continues

What are possible synergies between SIPRA and the GeoSUR Program?

The GeoSUR regional portal allows information exchange between national and regional levels. Because the SIPRA is under OGC standards, open data may be utilized by any user.

Therefore, from the GeoSUR portal the data on land market, production

systems and related monitoring of public policy could be queried.

On the other hand, experience exchange on knowledge management and the appropriation of good practices between GeoSUR and UPRA could be beneficial for both organizations in the future.

What is said from the Coordination of GeoSUR??

By Santiago Borrero

The GeoSUR Geoportal, version 2016

The GeoSUR Program was established in 2007 and since then is the result of the coordination between CAF and PAIGH and the contribution of organizations that have been core to its development.

This is the case of its technological platform: the result of a cooperation agreement signed between CAF and USGS, also in 2007, which has allowed developing a Geoportal characterized by a Regional Map Service (RMS), a Topographic Processing Service (TPS) and a Regional Metadata Catalog.

When introduced, these elements were innovative and today support this site where the largest Latin America and the Caribbean spatial information-repository are located.

But eight years have passed since the launching of the Geoportal service, and technology has changed significantly; thus, to avoid the platform's obsolescence and to keeping GeoSUR at the regional forefront of innovation and technological development -as stated in the Program's Action Plan 2015-2017-, adjustments to its core

architecture and having a clear vision for the future are now needed.

The Geoportal 2016 version will not be the effect of updating the software supporting its server or Map Viewer, it goes further:

It is now the case to migrate it as part of a more robust scientific infrastructure based on a thorough review of original concepts, with a strong attention on its usability increase and facilitation.

As a result, it is expected to have new options on the GeoSUR Viewer and to widen the use of RMS and TPS services, as these will benefit from a renewed connection with more powerful and current satellite data sources.

Under the above conditions, we expect the Geoportal's consolidation as an essential information service by 2017 but also its development as a multilingual tool to supporting more effectively capacity building under the Joint Plan for the development of Spatial Data Infrastructure of the Americas.



Coordinador del Programa
GeoSUR

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From the PAIGH's Secretary General

By Rodrigo Barriga

The Pan American Agenda is a planning tool introduced in the scientific strategy of the Institute in order to cooperate, from our perspective, to improving life quality of inhabitants in our continent.

It is a tool -that without losing sight of the above goal-, in a constant improvement and modernization process thus guiding specialists linked to the PAIGH on where to direct efforts in studies and publications that are sponsored by the Technical Assistance Program of the PAIGH, on key issues such as: Climate change adaptation, territorial management, natural risk management, and historical heritage. Moreover, the Agenda of the PAIGH may support accomplishment of the United Nations Organization (UN) 2030 Agenda for Sustainable Development, which 17 sustainable development goals are indicated below:

1. End poverty in all its forms everywhere
2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture
3. Ensure healthy lives and promote well-being for all in all ages
4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
5. Achieve gender equality and empower all women and girls
6. Ensure access to water and sustainable management, and sanitation for all
7. Ensure access to affordable, reliable, sustainable and modern energy for all
8. Promote inclusive and sustainable economic growth, full and productive employment and decent work for all

9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
10. Reduce inequality within and among countries
11. Make cities and human settlements inclusive, safe, resilient and sustainable
12. Ensure sustainable consumption and production patterns
13. Take urgent action to combat climate change and its impacts
14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development
15. Promote sustainably use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss
16. Promote just, peaceful and inclusive societies for sustainable development, facilitate access to justice for all and create effective, accountable and inclusive institutions at all levels
17. Strengthen means of implementation and revitalize the global partnership for sustainable development

All of them, no doubt, involve improving environmental management from the different natural, cultural and perceptual perspectives, thus having the same stated goal of our Pan-American agenda: Improving life quality of people. Therefore, our task will be to continue aligning both agendas at work in more detail, as to optimize contribution from the PAIGH for sustainable development in our region.



Rodrigo Barriga, Secretary General of the PAIGH

"The Pan American Agenda is a planning tool introduced in the scientific strategy of the Institute in order to cooperate, from our perspective, to improving life quality of inhabitants in our continent ... (and) may support accomplishment of the United Nations Organization (UN) 2030 Agenda for Sustainable Development."

How to discover and visualize data in GeoSUR?

Now the sequences for data discovery and visualization may also be revised through videos on the [GeoSUR YouTube channel](#). This time we include the example for delimitating watersheds using the GeoSUR Portal Regional Map Viewer SRTM topographic model.

By Miguel Blanco, Information Technology Consultant for GeoSUR

In this example we show the sequence to delimit watersheds based on the **GeoSUR Portal Regional Map Viewer SRTM topographic model** (www.geosur.info).

Please follow these steps (which may be revised on the GeoSUR YouTube channel):

1. In the main GeoSUR Portal menu, click on "Regional Map Viewer."
2. Then click on the "Topographical Models" icon (Figure 1).
3. In the "Topographical Models" list select "Watersheds," by clicking on the respective selection (Figure 2).
4. For delimiting the upstream tributary drainage area now select the "Point" icon to define the slope site and then the "Snap Distance" that is demarcated in meters (Travel Distance); when you put a point on the map it 'will jump' to the location where the current flow is at a higher altitude and will indicate the snap distance which default is 5,000 m (Figure 3).
5. Then select a point on the map and click the "Submit" button (Figure 4).
6. The screen will indicate that the process is running (Figure 5)
7. Once the process is completed, downloadable data are displayed; by clicking on "Download Data", the respective downloading starts (Figure 6).
8. Finally, after downloading data that is obtained in compressed format, these must be decompressed and may be used from any GIS software to display the delimitation of the watershed.

It is noteworthy that this model only uses the SRTM 30 arc-seconds DEM as source data to generating the delimitation of the watershed.



Figure 1



Figure 2



Figure 3



Figure 4



Figure 5



Figure 6

CAF - Development Bank of Latin America

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Other events in the region

CAF: THE ROLE OF CAF IN ACHIEVING THE SUSTAINABLE DEVELOPMENT GOALS AND THE PARIS AGREEMENT WAS HIGHLIGHTED

With its active presence in momentous debates of the United Nations, CAF contributes to strengthening the voice of Latin America on the global stage and in international discussions on sustainable development and the effects of climate change. Executive President of CAF -development bank of Latin America-, Enrique Garcia, in April participated in the signing ceremony of the Paris Agreement on climate change on behalf of the International Development Finance Club (IDFC).

In a speech to the hearing, Garcia stressed that the IDFC, founded in 2011, is a network of 23 international development financial institutions, 19 of which belong to emerging countries. Moreover, prior to the signing of the Agreement, the Executive President of CAF participated in the High-Level Thematic Debate on how to achieve Sustainable Development Goals (SDGs), which took place at headquarters of the United Nations. "Structuring of quality projects with an environmental focus from the beginning, institutional strengthening and the catalytic role of development banks are critical to such effects," he said.

[Source: [CAF](#)]

"...Executive President of CAF participated in the High-Level Thematic Debate on how to achieve Sustainable Development Goals (SDGs), which took place at headquarters of the United Nations."

CALL FOR PARTICIPATION IN CONSTRUCTING A LAND VALUE MAP OF LATIN AMERICA

Knowing the behavior of land markets is relevant to a best definition of urban policies. Therefore, the development of a free-access georeferenced and systematized information Regional Bank will be a key tool for urban planners.

"5 data in your city!" Participation in this initiative is simple. It only requires data input of 5 or more current land values in your city and to register as a Web GIS map user in order to locate those on the map. Participation is free and at no charge. It is aimed at professionals, academics and public officials involved in urban land policies.

Volunteers will be quoted as anonymous collaborators both at the website of this project and in a potential study report. This project is designed and directed by Mario Piumetto and Diego Erba, in collaboration with the Lincoln Institute Program for Latin America and the Caribbean. For more information about the project and on how to participate, please login at: <http://valorsueloamericalatina.org/>. Contact: valoresinmobiliariosal@gmail.com.

[Source: Diego Erba, co-director of the project, by way of Santiago Borrero]



Portal of Land Values in Latin America