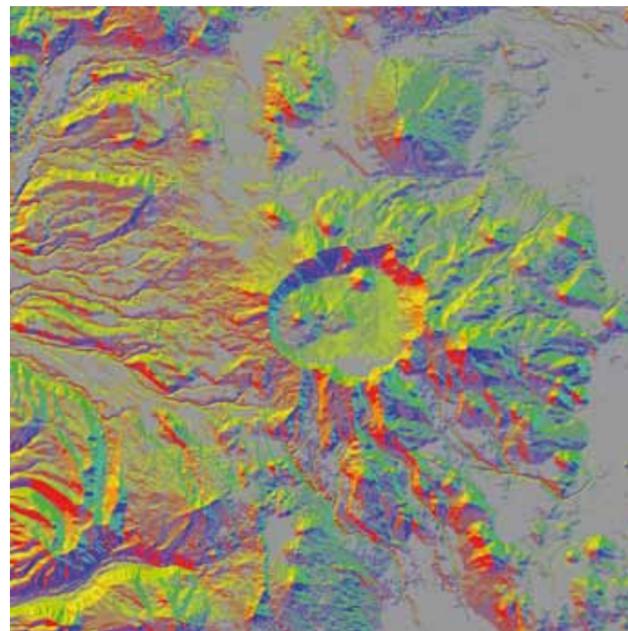


Planning and development efforts undertaken in Latin America and the Caribbean require appropriate access to fully integrated, georeferenced and standardized spatial information. This information must be readily available to planners and decision-makers to allow its appropriate use and its incorporation in the project-planning cycle.

The GeoSUR program, led by CAF and PAIGH and supported by the USGS-EROS, provides geospatial information on Latin America and the Caribbean helpful for planning and analyzing development activities. The Web services developed or sponsored by GeoSUR offer access to images, aerial photography and geospatial data developed by member institutions in areas such as topography, environment, and infrastructure, amongst many others.

For more information on the GeoSUR Program please contact its coordinator at: +58 212 209 2111, [geosur@caf.com](mailto:geosur@caf.com)



Slope map, showing in red slopes with a gradient greater than 30 degrees.

**WITH GEOSUR, DEVELOPMENT PLANNING AND DECISION-MAKING CAN BE GREATLY IMPROVED**

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CAF is a multilateral financial institution whose purpose is to support the sustainable development of its shareholding countries and the integration of Latin America. CAF's shareholders are: Argentina, Bolivia, Brasil, Chile, Colombia, Costa Rica, Ecuador, Spain, Jamaica, Mexico, Panama, Paraguay, Peru, Portugal, Dominican Republic, Trinidad and Tobago, Uruguay, Venezuela and 14 private banks in the region.

It serves the public and private sectors by providing multiple products and services to a large portfolio of customers made up of the shareholder States, private corporations and financial institutions. Social and environmental variables are integrated in its management policies and all of its operations include eco-efficiency and sustainability criteria. As a financial intermediary, it mobilizes resources from the international markets into Latin America thereby promoting investments and business opportunities.

AN OPEN ACCESS AND WEB-BASED SYSTEM



[www.geosur.info](http://www.geosur.info)



# A NOVEL TOOL FOR INFRASTRUCTURE PLANNING AND TERRITORIAL ANALYSIS

## GEOSERVICES

GeoSUR develops geospatial services on the Web which enable users to locate, view, analyze, and obtain spatial information.

Access to these services is open and free and no special software is required to use them. All GeoSUR services are available at [www.geosur.info](http://www.geosur.info)

### GEOSPATIAL PORTAL OF LATIN AMERICA AND THE CARIBBEAN

This is the first portal to offer access to spatial information for all the countries of the region in one place. Spatial data and metadata generated by participating agencies can be consulted in this website.

### REGIONAL MAP SERVICE

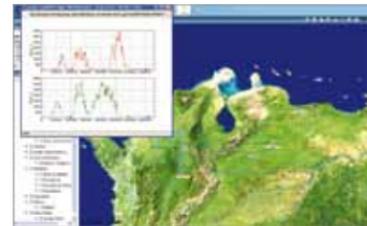
Regional maps of Latin America and the Caribbean are available for viewing and analysis through this service, on topics such as base maps, infrastructure, CAF projects, land use and land cover, protected areas, aerial imagery, and much more.

### TOPOGRAPHIC PROCESSING SERVICE

The service allows modeling and generation of derived datasets such as slope, shaded-relief or elevation profiles from the 30-meter SRTM digital elevation model of the region. It is the first of its kind in the developing world due to its extensive geographic coverage and high resolution.

### GEOSERVICE NETWORK

More than 60 agencies in Latin America and the Caribbean participate in GeoSUR by implementing map services and data catalogs that become part of the first regional spatial data infrastructure. It is a decentralized network and every participating agency is responsible for the development, operation, and maintenance of its geoservices.



## MAIN USES

The geoservices developed by GeoSUR and its partners offer a broad range of functions for finding, viewing, analyzing, and obtaining geospatial data as it is shown in the following examples:

### FINDING INFORMATION

Geospatial information generated by partner agencies may be located through the GeoSUR portal and its availability and potential uses may be assessed.

### ROUTE TRACING

The Topographical Processing Service allows tracing on a map alternative routes for a future road or electrical grid line and obtaining the altitude profile for each route with great detail.

### VISUALIZATION OF INDIGENOUS TERRITORIES AND PROTECTED AREAS

Using the Regional Map Service indigenous territories and protected areas close to a road project may be visualized to evaluate potential project impacts.

### GENERATION OF CRITICAL SLOPE MAPS

With the Topographical Processing Service maps showing areas with slopes above 30 degrees and close to urban areas may be generated in support of disaster prevention efforts.

### ASSESSMENT OF HYDROELECTRIC POTENTIAL

The geospatial tools and the digital elevation models implemented by GeoSUR, combined with hydrological data, allow the quick and low-cost assessment of the hydroelectric generation potential of a country or region, and the identification of ideal locations for placing hydroelectric plants.



## PARTICIPATING AGENCIES

Participation in GeoSUR is open to agencies that produce spatial information at local, national, or regional levels. Geographic institutes, ministries of environment, ministries of public works, research centers, NGO's, and private companies, among others, participate in the Program and stage on the web spatial information helpful in a myriad of development activities. Following is a brief description of the role some of these agencies play in the Program.

### ► Pan American Institute of Geography and History (PAIGH)

An international scientific and technical organization under the Organization of American States (OAS) devoted to the generation and transfer of know-how in the areas of cartography, geography, history, and geophysics. PAIGH coordinates the Program along with CAF, it sponsors and oversees the participation of its member agencies on it and supports the integration of GeoSUR in regional and international initiatives.

### ► U.S. Geological Survey (USGS) Center for Earth Resources Observation and Science (EROS)

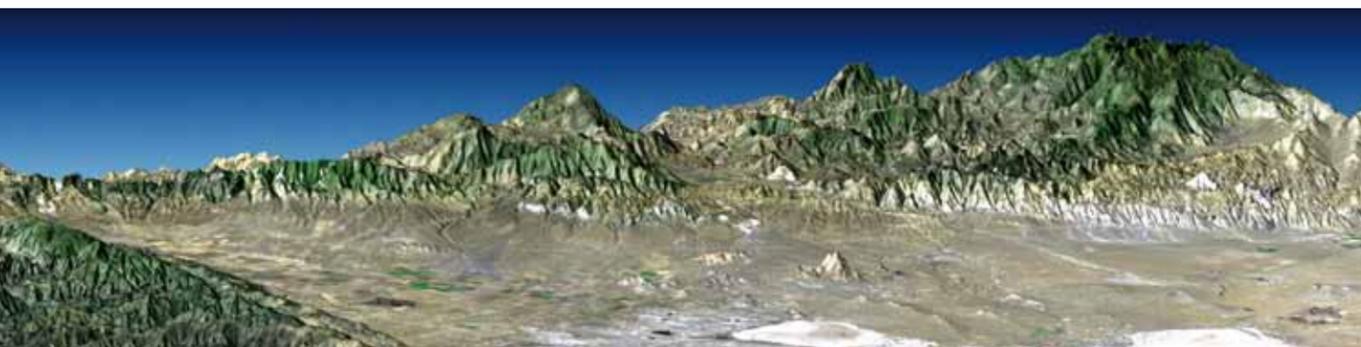
The USGS-EROS provides special resources in remote sensing applications, SDI, and regional and national web services. EROS develops some of the GeoSUR regional geoservices - in cooperation with CAF and PAIGH - and offers technical assistance in map service development to participating institutions.

### PARTICIPATING INSTITUTIONS

There are over 60 institutions actively participating in the Program in more than 20 countries. At first, priority was given to the participation of the region's geographic institutes and ministries of environment because of their responsibility in the production of key national base maps. Later, participation in the Program was expanded to include other national and regional agencies such as ministries of public works and planning, NGO's, research institutes, universities and private companies. Each participating agency helps in the development of the regional network through the implementation of a map service and a spatial data catalog.

Some partner agencies, such as the Colombia, Spain, and the Ecuador geographic institutes, offer technical assistance and support the development of geoservices at other participating institutions.

## A CHANGE OF PARADIGM IN DEVELOPMENT PLANNING



## INFRASTRUCTURE IS A KEY ELEMENT IN THE REGION'S DEVELOPMENT