

Development of rural territories in Central America to benefit from new geospatial information

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Before year's end, the countries in what is known as the **Central American Dry Corridor**, as well as the Dry Arch area of Panama, will be able to access an online platform and a knowledge network being created to assist them in deciding how best to develop their rural territories and adapt agriculture to climate change at the local, national and regional levels.

Both the **GeoWeb** system and the network will foster interaction among the governmental, production and academic sectors, their direct beneficiaries, in addressing both issues.

The creation of the platform and the network is the objective of an agreement reached between the Inter-American Institute for Cooperation on Agriculture (IICA) and the Center for Research in Geography and Geomatics (CENTROGEO), of the National Council on Science and Technology (CONACYT) of Mexico.

The Central American Dry Corridor and the Dry Arch area of Panama are located in territories found along the Pacific coast of Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica and Panama (See figure on page 2). The climate, economic and social vulnerability that characterizes these territories is reflected in high poverty levels, food insecurity, the degradation of natural resources and the increasing occurrence of disasters caused by extreme climate-related events.

The GeoWeb platform will systematize physiographic geospatial information on natural resources, soil use, demographic, economic and social trends, the climate outlook for 2030 and 2050, the extent to which these areas are at risk and vulnerable, and other elements needed to make sound decisions.

The **formal knowledge network** will add to and draw on the flow of information and knowledge regarding the region, which will form the basis for proposals on ways to improve agriculture and rural well-being there.

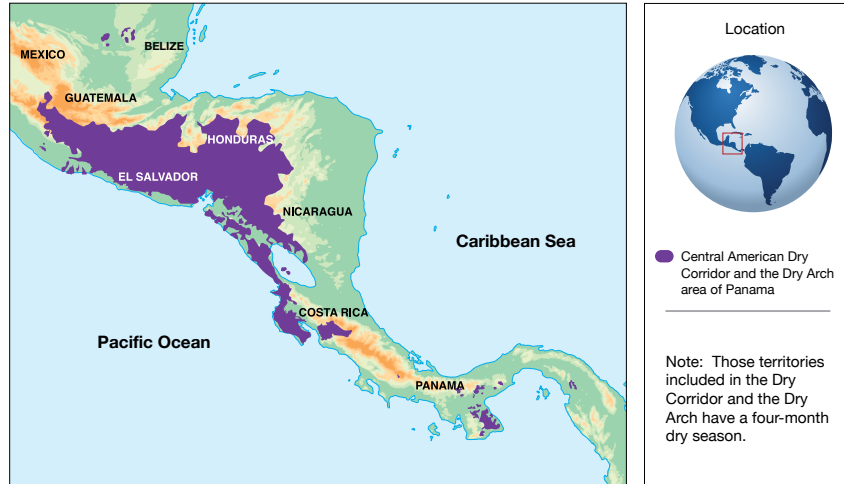
With respect to agriculture, thanks to these innovations, it will be possible to make projections, implement science-based actions and apply an approach to the development of rural territories aimed at **improving productivity, food security and the ability of the sector to mitigate the effects of and adapt to climate change.**

The platform will provide access to satellite images available in the Central American Dry Corridor and the Dry Arch area of Panama, as well as demographic, economic and social information gathered by the CENTROGEO, which is currently found in numerous databases generated in previous research and projects.

■ **Our commitment: results.** IICA and the CENTROGEO have agreed to have the first version of the platform ready by April of this year, to share it with users at some point during the first eight months of the year and to make the network available to decision makers in December 2015. This initiative is consistent with several of the contributions that link the Institute's 2014-2018 Medium-term Plan and its Flagship Projects, such as **inclusion in agriculture and rural territories and resilience and comprehensive risk management in agriculture.**

In addition, it is consonant with its commitment to deliver **concrete results** to its member countries. It is hoped that the new information system and the network will constitute significant contributions to research and projects already under way in the region, including those in cross-border territories, and will be useful in the Central American Strategy for Rural

Location of the Central American Dry Corridor and the Dry Arch area of Panama



Source: Based on the Central American Atlas for Sustainable Territorial Management.

Area-based Development 2010-2030 (ECADERT), which IICA has supported since its creation.

The resources of the GeoWeb platform could be applied to research on topics such as territorial analysis and planning, risk analysis, the competitiveness of territories, shanty towns, environmental management and ecological impact, as well as effective management of natural resources.

■ **A vulnerable region.** Central America is highly vulnerable to climate-related risks due to its geographic location and its extremely variable climate. The Central American Dry Corridor has a marked and lengthy dry season, and in the rainy season there is always the latent threat of drought, which is cyclical and is related to the El Niño-Southern Oscillation (ENSO) phenomenon.

As a result of this situation, which is having an increasing impact on agriculture throughout the region, it has become necessary to strengthen planning in rural territories vis-à-vis choosing where to plant (depending on the availability of water and soil), making changes in production practices and deciding what to plant, among other actions. Planning is also fundamental for decision making in areas such as livestock farming, urbanism and tourism, with the latter being an important economic activity on the Pacific coast of these countries.

The system and knowledge network being promoted by IICA and the CENTROGEO, which will be available to government officials, researchers and farmers in the region, will prove useful in such planning.

The project will be implemented in three stages, as follows:

1. Design and basic development of the platform, which includes the compilation of the geospatial information available in the countries of the Dry Corridor and in the Dry Arch, as well as design of the knowledge network. In this phase, efforts will also focus on interconnecting the GeoWeb platform and the **National Food Sustainability Initiative of Mexico**, coordinated by the CONACYT, to increase research topics and knowledge sources in regions with problems similar to those of the Dry Corridor.
2. Release of the platform (testing, implementation and installation in a server), distance training for researchers and officials, and formalization of the network.
3. Incorporation of recommendations for improving the platform and transfer of the platform to IICA. Additionally, a proposal will be made to develop a system for monitoring the Dry Corridor and the Dry Arch with respect to those topics considered strategic by the Institute.

The geospatial system and the knowledge network may form the basis of new models for working in rural territories that could promote social participation, inclusion and cohesion, all of which are key elements of the process of regional integration to which IICA hopes to contribute via its alliance with the CENTROGEO.