ECOSYSTEM-BASED ADAPTATION IN THE MAGDALENA RIVER BASIN

OBJECTIVE

As Colombia implements a peace agreement between the FARC and the Government of Colombia, protecting the country’s diverse ecosystems is critical to the peace accord’s long-term success. The Magdalena River Basin is Colombia’s principal watershed, covering 24 percent of the national territory (including 19 departments and 724 municipalities), and home to 77 percent of Colombia’s population. The watershed produces 80 percent of the country’s gross domestic product, 75 percent of its hydraulic energy, and 70 percent of the nation’s agriculture.

The Magdalena River Basin has historically been exploited to support economic development, resulting in significant environmental deterioration. In addition, the watershed is extremely vulnerable to climate events, as evidenced by the floods caused by La Niña in 2010-2011, which affected over 2.2 million people. Extreme climate events are expected to be stronger and more intense in the future due to climate change.

In this context, USAID and The Nature Conservancy (TNC) implemented the Ecosystem-Based Adaptation in the Magdalena River Basin activity from September 2013 - March 2017. In order to support the ecosystem’s ability to continue providing key services and benefits to Colombia, the activity was designed to improve the watershed’s resilience and adaptation capacity to climate variability and climate change.
COMPONENTS

IMPROVED SCIENTIFIC INFORMATION

The Ecosystem-Based Adaptation in the Magdalena River Basin activity worked with various institutions to develop and improve scientific information and tools to support decision-making in the Magdalena watershed, in order to promote integrated watershed management and climate adaptation.

IDENTIFIED AND IMPLEMENTED ECOSYSTEM-BASED ADAPTATION MEASURES

An important goal of the activity was to define ecosystem-based adaptation strategies to reduce the vulnerability of natural systems and communities to the negative impacts caused by climate variability and climate change. The program worked with the Department of Antioquia’s Regional Environmental Authority (CORANTIOQUIA) and local communities to identify, prioritize and implement several ecosystem-based measures in the floodplains/wetlands, and in the pilot sites of Barbacoas (Yondó) and El Sapo (Nechí).

INCREASED INTER-INSTITUTIONAL CAPACITY BUILDING AND COORDINATION

The activity promoted coordination and collaboration among various governmental and private stakeholders at the local, regional and national levels for the integrated watershed management of the Magdalena Basin. The program facilitated various workshops and trainings to build capacity and transfer knowledge related to the scientific information and decision support tools while also promoting dialogue among diverse sectors and stakeholders.

RESULTS

- Developed the Decision-Support System for the Magdalena River Basin, which allows users to analyze different development scenarios to support sectoral planning that incorporates climate information, development alternatives, and context, allowing for improved scenario planning. The Government of Colombia now uses this system to evaluate hydroelectric projects.
- Co-developed a simulation game called “SimBasin” which utilizes scientific information to simulate development and climate change scenarios, and generate discussion on how to best manage the basin.
- Partnered with local communities to identify and implement 63 adaptation measures that address climate risks, such as flooding and droughts.
- Developed the “Guidelines of Floodplains and Fisheries in the Magdalena Basin,” and partnered with the GOC to integrate those guidelines into national fisheries policy.