



Working Together to Restore Forest & Coral Reef Habitats in Río Loco/Guánica

Background

In November 1999 USDA Secretary Tom Vilsack launched an initiative to conserve coral reefs. USDA pledged over \$1 million in Environmental Quality Incentives Program (EQIP) funds to reduce sediment and nutrient runoff from southwest Puerto Rico's Río Loco/Guánica Bay watershed to help protect nearshore coral reef ecosystems.

The Guánica-Río Loco Watershed Project is a multi-agency effort to preserve and protect coral reef ecosystems. NRCS is working with producers and partners in the watershed to voluntarily implement conservation practices to avoid, control, and trap sediment and nutrient runoff and improve wildlife habitat while maintaining agricultural productivity. The goal is to protect coastal and stream water quality, improve wildlife habitat for threatened and endangered species, and enhance near shore coastal and coral reef health through improved land-based management.



Sun grown coffee orchard to be planted with shade trees in Upper Río Loco (*Shade-grown coffee erosion potential is estimated to be 3.5 times less than sun-grown coffee*).



Farmer planting shade trees in a sun-grown coffee orchard.



Basins will be built in Lower Río Loco to trap sediment to reduce siltation of nearshore reefs.

Site & Project Description

The Río Loco / Guánica Bay watershed is located in the southwest corner of Puerto Rico and covers portions of Guánica, Yauco, Lajas and Cabo Rojo counties. The watershed is about 52,000 acres in size with rainfall ranging from less than 20 inches/year in the arid southwest to over 100 inches/year in the mountains, and includes Spanish Colonial cultural resources. Crops include: coffee, citrus, plantains, bananas, tomatoes, peppers, papaya, pumpkins, cantaloupes, and other vegetables. Area farmers also produce beef, pork, sheep, goats, and eggs.

The **Upper Río Loco** watershed has very steep slopes and humid subtropical forest vegetation. Conservation goals are to reduce erosion, improve water quality and quantity, improve forest habitat for wildlife, and apply conservation practices like tree and shrub planting, nutrient and pest management and riparian forest buffers. NRCS and the U.S. Fish and Wildlife Service (USFWS) Caribbean Field Office are partnering to provide technical assistance to area stakeholders to convert sun coffee plantations to shade to improve wildlife habitat.

The **Lower Río Loco** watershed has flat slopes and dry subtropical forest vegetation. Conservation objectives are to reduce erosion and sediment deposition from the upper watershed, improve water quality and quantity for irrigation, manage flooding and stabilize riverbanks. Conservation practices include: water management, sediment basins, nutrient and pest management, tillage systems using residues and cover crops, and runoff control. NRCS, the PR Department of Agriculture and the Land Authority are partnering to assist stakeholders.



River banks to be stabilized along Lower Río Loco.

Accomplishments

Over 4,000 acres in the watershed have been enrolled in NRCS EQIP to date to benefit over 250 square miles of marine ecosystems. At least \$2.5 million has been obligated to date, funding 56 conservation plans. Practices installed include:

- ~1,700 native trees planted to convert sun grown coffee plantations to shade coffee systems,
- Three 3-acre water reservoirs and two 3-acre sediment basins,
- 5,500 feet of open channels and 6,000 feet of pipeline,
- 4,500 feet of grassed waterways,
- 8,760 feet of fencing and 6 watering facilities,
- 35 acres of pasture and hay planting and 104 acres of access control,
- 63.5 acres of critical area planting and 10 acres of trees established,
- 581 acres of multi-story cropping, and
- Pump houses with irrigation system upgrades to serve ~ 900 acres.

Outreach

Partnership accomplishments include:

- Over 30 non-governmental organizations (NGOs) partners,
- Over 10 federal, state, and local government agency partners, and
- Over 1,000 hours of in-kind services provided by NGO's.

USDA-NRCS Caribbean Area

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