

Caribbean Landscape Conservation Cooperative

Providing science and technology for conservation planning and action – addressing the need to restore and sustain natural resources in Caribbean land and seascapes.



Overview. The Caribbean Islands Landscape Conservation Cooperative (CLCC) is part of a national network of Landscape Conservation Cooperatives (LCCs). The LCCs are applied conservation science partnerships among state and federal agencies, regional organizations, tribes, NGOs, universities and other entities within a geographic area. They are designed to inform resource management decisions in an integrated fashion across landscapes – at a broader scale than any individual partner’s responsibility. The partnership will consider landscape-scale stressors including climate change, habitat fragmentation, urban sprawl, invasive species, and water availability in order to assess the conservation status of species and habitats and provide a vision for sustainable land and seascapes under future scenarios. The CLCC includes the terrestrial and marine components of the Puerto Rican archipelago and the U.S. Virgin Islands. Many of the cooperative members work internationally and bring that capacity to the CLCC as we recognize the connectivity of these islands with the greater Caribbean and the continental regions through shared species, habitats, and conservation opportunities and goals.



Anolis pulchellus (L. Vicens)



Elfin woodland in mountain peaks (B. Fevold)

The Purpose. The CLCC provides a regional context to conduct conservation planning and management at several scales, from decisions on site management to understanding the implications of management actions regionally, nationally and globally. It is a platform for partners working to integrate information, perform regional assessments of conservation status, assess future scenarios, and collaborate in applied conservation science. The CLCC supports site level conservation initiatives and complements other landscape conservation strategies to restore, manage, and conserve the natural resources of the region in the face of climate change and development pressure.

The Region. The Caribbean has a number of large and small islands and many endemic species. The tropical climate promotes high species diversity and the Caribbean is a global biodiversity hotspot. The U.S. Caribbean includes the Puerto Rican archipelago and the U.S. Virgin Islands (USVI). The Commonwealth of Puerto Rico includes the main island of Puerto Rico, Culebra and Vieques to the east, Mona, Monito, and Desecheo to the west, and a number of smaller cays. Puerto Rico includes 9000 km² of land surface and has a population of 3.7 million people. The USVI are located just east of Puerto Rico, include 350 km² of land surface, have a population of 109 thousand people, and include the islands of St. Thomas, St. John, St. Croix, and a number of smaller cays.



Elkhorn coral, St. Thomas (L. Carrubba)



Puerto Rican Parrot (USFWS) montane cloud forests, and the matrix of wetlands and coastal hills in the lowlands.

Conservation challenges and priorities. The U.S. Caribbean shares many conservation issues with the continental U.S., including competing demands for open space, climate change and managing for future scenarios, vulnerable coastal habitats, degraded lands in need of restoration, and threatened and endangered species. Specific challenges include the protection of the diversity of plants and animals, particularly rare and threatened endemics, the maintenance and improvement of habitat, and developing management strategies in light of future scenarios related to climate change and development. Population pressures are high, open space is limited, and the diversity of habitats creates a complex region for management. Priorities include the identification and maintenance of threatened and endangered species and habitats, including the indigenous tree frogs, the Puerto Rican Parrot, coral reefs, estuaries, the

Science and management resources. The U.S. Caribbean has a wealth of educational, research, and management entities with a history of integrating science and conservation management. These include the U.S. Fish and Wildlife Service (FWS), the U.S. Geological Survey (USGS), and the U.S. Forest Service (FS), the National Oceanic and Atmospheric Administration (NOAA), the International Institute of Tropical Forestry (IITF), a network of public and private universities including the University of Puerto Rico (UPR) Río Piedras and Mayagüez campuses, the Puerto Rico Department of Natural and Environmental Resources (PRDNER), and several nongovernmental conservation groups. Long term datasets of environmental characteristics are available from the USGS water monitoring program, the National Weather Service (NWS), the National Science Foundation supported Long Term Ecological Research (LTER) site in the Luquillo Mountains, the Urban Long Term Research Area (ULTRA), and the Neotropical site for the National Ecological Observatory Network (NEON).

Organizational structure. The CLCC is in the process of developing its organizational structure. The goal is it create avenues for input from all interested participants. The CLCC currently has a steering committee with representatives from several agencies. Future components will include a science and technology advisory group and a stakeholder advisory group.

CLCC Coordinator

William Gould, USDA Forest Service, International Institute of Tropical Forestry, 1201 Calle Ceiba, Río Piedras PR 00926-1119, Phone:787-766-5335 ext. 302, wgould@fs.fed.us

Steering committee

Susan Silander, USFWS Caribbean Islands NWR complex, Susan_Silander@fws.gov
 Pedro L. Díaz, USGS Caribbean Water Science Center, pldiaz@usgs.gov
 Constance Carpenter, USDA Forest Service, IITF, conniecarpenter@fs.fed.us
 Pedro Rios, USDA Forest Service, EYNF, prios@fs.fed.us
 Lisamarie Carrubba, NOAA Caribbean Field Office, Lisamarie.Carrubba@noaa.gov
 Ernesto L. Díaz, Puerto Rico DNER, ediaz@drna.gobierno.pr
 Jose Cruz, USFWS Caribbean ES Field Office, Jose_cruz-burgos@fws.gov
 Edwin Almodovar, NRCS Caribbean Area Office, Edwin.Almodovar@pr.usda.gov
 David P. Brown, Southern Region Climate Services Director, NOAA, david.p.brown@noaa.gov
 Mark Hardgrove, Superintendent, Virgin Islands National Park, Mark_Hardgrove@nps.gov
 Jean-Pierre L. Oriol, Director, Virgin Islands CZMP, DPNR, jp.oriol@dpnr.gov.vi

Additional contacts

USFWS: Robert Ford, Robert_P_Ford@fws.gov
 USGS: Jaime Collazo, jcollazo@ncsu.edu