Los Machos, Coastal Site
Ceiba, Puerto Rico 18.24998N 65.61365W

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History: This site has been protected for over a century, we find no evidence of human impact on the vegetation. The land is under the control of the US Navy, but will soon be transferred to the Government of Puerto Rico, to be protected in perpetuity. Before the Navy, the land was under the control of the Commonwealth of Puerto Rico, and before that, the Spanish government protected it. Our studies show about 4 m of peat accumulation at the site. The age of the peat is 4,000 yr.

Key Contribution to Domain and Continental issues: The site is proposed for study of the effects of sea level change, hurricane passage, and global climate change on coastal systems. The site is located at sea level at the point of entry of hurricanes moving from West Africa or the southern Atlantic towards the eastern and southern coastal zones of the United States. The site is influenced by the trade winds, which blow constantly from the northeast. Any climate-induced change in this major climatic system of the Atlantic Ocean will be reflected on these mangroves. Mangrove vegetation is also expected to respond to sea level change by depositing peat and moving inland. The mangroves also provide protection from storm surges to inland areas. Within the Domain, this site is a contrast to the Jobos mangroves on the south coast of Puerto Rico and also a contrast to inland sites in terms of hurricane and climate change response.

Key Characteristics: The vegetation is an evergreen, coastal mangrove, a tropical forest adapted to salinity. These mangroves are dwarf red mangroves (*Rhizophora mangle*) and grow on pure organic peat deposited over marl. Soils are saline soils with salinities ranging from seawater strength (35 ‰) to about 50 ‰. They are also subjected to a 30 cm tidal range. The height of vegetation is only 1 m.

Existing Infrastructure Relevant to NEON:
The site is easily accessible by vehicle or boat. Climatic stations are available outside the reserve. NOAA operates a tidal gage with over 50 years of record several kilometers west of the site. The mangrove stands have been monitored for a period of over 20 years. Climate stations are found in the Navy facility, the LTER Luquillo site, and the Puerto Rico Conservation Trust facilities, all located within less than 20 km from the mangroves. A long-term air quality monitoring station is located north and east of the mangroves.

Facilities: There are no facilities at the site itself. Fully equipped laboratories and dormitories and other research facilities are available at the Luquillo LTER site, < 20 km from the site.