

PUERTO RICO



Source: esri

General

Puerto Rico - officially the Commonwealth of Puerto Rico and briefly called Porto Rico - is an unincorporated territory of the United States located in the northeast Caribbean Sea. An archipelago among the Greater Antilles, Puerto Rico includes the main island of Puerto Rico and a number of smaller ones. Puerto Rico has an area of 0.91 Mha (million hectares) with in 2020 a population of 2.9 million, or 3.2 persons per ha (Wikipedia and United Nations, 2019).

Climate and geography

The climate of Puerto Rico is tropical rainforest. Temperatures are warm to hot year round, averaging near 29 °C in lower elevations. The average temperature of 28 °C throughout the year, with an average minimum temperature of 19 °C and maximum of 30 °C. Daily temperature changes seasonally are quite small in the lowlands and coastal areas. The temperature in the South is usually a few degrees higher than the North. Between the dry and wet season, there is a temperature change of around 3.3 °C. This is mainly due to the warm waters of the tropical Atlantic Ocean, which significantly modify cooler air moving in from the North and Northwest. Easterly trade winds pass across the island year round. The rainy season stretches from April into November. The average yearly precipitation is 1,690 mm (source: Wikipedia).

The island is mostly mountainous with large coastal areas in the North and South. The main mountain range is called The Central Range (*La Cordillera Central*).

Existing polders

The Group Polder Development (1982) mentions that the Guanica Lagoon (400 ha) is a shallow depression near the Eastern end of the Lajas Valley. By that time irrigation and drainage works were constructed to promote agricultural development (Figure 1).

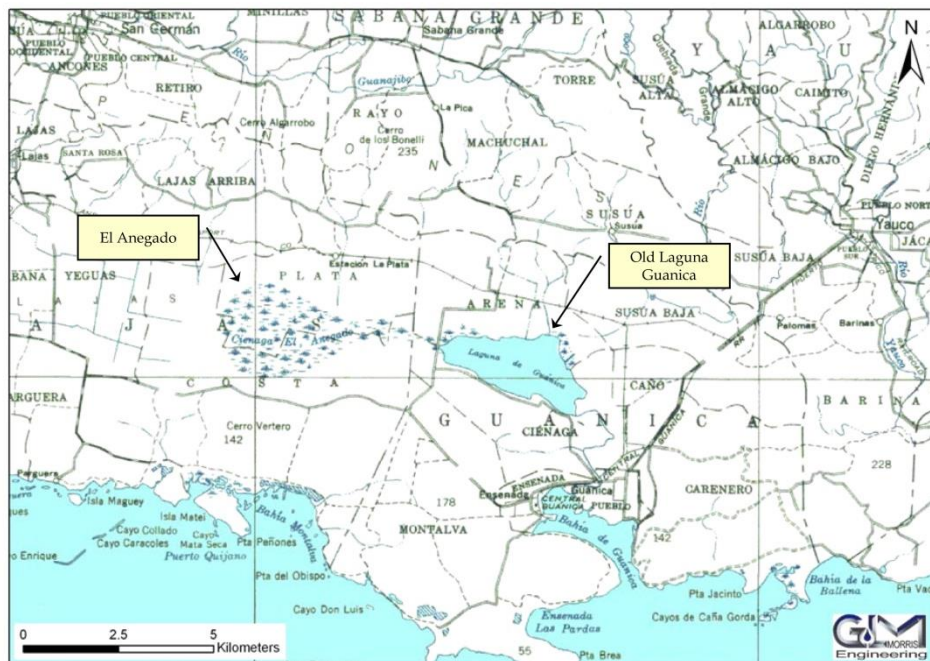


Figure 1. Location of the polder area in the Former Guanica Lagoon (GM-Morris Engineereng, 2011)

General characteristics of the polder in Puerto Rico are shown in Table I.

Proposed polders

No proposed polders could be identified.

References

- Group Polder Development, Department of Civil Engineering, Delft University of Technology, 1982. *Polders of the World. Compendium of polder projects*. Delft, the Netherlands
- GM-Morris Engineereng, 2011. Hydrologic-hydraulic study of Laguna Guanica restauration impacts on regulatory flood levels, Guanica, Puerto Rico.
- Israelsen, Orson W. 1954. *Drainage and reclamation problems in Lajas Valley, Puerto Rico*. Report by UPR Aricultural Experimental Station, Río Piedras, Puerto Rico.
- McClymonds, Neal. E. 1967. *Water resources of the Guánica Area, Puerto Rico: A Preliminary Appraisal, 1963.*” Water Resources Bull No. 6, USGS, San Juan.
- United Nations, Department of Economic and Social Affairs, Population Division. 2019. *World Population Prospects, medium prognosis. The 2019 revision*. New York, USA.
- Willardson, Lyman S. 1958. *Lajas Valley drainage problems*. UPR Ag. Experimental Station Bulletin No. 143.

Bart Schultz

Lelystad, June 2021

Table I. General characteristics of existing polders in Puerto Rico

Name	Reclamation	Area in ha	Type *)	Latitudes	Longitudes	Elevation in m+MSL	Land use
Polder(s) in Guanica Lagoon	1955		DL	18° 01' N	66° 59' W	5	agriculture
Total							

*) RLL = reclaimed low-lying land; LGS = land gained on the sea; DL = drained lake