# **PUERTO RICO**



#### 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 2022, a population of 3.25 million, or 3.6 persons per ha (Wikipedia and United Nations, 2022).

Source: esri

# **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 throughout the year is 28 °C, 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 annual 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).

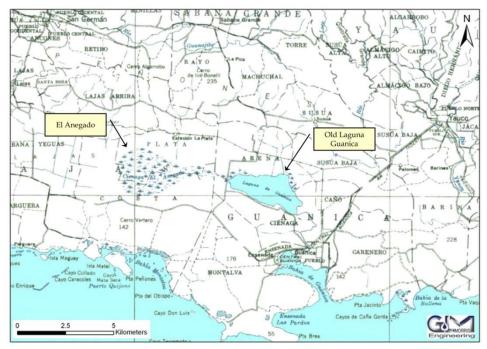


Figure 1. Location of the polder area in the Former Guanica Lagoon (GM-Morris Engineereng, 2011) General characteristics of the polders in Puerto Rico are shown in Table I.

### **Proposed polders**

No proposed polders could be identified.

### Location of the polders in Puerto Rico as shown on the World polder map

The locations of the polders in Puerto Rico are shown in Figure 1.



Figure 1. Location of the polders in Puerto Rico (source: esri – Batavialand)

# 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 Agricultural Experimental Station, Río Piedras.
- McClymonds, Neal. E. 1967. Water resources of the Guánica Area, Puerto Rico: a preliminary appraisal, 1963. *Water Resources Bull* No. 6, USGS, San Juan.
- Molen, W.H. van der, 1957. Report on salinity, irrigation and drainage conditions in the Lajas Valley Development Project, Puerto Rico. Special report, Puerto Rico Department of Agriculture, January.
- United Nations, Department of Economic and Social Affairs, Population Division. 2022. World population prospects, medium prognosis. The 2022 revision. New York, USA.
- Willardson, Lyman S. 1958. Lajas Valley drainage problems. UPR Ag. *Experimental Station Bulletin* No. 143.

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Reclamation	Area in ha	Type *)	Latitudes	Longitudes	Elevation in m+MSL	Land use
1955		DL	18º 01' N	66° 59' W	5	agriculture
						Reclamation Area in ha Type *) Latitudes Longitudes in m+MSL

Table I. General characteristics of existing polders in Puerto Rico

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