

ARGENTINA



Source: esri

General

Argentina - officially the Argentine Republic - is a federal republic located mostly in the southern half of South America. Sharing the bulk of the Southern Cone with its neighbour Chile in the West. The country is also bordered by Bolivia and Paraguay in the North, Brazil in the Northeast, Uruguay and the South Atlantic Ocean in the East, and the Drake Passage in the South. The country has a mainland area of 278 Mha (million hectares) with in 2022 a population of 45.5 million, or 0.16 persons per ha (Wikipedia and United Nations, 2022).

Climate and geography

Although the most populated areas are generally in the temperate zone, Argentina has an exceptional divers climate, ranging from subtropical in the North to polar in the far South. The average annual precipitation ranges from 150 mm in the driest parts of Patagonia to over 2,000 mm in the westernmost parts of Patagonia and the northeastern parts of the country (source: Wikipedia).

The lowest point of the country is Laguna del Carbón in the San Julián Great Depression at 105 m-MSL (mean sea level), also the lowest point in the Southern and Western Hemispheres. In addition there are three other deep saline depressions: Salina Grande and Salina Chica at 42 m-MSL, and Bajo del Gualicho at 41 m-MSL. However, these are no polders, but natural depressions (source: Wikipedia).

Large parts of the delta of the Parana River are flooded most of the year. Canals have been constructed, serving both drainage and water traffic. The spoil from these canals has often been dumped alongside, forming artificial dikes, which like the natural levees, are inhabited and cultivated. The lower parts of the areas have been drained by open drains, thus allowing the cultivation of these lands. The population is scattered along the rivers, the navigable creeks and the canals. Most people live in pile dwellings due to the frequent inundations, and as a result of these precautions even the highest floods cause very few casualties. In a few places, some degree of flood protection has been achieved by surrounding the fields with dikes. These dikes are high enough to keep out the regular inundations but are unable to withstand the major floods. Dikes surrounding urban areas have been designed for overtopping with a chance of occurrence of once in 1,000-10,000 years (Centre for Civil Engineering Research and Codes (CUR) and Ministry of Transport, Public Works and Water management, 1993).

Existing polders

Sallabar (1983) gives a list of polders in the Delta of Parana River. The data may have been derived from NEDECO (1962). The characteristic data of these polders are shown in Table I.

Proposed polders

Sallabar (1983) describes a proposed open polder of 90,000 ha in the Parana Delta (Figure 1). This project would be a first phase of a much larger reclamation in the delta.

Location of the polders in Argentina as shown on the World polder map

The location of the polders in Argentina is shown in Figure 2.

The pictures by Prof. Adriaan Volker are shown in Table II.



Figure 1. Proposed open polder of 90,000 ha in the Parana Delta (Sallaber, 1983)



Figure 2. Location of the polders in Argentina (source: esri – Batavialand)

References

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Table I. General characteristics of existing polders in Argentina

Name	Reclamation	Area in ha	Type *)	Latitudes	Longitudes	Elevation in m+MSL	Land use
Don Antonio Polder		4,600	RLL	31° 36' S	60° 01' W	92	Agriculture
Don Ernesto Polder		500	RLL	34° 31' S	58° 57' W	27	Agriculture
Don Humberto Polder		720	RLL	34° 01' S	60° 12' W	41	Agriculture
Don Mario Polder		575	RLL	33° 00' S	58° 28' W	5	Agriculture
Don Orlando Polder		1,970	RLL				Agriculture
Impora Polder		800	RLL				Agriculture
INTA Polder		56	RLL				Agriculture
Las Carabelas Polder		1,000	RLL	32° 06' S	64° 08' W	423	Agriculture
Lechiguanas Polder		23,500	RLL	33° 33' S	59° 35' W	4	Agriculture
Mazaruca Polder		5,000	RLL	33° 35' S	59° 17' W	3	Agriculture
Tajber Polder		800	RLL				Agriculture
Victoria Polder		4,900	RLL	32° 36' S	60° 08' W	50	Agriculture
Total		44,421					

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

Table II. Pictures and slides on polders in Argentina by Prof. Adriaan Volker













			
A1 002/V.1.2 Prof. Volker 4th meeting of the Technical Committee for hydrology of the World Meteorological Organisation in Buenos Aires, 3-17 April 1972	A1 003/V.1.3 Volker 4th meeting of the Technical Committee for hydrology of the World Meteorological Organisation in Buenos Aires, 3-17 April 1972	A1 004/V.1.4 Lowland area	A1 005/V.1.5 Lowland area
			
A1 006/V.1.6 Lowland area	A1 007/V.1.7 Lowland area	A1 008/V.1.8 Lowland area	A1 009/V.1.9 Flooding of lowland area
			
A1 010/V.1.10 Flooding of lowland area	A1 011/V.1.11 Flooding of lowland area	A1 012/V.1.12 Flooding of lowland area	A1 013/V.1.13 Flooding of lowland area

Table II. Pictures and slides on polders in Argentina by Prof. Adriaan Volker (continued)













			
A1 014/V.1.14 Flooding of lowland area	A1 015/V.1.15 Aerial picture of a lowland area	A1 016/V.1.16 Aerial picture of a lowland area	A1 017/V.1.17 Aerial picture of a lowland area
			
A1 018/V.1.18 Warehouse Puerto Barranquas, lowland area	A1 019/V.1.19 Lowland area	A1 020/V.1.20 Lowland area	A3 1 037/A.3.1.37 Flooding
			
A3 1 038/A.3.1.38 Flooding	A3 1 039/A.3.1.39 Flooding	A3 1 040/A.3.1.40 Marsh vehicle	A3 2 041/A.3.2.41 Flooding

Table II. Pictures and slides on polders in Argentina by Prof. Adriaan Volker (continued)

			
A3 2 042/A.3.2.42 Flooding	A3 2 043/A.3.2.43 Flooding	A3 2 044/A.3.2.44 Flooding	A3 2 045/A.3.2.45 Flooding
			
A3 2 046/A.3.2.46 Flooding	A3 2 047/A.3.2.47 Flooding	A3 2 048/A.3.2.48 Flooding	A3 2 049/A.3.2.49 Flooding
			
A3 2 057/A.3.2.57 Lowland area	A3 2 058/A.3.2.58 Lowland area		