

MALI



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General

Mali - officially the Republic of Mali - is the eighth-largest country in Africa. Mali consists of eight regions. Its borders in the North reach deep into the middle of the Sahara Desert, while the country's southern part, where the majority of inhabitants live, features the Niger and Senegal rivers. Mali is a land-locked country, with Algeria in the North, Niger and Burkina Fasso in the East, Ivory Coast and Guinea in the South, and Senegal and Mauritania in the West. Its area is just over 124 Mha (million hectares) with in 2020 a population of 20.3 million, or 0.16 persons per ha (Wikipedia and United Nations, 2019).

Climate and Geography

Mali lies in the torrid zone and is among the hottest countries in the world. The thermal equator, which matches the hottest spots year-round on earth crosses the country. Most of Mali receives negligible rainfall and droughts are very frequent. Late June to early December is the rainy season in the southernmost area. During this time, flooding of the Niger River is common, creating the Inner Niger Delta. The vast northern desert part of Mali has a hot desert climate with long, extremely hot summers and scarce rainfall, which decreases northwards. The central area has a hot semi-arid climate with very high temperatures year-round, a long, intense dry season and a brief, irregular rainy season. The little southern band possesses a tropical wet and dry climate very high temperatures year-round with a dry season and a rainy season (source: Wikipedia). The Inner Delta of the Niger River has an area of 4,1 Mha. As an example the inundated area at a level of 6.30 m at the Mopti scale is shown in Figure 1 (Marie, 2000).

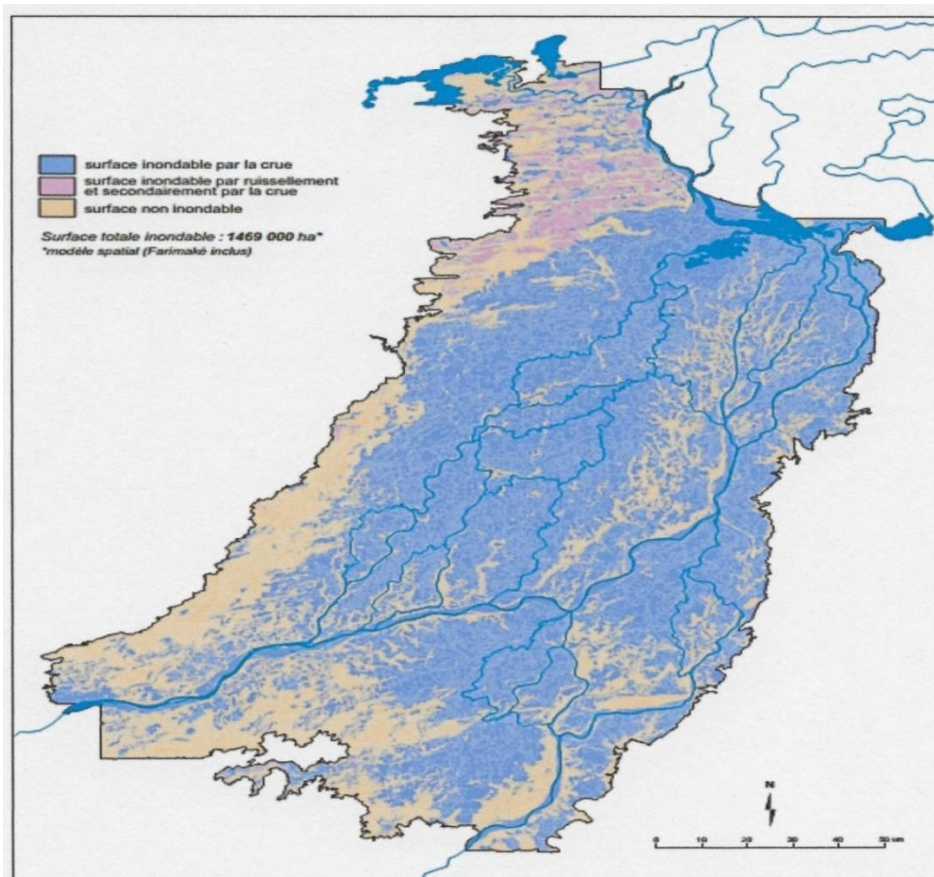


Figure 1. Inundated area at a water level of 6.30 m at the scale of Mopti (Marie, 2000)

Poncet and Troublet (1994) have published a map from which to a certain extent the polders in the Inner Delta of the Niger River can be derived (Figure 3).

Wymenga *et al.* (2002) and the International Union for Conservation of Nature (UICN) (2009) describe that the inner delta is also a Ramsar site and give information on the environmental values. Zwarts (2010) gives useful information on the rainfall, river flow, climatic and human induced impacts in the area of the Inner Delta. Dependent on the magnitude of the annual flood a large area will be inundated.

At 4 June 2016 the 4 km long Cornelis Lely Dike was inaugurated. The dike protects the city of Mopti against flooding by the Niger River (Figure 4) (Dutch Water Sector, 2016).

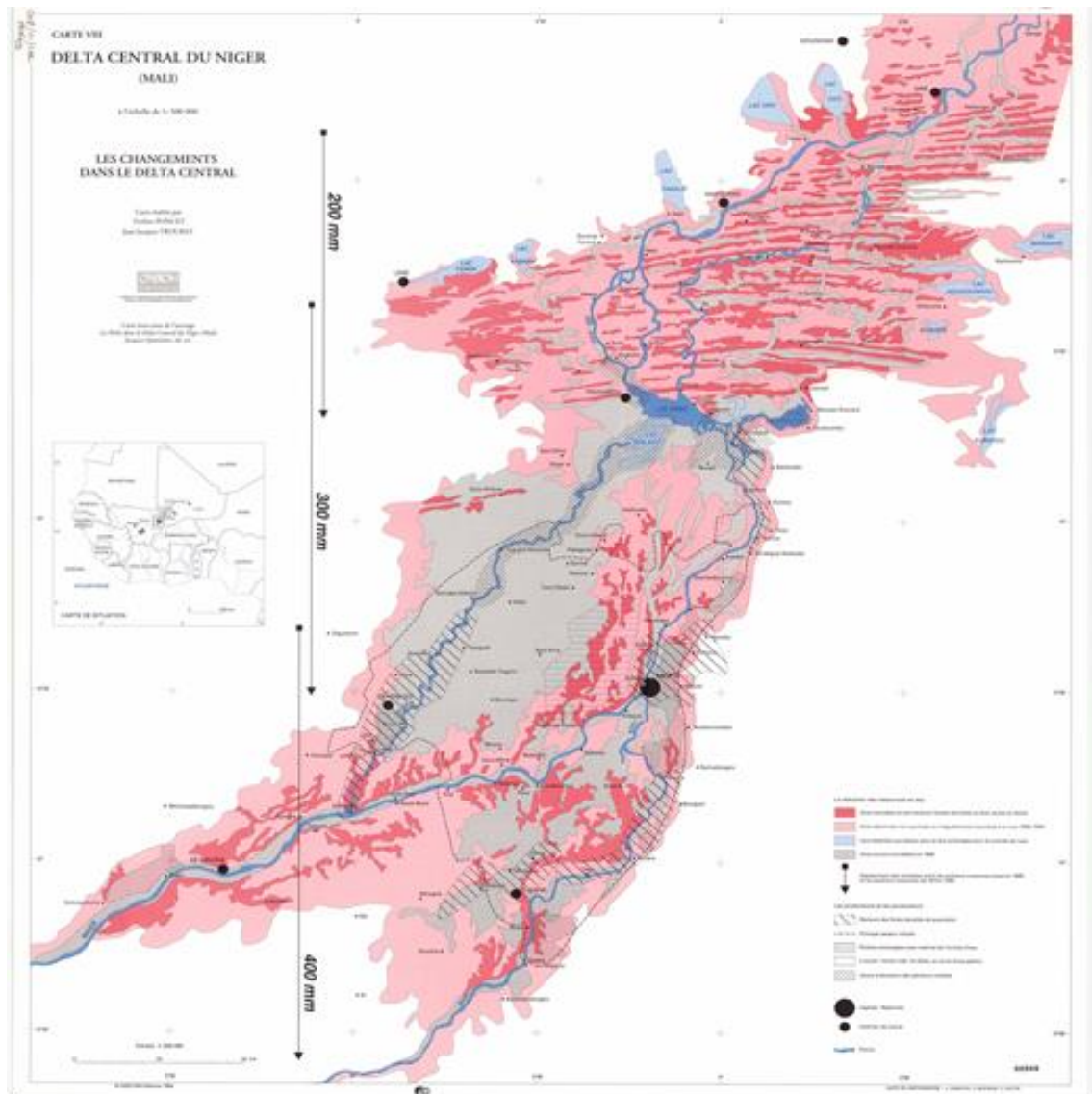


Figure 3. Map from which to a certain extent the polders in the Inner Delta of the Niger River can be derived (Poncet and Troublet, 1994)

Existing polders

Some names of polders, as mentioned by the World Bank (1981, 1987, 1994) are: Dia-Tenenkou Polders, Ibetemi Polder, Karbaye Polder, Mopti-Sud Polder, Sarantomo Syn Polder, Sofara Polder and Soufouroulaye Polder.

General characteristics of existing polders in Mali are shown in Table I.



Figure 4. Cornelis Lely dike at Mopti, Mali

Proposed polders

No proposed polders could be identified.

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Lelystad, November 2020

Table I. General characteristics of existing polders in Mali

Name	Reclamation	Area in ha	Type *)	Latitudes	Longitudes	Elevation in m+MSL	Land use
Existing polders 18 polders exploited by <i>ORM</i>	1972-1983	>2,700 39,000	RLL RLL				
Mopti I Rice project: <ul style="list-style-type: none"> • construction of three polders • rehabilitation of five polders • land preparation of 2000 ha in an existing polder Bougala Polder Dia-Tenenkou Polders Ibetemi Polder Karbaye Polder Mopti-Sud Polder Sarantomo Syn Polder Sofara Polder Soufouroulaye Polder	1972-1978	13,300 13,200 10,300	RLL RLL RLL RLL RLL RLL RLL RLL	14° 30' N	4° 10' W		
Mopti II Rice project - construction of four polders: <ul style="list-style-type: none"> • Saré-Mala Polder • Ouronema Polder • Tiroguel Polder • Torokoro Polder 	1978-1983	8,800	RLL RLL RLL RLL	14° 30' N	4° 10' W		
Total		48,300					

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