

Nigeria (Federal Republic of)

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Location and area

Nigeria is a federal republic in western Africa, bounded on the north by Niger, on the east by Chad and Cameroon, on the south by the Gulf of Guinea, and on the west by Benin. The most populous country in Africa, Nigeria has an area of 923,768 km². (Microsoft Encarta Encyclopedia 2002).

Topography

Much of Nigeria consists of a low plateau cut by rivers, especially the Niger and Benue. Nigeria can be divided into four distinct geographical regions:

1. A belt of mangrove forests and swamps along the coast stretches some 15 km inland in most places. This region is cut by numerous lagoons and creeks. In the Niger delta region, the coastal belt extends some 100 km inland.
2. Beyond the coast, lowlands follow the valleys of the Niger and Benue.
3. Otherwise the land gives way to a broad, hilly, forested belt that gradually rises to the rocky terrain of the Jos and Bauchi plateaux.
4. Beyond these plateaux is a region of savannah, which stretches to the semi-desert Sahelian zone in the extreme north. A great plain, marked by occasional outcroppings of granite, the savannah region is Nigeria's main agricultural area. In the east is the Adamwa Plateau, which borders Cameroon and in which is Nigeria's highest point, Dimlang (Vogel Peak), 2,042 m high.

The Niger River and its tributaries - principally the Benue, Kaduna, and Sokoto rivers - drain most of Nigeria. In the northeast, the rivers drain into Lake Chad. (Microsoft Encarta Encyclopedia 2002).

Climate

Nigeria has two distinct climatic zones. Along the coast the equatorial maritime air mass influences the climate, which is characterized by high humidity and heavy rainfall. To the north the tropical continental air mass brings dry, dusty winds (harmattan) from the Sahara; the temperature varies considerably with the season, as does rainfall, which is far less than in the south. The main rains occur between April and October; average rainfall ranges from 2,500 mm at Port Harcourt on the Niger Delta to 870 mm at Kano in the north.

Land use

Vegetation zones in Nigeria parallel the climatic zones. In the south the well-watered zone is partly covered by the remnants of dense tropical forests. Oil palms are particularly plentiful. In the plateau and savannah regions, forests give way to grasslands and to such hardy trees as the baobab and the tamarind. In the extreme northeastern Sahel region, semi-desert vegetation prevails.

Most of the country is suitable for agriculture. Most Nigerians are subsistence farmers, producing sorghum, millet, and cattle in the north, and maize, rice, and yams in the south. Palm oil became an export crop to Europe in the early 19th century. Cacao and groundnuts

later grew in importance, surpassing palm oil as export crops in the early 1950s. Cotton, raised in the north, began to be grown for domestic use in the early part of the 20th century (Microsoft Encarta Encyclopedia 2002).

Wetlands

The Niger river delta constitutes one of the world's largest wetlands and contains one of Africa's largest mangrove forests

(www.africanfront.com/water_sheds/water_sheds2/water_sheds4.php).

According to Allen (1965) the Niger river floodplain (8,400 km²) accumulates mainly sand deposits in the river channels. He mentions a total area of mangrove swamp of 9,000 km².

Gosselink & Maltby (1991) estimate the extent of mangroves in the Niger delta on 7,000 km², a figure quoted by Lappalainen & Žurek (1996c).

The WWF estimates the area of Niger delta swamp forests to be 14,400 km²

(www.worldwildlife.org/wildworld/profiles/terrestrial/at/at0122_full.html#top).

Peatlands

Markov et al. (1988) mention the occurrence of peatlands at Lake Chad and along the rivers. 3/5 of the deltas are mangroves. The peat layer in the peatlands in the south of the country is about 30 - 40 cm.

Cole (1973) mentions the presence of scattered grass-herb swamps around the tributaries of the river Niger near Nupe, Kianji dam, Minna, Ilorin, Lake Chad.

Table 1: Possible peatland areas (in km²) in Niger and adjacent countries (after Howard-Wiliams & Thompson 1985). W = area in wet season, D = area in dry season.

Sokoto river	Nigeria	Floodplain	400
Benue river	Nigeria	Floodplain	W 3,100 D 1,240
Anambra river	Nigeria	Floodplain	
Ouémé	Benin, Nigeria	Floodplain and delta	W 896 D 52
Ogun River	Nigeria	Floodplain	W 63 D 25
Oshun River	Nigeria	Floodplain	W 37 D 20
Lake Chad	Chad, Niger, Nigeria, Cameroon	Shallow lake and swamps	

According to the interpreted World Soil Map (Van Engelen & Huting 2002) no histosols exist in Nigeria and 46,396 km² of gley soils.

Still to be checked:

ILACO 1966. Report on the soil investigations in the Niger Delta Special Area.

NEDECO/ILACO, Kingdom of the Netherlands.

33,34 Manga lakes (13o18'N, 10o55'E), 330 m, Nigeria. Pollen.

Salzmann, U., Waller, M. 1998. The Holocene vegetational history of the Nigerian Sahel based on multiple pollen profiles. Rev. Palaeobot. Palyn. 100, 39-72.

37Lake Tilla (10o23'N, 12o08'E), 730 m, Nigeria. Pollen.

Salzmann, U. 1999. Zur holozänen Vegetation- und Klimaentwicklung der westafrikanischen Savannen. Thesis. Univ. Würzburg, 144 p.

40 Niger delta (4o33'N, 1o25'W) ca 20 m, Nigeria. Pollen.

Sowunmi, M.A. 1981. Late quaternary environmental changes in Nigeria. *Pollen et Spores* XXIII,1, 125-148

Salzmann, U. (1996) Holocene vegetation history of the Sahelian zone of NE-Nigeria: Preliminary results. *Palaeocol. Afr.* 24: 103-114.

Salzmann, U. (2000) Are modern savannas degraded forests? - A Holocene pollen record from the Sudanian zone of NE-Nigeria. *Vegetation History and Archaeobotany*, Vol. 1 (in press)