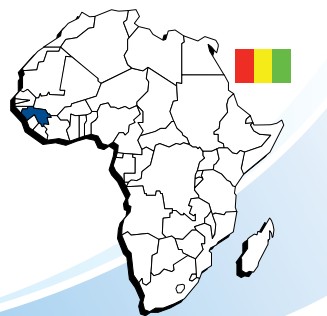


7.8 Guinea



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Capital city	Conakry
Population (2005 est.)	9,000,000 (2.4% growth)
GDP per capita (USD 2005 est.)	\$2 316
Life expectancy at birth (2005 est.)	54.8 years (male - 53.2, female - 56.4)
Land and water area	245,857 km ²
Length of coastline	320 km
Highest point of elevation	Mount Nimba 1 752 m
Mangrove area (2005 est.)	276,000 ha
Marine protected areas (2007 est.)	None recorded
Capture fisheries prod. (2006 est.)	94,000 metric tones
Aquaculture fisheries prod. (2006 est.)	None recorded

Coastal Climate: Guinea enjoys a humid tropical climate characterized by two seasons: the dry season (November-April), whose trade winds blow from the north-east (harmattan) and the rainy season (May-October) whose trade winds blow from the south-west (monsoon). In all of Guinea, the annual average rainfall is 1 835 mm. The rainy season lasts for about six to seven months and the annual rainfall rates vary between 2 000 to 4 000 mm. The climate is hot and humid.

Coastal Geomorphology: The total land area is estimated to be 245,857 km² with a coastline of about 300 km. Lower Guinea covers about 18% of the land and supports 32% of the population. It is a coastal region that is characterized by coastal plains, plains and mountains rising steadily towards the heights of Fouta Djallon. Guinea's maritime area covers an area of about 43,730 km² and forms about 300 km of the coast. A broad coastal strip of about 100 - 150 km can be found west of Fouta Djallon on the ocean's coast. Guinea's marine system is unique in the diversity of its landscape. The coastal formations characterized by two rock projections (the Verga course and the Kaloum peninsula) formed by volcanic activity and now are primarily marshes.

Coastal Habitats: The coastal vegetation has unique characteristics. In spite of its poor composition, it is dense and contains very unique flora

and fauna (mangroves). From an ecological point of view, the coastal zone it is located in the 'rivers of the south' - a natural area that extends from Gambia to Sierra Leone. Crossed by many rivers, most of which descend from Fouta Djalon, the marshes cover a surface of 360,000 ha of which about 260,000 ha consists of mangrove - comprising one of the most important of these areas in west Africa. These mangroves are characterized by a halophilous vegetation made up of trees which grow in the upper inter tidal part of the land and herbaceous plants, which are a very rich medium, very dynamic and are quite significant. The mangrove has for a long time been exploited by the local population (Oliver Rue, 1994).

Coastal Currents and tides: The major currents of Guinea are the Canary current, the Alizé current, and the Gulf of Guinea current. The gulf of Guinea current is the counter current to Alizé.

Coastal Observations: The coastal observation programmes in Guinea are directed towards monitoring: 1) climate, 2) the continental shelf, and 3) mangroves. The programmes of observation undertake:

- Evaluation of annual and total solar radiation averages, clouds, atmospheric pollution or changes in the country
- Monitor the annual the radioactive processes
- Monitor annual migrations and inter-tropical convergence - this has made it possible to undertake rainfall forecasting
- Monthly, seasonal, synoptic and inter-annual hydro-physical and hydro-chemical variability
- Monitoring of the major currents of Guinea, and upwelling events
- Taxonomic composition of plankton and the development of its space-time distribution and seasonal dynamics according to the structure and movement of the water masses
- Concentration and spatial distribution of chlorophyll and primary production

Ports and Harbours: The principal port of Guinea is Conakry, with secondary ports of Benty and Kamsar. In addition, there are 65 fishing ports along the coast.



Figure 1. Guinean fishermen deploying their fishing nets.

Coastal Economy: The coastal economy is based on agricultural and industrial products, fish, as well as mineral resources. The rural economy is an integral element in the economic and social dynamics of Guinea's maritime economy

The coastal administrative region is approximately 150 km wide boarded by the Fouta-Djalon plateau to the east. Due to the presence of the capital city, Conakry, about 36%, almost 2.5 million inhabitants (or 1.4 million inhabitants and 20% of the total population reside in the coastal zone, a considerable portion of the economic activity of the country takes place there.

Fisheries: In Guinea, three types of fishing are practiced; artisanal fishing, industrial fishing and semi-industrial fishing. Data and information on fisheries in Guinea is summarized in the Guinea atlas of fisheries in the form of maps and figures by the departments of fishing and the other technical institutions collaborating with the Department

of Fishing. This includes information on: the Exclusive Economic Zone (EEZ), sediments, salinity, temperature, and demersal artisanal and industrial fisheries.

Mineral Resources: The mineral resources are varied (bauxite, gold, diamond, iron etc). The mining sector contributes about 20% to the GDP and represents by itself about 80% of products for export and 29% of products for domestic use. The extraction of materials for construction is also an important mining activity. Guinea is a country with great mineral wealth. There is a need for greater economic and technological investment in order to get more value from its mineral resources.

Agricultural Products: The agricultural products in the lower part of Guinea are of two types: agro-industrial and local scale farming. The agro-industrial products include: bananas, palm tree oil, mangoes, pineapples, and coconuts. The local scale farming for local consumption include: rice, maize, potatoes, manioc, the arachidela mango, vegetables and oranges. Crisis has occurred when the local scale farming does not satisfy family needs. This insecurity leads to chief breadwinners of the family undertaking activities in other sectors to meet the families' financial obligations. In such cases, it is possible to maintain an agricultural culture within the family unit, financed by the extra monetary activities.

Other Marine Resources: The other marine resources in the marine and coastal environment include mining and energy resources that have not yet been utilized. Mangrove resources contribute, to a large extent, to the economy of the coastal area and the country in general.

ADDRESSING KEY COASTAL ISSUES AND HOT SPOTS

The natural resources of Guinea show signs of over exploitation and degradation for several reasons. Because of their economic and social importance, their management for access and exploitation, and protection has become priority. Accordingly, there has been the creation of reserves, natural parks and artificial reefs in order to safeguard their sustainability.

Mangroves habitats along the coast are a particular example of the

difficulties faced in managing natural resources in Guinea. The mangrove forests are used in the construction industry and in the manufacture of the small fishing boats. They are also used for construction and as coal in households. The increasing demand for wood-energy and arable land has arisen as a result of an increase in human pressure. The result is the deforestation of this natural environment and degradation of the ecosystem. These competing needs make the management of the mangroves, and the coastal area more broadly, difficult. This problem can be resolved by involving all the principal actors involved in maintaining the ecosystem of the area, including the local population that live there.

DEVELOPMENT AND ACHIEVEMENTS OF THE NODC

The Centre de Recherche Scientifique de Conakry Rogbanè (CERESCOR) is the focal point for the NODC in Guinea: the Centre National des Données Océanographiques (CNDO). CERESCOR is a public scientific and technical institution that is under the supervision of the Ministry of Scientific and Technical Research.



Figure 2. The CERESCOR research centre.

Within the scope of its activities with ODINAFRICA, CNDO Guinea develops products and services that benefit the general public, national and international institutions, and Non Government Organizations.

The products and services available are:

- Development of national databases on oceanographic and coastal zone observations and studies. This includes a database of salinity, phosphates, silicates, nitrates, and plankton samples compiled for about 1 743 expeditions at 101,804 locations, obtaining 4,270,555 samples for the period 1906 to 2005
- Development of metadata and bibliographical databases on oceanographic, fishing, and related activities
- Website design and management including the CNDO website
- Maintenance of a national directory of institutions and researchers in marine and coastal science
- Physical and conceptual models
- Different products and services used by scientists and members of the public
- Geographic Information Systems data manipulation and map production, including thematic maps on the resources available in the country's coastal zone

MARINE RELATED PROGRAMMES AND ORGANIZATIONS

International cooperation constitutes an important component of CNDO-Guinea's role in the conservation and monitoring of environmental resources that each one of us must preserve and for the future (CNDO-GN, 2007)

Nationally, partners of the Centre National des Données Océanographiques (CNDO) in Guinea are:

- Centre de Recherche Scientifique de Conakry Rogbanè (CERESCOR) siège du (CNDO) BP: 1615 Conakry Guinée.
- Division Promotion et Statistique (DPS) de la Direction Nationale de la Pêche Maritime (DNPM)
- Chaire UNESCO/Université de Conakry
- Institut Géographique National (IGN), Conakry

- Service National de Gestion des Catastrophes et Urgences Environnementales Ministère de
- l'Environnement (SNGCUE), Conakry
- Direction de la Météorologie Nationale (DMN), Conakry
- Direction de la Protection et de la Surveillance des pêches (DPSP/Ministère de la pêche), Conakry
- Direction du MAB l'Homme et la Biosphère Direction Nationale de la Recherche Scientifique et technique, Conakry
- Fonds Mondial pour la Nature (WWF), Conakry
- Institut de Recherche pour le Développement (IRD), Conakry
- Observatoire de la Guinée Maritime (OGM)
- Département de Géographie (DG)/ Université de Sonfonia Conakry (USC)
- Port Autonome de Conakry (PAC), Conakry
- Direction Nationale de la Géologie (DNG), Conakry
- Centre d'Etude et de Recherche en Environnement (CERE)/ Université de Conakry (UC)
- Direction Nationale de l'Hydraulique (DNH)
- Univers Sel (US), Dubréka

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