

National Report; Sea Turtles in Nigeria.

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Introduction

- Nigeria
- Coastline of 853 km
- Maritime area of 46,500 km²
- Exclusive economic zone of 210,900 km².
- Weather is hot and humid
- Annual temperature range between 26 and 34°C,
- Highest temperatures occurring during the dry season (November to March).
- Total annual rainfall averages between 350 and 600 centimeters.
- More than 80 percent of the rain falls during the rainy season (April to October)
- Tropical storm conditions are frequent during the rainy season.
- Rainfall is usually heavy and occasionally lasts for over 24 hours.
- Rainfall of about 50mm/hour between July and August are common and results in flash floods.
- Nigerian intertidal mangrove swamps cover an area of about 5,590 square kilometres (Allen 1965).
- The total brackish water habitat is estimated as 12,900 km².

Fishing is the main occupation of the coastal communities, with various types of gears being employed.

Fishing is conducted in creeks, rivers, estuaries, mudflats, near-shore and offshore.

Commercial fishing supports about 440 trawlers, with about three quarters of the fleet targeting the shrimp resources.

Major mineral resources in the coastal and marine waters is a vast oil reserve of about 21 billion barrels and gas reserve estimated at more than 11 trillion cubic feet.

Sand and gravel are exploited onshore and offshore, in the riverbed, lagoons, estuaries and beaches.

Millions of cubic meters of sand are dredged annually during oil exploration and exploitation, as well as for the construction industry.

Map of Nigeria in Africa



Status of Sea turtles

- Sea Turtles are endangered species found in brackish and marine environment. They nest along the Nigerian beaches and inhabit mainly coastal waters. They are listed in major international convention including CITES, CBD and CMS. Five Species of sea turtles occur in Nigerian waters (Amadi,1991), *Caretta caretta* (*Atlantic Loggerhead*), *Chelonia mydas* (*Atlantic Green turtle*), *Lepidochelys olivacea* (*Olive ridley turtle*), *Eretmochelys imbricata* (*Atlantic Hawksbill turtle*) and *Dermochelys coriacea* (*Leatherback turtle*).

Past Research

- Sea turtle Nest Protection- Akassa Community Development Project and Pro Natural International.
- Sea turtle by-catch in small scale Fisheries in Lagos- 2008-Nigerian Institute for Oceanography and Marine Research (NIOMR), Victoria Island, Lagos and Project Global.
- Flagship Campaign on Sea turtles in Lagos-Nigerian Conservation Foundation
- Sea turtle and Pelagic Large Marine Resources Survey in Lagos, Ogun and Ondo State- 2011/2012-NIOMR, NOAA and SDSU.

Ongoing Research

- Sea turtle Nesting Monitoring and Conservation in Lagos Nigeria: Nigerian Institute for Oceanography and Marine Research, Victoria-Island, Lagos Nigeria. This project involved sensitization of existing sea turtle hunters and egg collectors about status of sea turtles and collaborates with them to obtain information about nesting sites in Lagos and news of newly laid nest. Such nest are protected and monitored for emergence of hatchlings to ensure their safe sail into the ocean.

Sea turtle eggs relocation on Elegushi beach in Lagos, 2012.



- Monitoring and Conservation of Sea turtle in Artisanal Capture Fisheries in Lagos Nigeria: Nigerian Institute for Oceanography and Marine Research, Victoria-Island, Lagos Nigeria.
- This project involves
- Sensitization of fishermen about the status of sea turtles using sea turtle calenders.
- Rescue and release of captured sea turtles reported by fishermen or members of the public through negotiation and buy-out
- Morphometric and meristic data collection on reported sea turtles.
- Photo and video recording of rescues of sea turtles.

Released sea turtle sails back to sea



Planned research

- **Bio-ecology and Conservation of Sea turtles in Lagos Nigeria-PhD proposal.**
- **Sensitization for Coastal School students**
- **Sensitization of coastal fishermen/ sea turtle hunters in Lagos**
- **Tagging of nesting females**
- **Genetic characterization of sea turtles.**

Major threats

- Threats to Sea turtles in Nigeria is increasing daily mainly due to development pressure. Man-made impacts tend to affect this species population. These include Pollution from oil activities, marine debris, entanglement in fishing nets mainly gill nets, captures when they venture ashore to nest, Storm surges eradicating nesting beaches, coastal development, dredging and sand mining.
- **Pollution of coastal waters**
- The main sources of pollution include industrial waste, raw/untreated sewage and pesticides. Hydrocarbon production contributes about 95% of the country's Gross National Product (GNP). Oil exploration, exploitation and transportation have a significant effect on the environment. Crude and refined oil spills incidents are very frequent in the coastal and marine environment, especially during periods of very strong ocean currents when it can spread to cover the entire 853 km coastline. The area where frequent spillages occur is categorized as ecologically sensitive or critical (mangrove ecosystems). Sea turtles are some of the marine organisms affected by pollution from oil, debris and nets abandoned at sea.

- Land reclamation
- Reclamation beaches in the coastal areas as residential areas for the increasing human population and other development activities destroys the nesting grounds of marine turtles. It also restricts the distribution of sea turtles and leads to considerable loss in their biodiversity.
- Coastal erosion
- Coastline erosion is prevalent in Nigeria and has been closely associated with ocean front constructions such as ports and harbours. Ibe (1988) reported that the Nigerian coastline experiences some of the fastest erosion rates in the world averaging about 20-30 metres per year in some locations. With the increasing number of reclamations within the coastal areas combined with more severe storm surges along the Nigerian Coast vital nesting beaches for sea turtles are being lost for example Kuramo beach in Victoria Island, Lagos.
- Storm Sturge at Kuramo Beach, Victoria-Island Lagos.

Storm Sturge at Kuramo Beach, Victoria-Island Lagos



- **Over fishing**
- **The coastal and marine resources are either over fished, or fished close to, or beyond their maximum sustainable yield. The heterogeneity of species of different sizes poses a problem in mesh size regulation in the fishery sub-sector. Hence the problem of by-catch of sea turtles and other marine mega-fauna is existent especially in the artisanal fishery sector which produces more than 80% of fish landed in Nigeria**

- **Deforestation**
- **Deforestation of the coastal mangrove vegetation exposes the coast to storm surges, coastal erosion and loss of land. The mangrove swamp is the spawning, breeding, nursery and feeding ground for fish and shellfish for both brackish and marine organisms.**
- **Mining of sand**
- **Mining activities on the foreshore and seabed are a very common feature in Nigeria and they impact negatively on the sea turtle nesting as eggs are laid in some of these areas and lost during such activities**

Legal context

- Nigeria signatory to CBD, CITES, CMS and Abidjan convention.
- Nigeria has ratified the CBD and CITES legislation.
- Nigeria is TED compliant in its industrial fisheries as fabrication of turtle excluder device (TED) was required to facilitate the recertification of Nigeria for shrimp export to the USA and Europe.
- All species of Sea turtles are listed on Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), a listing which prohibits trade in the species between party States.
- All species of sea turtles found in the western hemisphere are listed in both Appendix I and Appendix II of the 1975 Bonn Convention (Convention on Migratory Species)
- Nigeria is signatory to the 1999 Memorandum of Understanding Concerning Conservation Measures for Marine Turtles of the Atlantic Coast of Africa.

- The Leatherback Turtle is not protected in Nigeria (UNEP/CMS 2000). The National Park Service Decree, 1999 (No. 46 of 1999) provides for the management of National Parks and lays down restrictions on hunting, fishing, etc. in National Parks (FAOLEX, 2003). There are no marine reserves in Nigeria
- Under Chapter 108 of its 'Endangered Species (Control of International Trade and Traffic) Act', Sea turtles are listed as animals on 'First Schedule' for which international trade is absolutely prohibited reflecting the provisions of the Convention on the International Trade of Endangered Species of Fauna and Flora (CITES).
- Under the Sea Fisheries Decree (N°71 of 1992) "fish" means any aquatic creature whether fish or not and includes shell fish, crustaceans, turtles and aquatic mammals. All motor fishing boats within territorial waters or its EEZ must be duly registered and licensed

Urgent research Interventions

- Education programmes to highlight the importance of Sea turtle conservation and to encourage sustainable use of natural resources should be developed and established in local communities and should target individuals such as local egg collectors etc.
- The impacts of bycatch should be highlighted and awareness programmes for fishermen should be developed.
- Fishing methods that reduce by-catch in artisan fisheries should be developed.
- Further research on the distribution and status of all five species of Sea turtles in Nigeria should be supported.
- Nigeria being one of the range state for Leatherback turtles should harness research on this species, its nesting and the declines in numbers and profer solutions.
- Research into sustainable beach management and harvesting such be conducted to ensure that
- Local communities should not be deprived of local resources however sea turtle conservation should be safeguarded.