**West Africa Coastal Areas Management Program (WACA)**

**BRIEFING NOTE - NIGERIA**

**January 2016**

**Background**

1. **Natural context.** Nigeria’s coastal and marine area lies on the Atlantic Ocean and borders the gulf of Guinea. It stretches for approximately 853km and includes nine states out of the thirty-six states of the Federation, namely; Akwa Ibom, Bayelsa, Cross River, Delta, Edo, Lagos, Ogun, Ondo and Rivers (1).
2. The coastal population account for approximately 19% of the national population, which was recorded in the national census of 2006 as 140,431,790 (1). The rate of urbanization is 4.66% with high population densities and high population growth occurring along the Niger Delta and Lagos (2). Nationally, 69% of the population lives below the poverty line, with 38.7% being recorded as extremely poor (3). Figure 1 highlights the distribution of absolute poverty along the coastline. The high population increase in urban areas causes informal settlements to be a major feature of urban areas along the coastline.

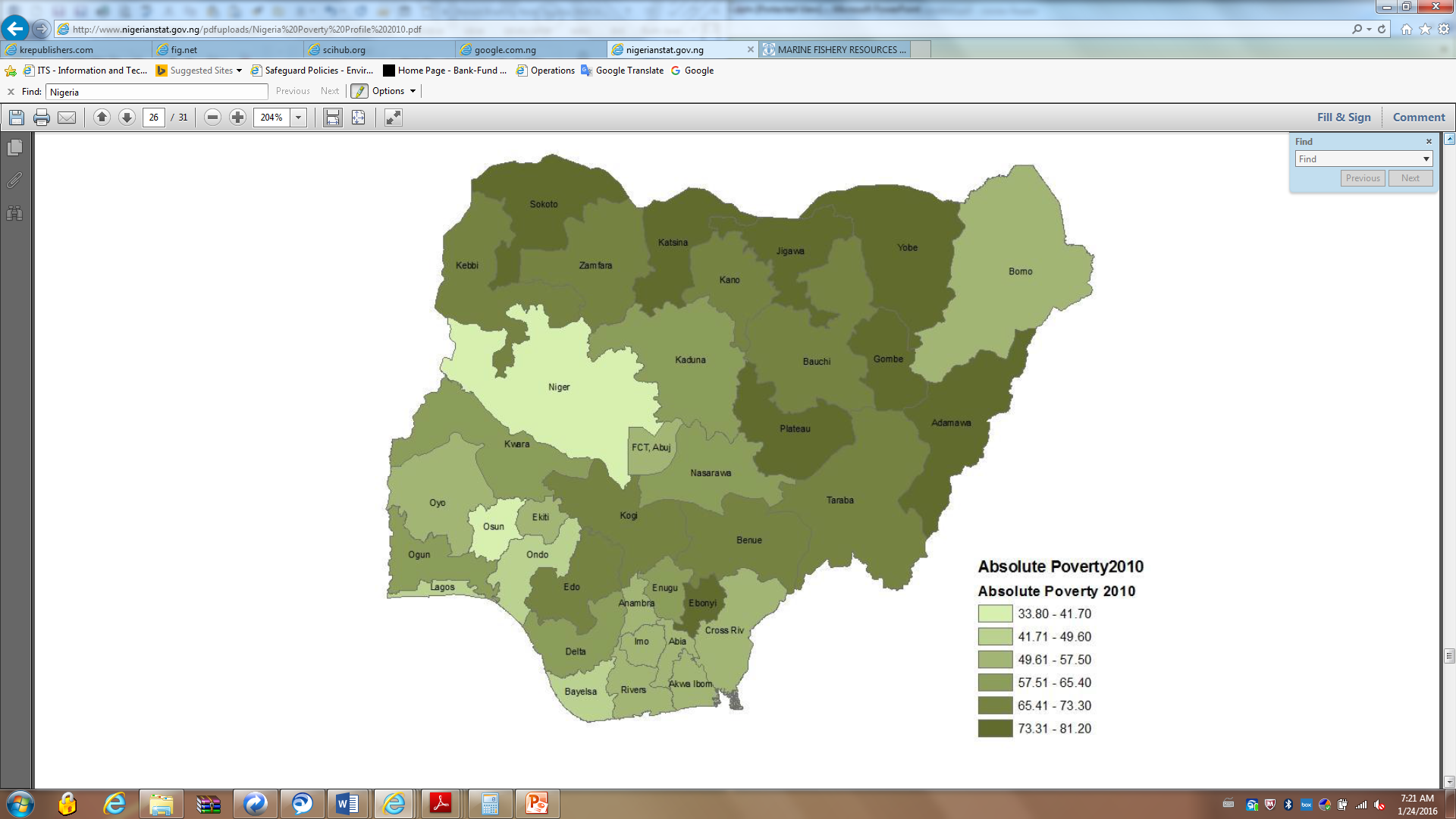


Figure 1: Distribution of absolute poverty along the coastline

1. Oil and gas exploration from this area form the backbone of the Nigerian economy, accounting for 35% of GDP. Oil accounts for close to 90% of total exports revenue and roughly 75% of the country’s consolidated budgetary revenues. Other industries rooted along the coastline, including; agriculture, sand and mineral mining, timber cutting, taxes generated from imports and exports, also contribute to the economy. Many people rely on fish for their source of protein and fisheries support the livihoods of many along this coastline. Tourism plays a growing role in the region’s economy, attracting direct and indirect foreign investment into the region.
2. Nigeria’s coastal areas are rich in biodiversity. The region possesses the largest mangrove in Africa (12,200km2) and extensive wetland ecosystems (1). These ecosystems provide a large number of goods and services that contribute to the economic welfare of the local and global communities, including the protection of shorelines from erosion, storm buffering, climate regulation, carbon sequestration, and preservation of biodiversity.
3. The coastline is a vital area for the localized population but also the country as a whole. It currently faces high vulnerability caused by a number of factors namely population explosion and urbanization, fisheries depletion, water pollution, public health and sanitation, habitat degradation, coastal erosion, loss of biodiversity, and land use. All of which are exacerbated by human activities.
4. The majority of this coastal zone[[1]](#footnote-1) is low lying, below 20m above mean sea level. The low-lying topography of the region, results in major flood vulnerabilities for the areas, especially to people and industries in urban highly populated areas (Figure 2). Close to 21 million people, live in the Low-Elevation Coastal Zone (LECZ) in Nigeria, which defines areas between 0-20m above mean sea level (2). Over 9 million of this population live between 0-5m above mean sea level, which is more than the total for other countries in the region combined (5.9 million) (2) (Table 1). These urbanized areas are also subject to fluvial flooding, caused by the limited capacity of drainage systems, and blockages of waterways and drainage channels (2). Population predictions estimating a dramatic increase in population in these LECZs, by 2050 (Table 1). A USAID study, aimed to create an Economic Systems Index, which identify levels of economic activity that could be exposed to seaward hazards[[2]](#footnote-2). The results show that there are very high levels of economic exposure in the Niger Delta and Lagos, and Table 1 estimates the total GDP exposed.

Table 1: Population and GDP exposure in Low-Elevation Coastal Zone of Nigeria (2)

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| --- | --- | --- | --- | --- |
|  | **Low- Elevation Coastal Zone (above mean sea level)** | | | |
|  | **0-5m** | **5-10m** | **0-20m** | **Total** |
| Population-2010 figures | 9,463,101 | 4,983,488 | 6,467,375 | 20,913,965 |
| Population- 2050 predictions | 41,577,719 | 18,459,392 | 28,316,341 | 88,353,452 |
| Exposed GDP ($US) | 5,472,782[[3]](#footnote-3) | 2,922,801 | 3,168,258 | 11,563,841 |

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Figure 2: Exposure of Nigerian coastline to coastal stressors

1. Coastal erosion occurs along this coastline, with erosion rates of 15-30m per year recorded (1). Road networks along this coastline (including major road systems), especially in Lagos, are particularly at risk of coastal inundation and erosion (2). Whilst erosion is a naturally occurring phenomenon, anthropogenic activities, such as the construction of ports, harbor protection structures and oil production facilities, damning of rivers, sand and gravel mining and dredging, deforestation, subsidence due to fluid extraction, poor physical and land use planning are aggravating it further.
2. Extensive biodiversity degradation and depletion, linked to poverty, has occurred in the region. Human activities have caused deforestation, habitat degradation, hunting, over-fishing, poaching and bush burning. Fish spawning grounds are lost due to mangrove destruction, while numerous animals and bird species are now endangered. Pollution caused by oil spills, industrial and agricultural effluents, inadequate management of sewage and solid waste, are a major contributor to this degradation. Gas flaring is another major effect of oil exploitation on the environment, generating air pollution and heat.
3. There is high levels of violence and crime within the area, with the presence of criminal gangs and militia groups, predominantly targeting the large-scale oil and gas exploitation activities in the region (4). These groups are reported to have different goals and objectives, ranging from nationalism to terrorism, but are at large a result of the high levels of poverty in the region, which has led to such socio-political- environmental unrest (4).
4. Sea level rise, as a result of climate change, will lead to increased flooding, erosion, loss of coastal land and coastal forest regions and seawater intrusion (causing an increased risk of potable water stress). Other impacts such as increased risk of soil erosion and increased fluvial flooding may result caused by increased precipitation and extreme climate events. The combination of armed conflict, economic assets, population density (In Lagos, Benin City, Warri and Port Harcourt) and projected population growth put Nigeria at the top of the list of high exposure countries in West Africa, both now and continuing in the future.
5. **Institutional context.** The Nigerian coastline forms part of the Guinea Current Large Marine Ecosystem (GCLME), which is one of five world’s most productive marine areas that are rich in fishery resources, petroleum production, and an important global region of marine biological diversity. The Global Environment Facility (GEF) GCLME Project is a program that facilitates the development of a regional Strategic Action Program (SAP) by the countries of the GCLME to facilitate regional commitment to integrated management of GCLME coastal areas and marine ecosystem and sustainable use of its resources. This approach is designed to support and supplement national efforts of coastal states to promote integrated management and sustainable development of coastal and marine areas under the coastal states jurisdiction including their Exclusive Economic Zones (EEZ).
6. In 2000, the **Niger Delta Development Commission** was established, to support the sustainable development of the Niger Delta region. In 2010, the Federal Ministry of Environment developed the National Action Plan (NAP) for Nigeria, which built upon the Transboundary Diagnostic Analysis and Strategic Action Plan previously developed for the whole GCLME area. The NAP specifically prioritized actions that aimed to: remediate polluted ecosystems; reduce discharge of untreated sewage and industrial effluents; enhance conservation of biodiversity; address various threats to the highly productive mangrove swamp forests; prevent further reduction of fish stocks; promote sustainable use of natural resources of the coastal areas; support sustainable economic development; combat poverty, and those that seek to improve indicators of human wellbeing in the country’s coastal region. The following proposed projects, for the coastal region, are outlined in the NAP, which was nevertheless never operationalized and the projects never initiated :

* Coastal Erosion Remediation and Control
* Exploring the Socioeconomic Potentials of an Invasive Palm: *Nypa fructicans*
* Remediation of Areas Polluted by Oil Spill
* Environmental Education and Public Awareness Programme for Sustainable Coastal Resources Utilization
* Sustainable Coastal ecosystem conservation and management
* Establishment of Coastal/Mangrove Park
* Coastal Ecosystem Resources Center
* Sustainable Fisheries Development Project

1. A **National Biodiversity Strategy and Action Plan and the Niger Delta Development Master Plan** (2007) were also developed but they were never implemented.
2. In 2010, a **Niger Delta Action Plan** was developed by the new Ministry of Niger Delta Affairs to improve the lives of the Niger Delta residents and help translate several previous plans into action over a 5 year period (2012 – 2017). The Action Plan was to be implemented in three tranches - short (one year), medium (two to three years) and longer term (five years and beyond) based on the strategic vision of the Niger Delta Master Plan, the Technical Committee Report of 2008 and the Collaborative Development Framework. The Action Plan comprised a Niger Delta Development Results Framework, providing strategic guidance to development programming of all stakeholders in the region combined with a new Multi-Donor Trust Fund, which will make high impact catalytic investments within this framework, focusing particularly on market development approaches. The Results Framework describes indicative investment allocations of $10 billion, with the MDTF seeking to raise an additional $200 million to finance its first tranche of investments.
3. In 2011, an independent **Environmental Assessment of Ogoniland** located in the South West of the Niger Delta was conducted by UNEP to assess the impact of oil spills on natural resources and livelihoods of the communities in Ogoniland. The report findings revealed the widespread of oil contamination on land, ground water, surface water, sediment, vegetation, air pollution, and impacts the public health of the communities. The major recommendation was the immediate commencement of a comprehensive cleanup of oil contaminated communities in Ogoniland which led to the set-up of the Hydrocarbon Pollution Restoration Project (HYPREP) and tasked with the responsibility of implementing the UNEP-recommended action plan in Ogoniland and adopting the lesson-learned from the Ogoni project, especially the recorded successes, to other petroleum contaminated communities across the country. Between early August of 2012 and late July of 2013, HYRPEP was able to accomplish eight (8) UNEP-recommended emergency measures and due to its institutional setup within the Federal Ministry of Petroleum Resources as against the Federal Ministry of Environment, further activities were terminated due to in-fighting and lack of interest by the Federal Ministry of Petroleum Resources.
4. In October 2015, the Government of Nigeria submitted their Intended Nationally Determined Contribution (INDC) as a requirement for the Conference of Parties to the United Nations Framework Convention on Climate Change (COP-UNFCCC) in Preparation for the Adoption of Climate Change Agreement at the Paris Conference on Climate Change, December 2015. The INDC implementation will fall under the Nigeria Climate Change Policy Response and Strategy, adopted in 2012, to foster low-carbon, high growth economic development and build a climate resilient society through the attainment of the following objectives:

* Implement mitigation measures that will promote low carbon as well as sustainable and high economic growth;
* Enhance national capacity to adapt to climate change;

1. Raise climate change related science, technology and R&D to a new level that will enable the country to better participate in international scientific and technological cooperation on climate change;
2. Significantly increase public awareness and involve private sector participation in addressing the challenges of climate change;
3. Strengthen national institutions and mechanisms (policy, legislative and economic) to establish
4. Within the INDC, sector-specific strategies and mitigation priorities were included, which aim to reduce the impacts of climate change. Below those that affect the coastal region and could be supported within the remit of the WACA program are highlighted.

Table 2: Strategies highlighted in Nigeria’s INDC which relate to coastal region

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| **AGRICULTURE**   * Climate smart agriculture and reforestation |
| **FRESHWATER RESOURCES, COASTAL WATER RESOURCES AND FISHERIES**   * Enhance artisanal fisheries and encourage sustainable aquaculture as adaptation options for fishing communities. |
| **FORESTS**   * Develop and maintain a frequent forest inventory system to facilitate monitoring of forest status; and initiate a research program on a range of climate change related topics, including long-term impacts of climatic shifts on closed forests. * Provide extension services to CSOs, communities and the private sector to help establish and restore community and private natural forests, plantations and nurseries. * Improve management of forest reserves and enforce low impact logging practice. |
| **BIODIVERSITY**   * Support and implement programs for alternative livelihoods in order to reduce unsustainable resource use that contributes to loss of biodiversity |
| **HEALTH**   * Reinforce programs to build and maintain wastewater and solid waste management facilities. * Establish early warning and health surveillance programs. |
| **HUMAN SETTLEMENTS AND HOUSING**   * Develop climate change adaptation action plans for urban areas, particularly those at greatest risk. * Assist communities to reduce vulnerability through participatory planning of land use & housing. * Discourage building/urban encroachment into vulnerable areas, high risk zones & low lying areas. * Discourage housing and settlement practices that are maladaptive in the face of climate change. |
| **ENERGY**   * Ending gas flaring by 2030 * Include increased protective margins in construction and placement of energy infrastructure (i.e. higher standards and specifications). |
| **TRANSPORTATION AND COMMUNICATION**   * Undertake risk assessment and risk reduction measures to increase the resilience of the transportation and communication sectors. |
| **INDUSTRY AND COMMERCE**   * Undertake and implement risk assessments and risk reduction measures * Review and enforce land use plans in industrial areas in light of climate change * Encourage relocation of high risk industries, facilities and markets |
| **DISASTER, MIGRATION AND SECURITY**   * Strengthen capacity to anticipate disasters and impacts on internal migration and security * Strengthen capacity to respond through information and awareness, training, equipment, plans and scenarios, and communication * Strengthen individual and community-based emergency preparedness and response   capacity in high risk areas |
| **LIVELHOODS**   * Animate communities with appropriate engagement methods, in order to elicit and document valid climate change and livelihood related needs/vulnerabilities. |
| **VULNERABLE GROUPS**   * Adapt government programs, including emergency response plans and programs directed at vulnerable groups, to better address the impacts of climate change on these groups. * Adapt to our national, the World Meteorological Organization- Global Framework for Climate Services (WMO-GFCS) to Nigeria's needs (National Framework for Application of Climate Services - NFACS) to reduce vulnerability of communities through enhanced advocacy and implementation of the five Pillars of the Framework. |

**Previous and On-going World Bank Engagement**

* Local Empowerment and Environmental Management Project (LEEMP) FY03-09
* ***Knowledge Activities and Technical Assistance:*** GEF FSP-Nigeria: Second National Fadama Development Critical Ecosystem Management Project (06); Enhancing the Climate Resilience of Growth in Nigeria: Disaster Risk Management PDNA (GFDRR: Track III TA); Nigeria - Scaling Up Sustainable Land Management Practice, Knowledge, and Coordination; Nigeria Climate Change Assessment with a brief description of vulnerability profile of Lagos state.
* The National Biodiversity Strategy and Action Plan (NBSAP) was a product of the World Bank-assisted Environment Management Project in 1998.
* West Africa Regional Fisheries Program Project (2009-2016).

**Technical and Financial Partners Active in the Area**

1. Very few initiatives are under implementation that target the development of Nigeria’s coastline and environment. The main activities of technical and financial partners have been research based and include:

* USAID (2014) Mapping the exposure of socioeconomic and natural systems of West Africa to coastal climate stressors.
* A Program of the Governments of the GCLME countries, with the assistance of GEF/UNIDO/UNDP/UNEP and US-NOAA (2010) Transboundary Diagnostic Analysis.
* UNDP Niger Delta Biodiversity Project (2011-2015)

**Role of the World Bank and Future Engagement**

1. The existing West Africa Coastal Areas (WACA) project is being implemented in a number of countries upstream of Nigeria (Benin, Côte d’Ivoire, Ghana, Mauritania, São Tomé and Príncipe, Senegal, and Togo,). The project is designed to improve the livelihoods of coastal communities in West Africa by reducing the vulnerability of its coastal areas and promoting climate- resilient integrated coastal management.
2. The program will provide technical assistance to determine the factors that threaten people, ecosystems, and economic assets along the coast. It also offers multi-sectoral solutions such as land management and spatial planning, infrastructure, natural habitat management, and pollution management. Interventions are organized into three pillars:
3. Strategic investment planning, including formulating and prioritizing key policies and sectoral investments to foster adaptation to climate change and build socioeconomic resilience
4. Knowledge, information, and capacity building, including multihazard vulnerability assessments in select urban areas, cost-benefit analyses of adaption options, and creating stronger information systems in national coastal areas
5. Country and regional engagement and resource mobilization, including analysis of stakeholders’ roles and responsibilities, political economy studies, and identifying  funding and finance opportunities.
6. The program addresses many of the challenges outlined for the coastline of Nigeria. A major focus for this coastline needs to be on poverty alleviation, and addressing the regions socio-political issues and resulting conflict and violence.

**Key issues for consideration**

1. There is lack of adequate baseline information related to many parts of the coastal zone. The NAP highlights the need for improved socio-economic information for the region, which in many cases is not available or reliable, causing a barrier to the accurate planning and implementation of the NAP (1).
2. There is a lack of trust between Issues of cooperation between regional institutions and the local communities, result in inadequate contributions to improved coastal management.
3. Whilst a number of Action Plans, have been developed for Nigeria’s coastal region, limited action has actually been undertaken on the ground.
4. The security situation and the recurrent episodes of intense political tensions in the region make it difficult, if not impossible, to implement activities and perform fieldwork in the area.
5. The Coastal Zone Management Division in the Department of Erosion, Flood and Coastal Zone Management (DEFCZM) of the Federal Ministry of Environment is responsible for monitoring and controlling coastal and river bank erosion, coastal land management and dredging and reclamation of affected areas receives funding from 2 sources: federal budget and the Ecological Funds which is financed through an annual provision of 1.5% of the Federal account The Ecological Fund Office (EFO) is located in the Presidency and is responsible for processing all requests for funds, documentation of all disbursements, monitoring and co-ordination and general administration of the funds. The fund allocation is decided by the National Committee on Ecological Problems which is chaired by the Minister of Environment and includes the representatives from various line ministries and the RBDAs. Over the years huge budgetary allocations have been made to tackling coastal erosions and environmental remediation problems such as oil pollution. In spite of these huge budgets allocated to address a wide range of activities, mismanagement and misallocation of funds have resulting in lack of investments.
6. The Government must provide the Bank with a list of priority actions and investments to be considered for future cooperation.
7. The Bank would appreciate designating an official counterpart to work with and coordinate all future activities.

# Bibliography

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1. Defined as 200km strip from the coastline inland [↑](#footnote-ref-1)
2. Economic system indicators of: GDP; Urban, built up areas; and Cocoa, coconut, palm oil, rubber and banana production (metric tons) used. [↑](#footnote-ref-2)
3. This include economic activity of Lagos and oil extraction facilities in the delta. [↑](#footnote-ref-3)