

INTEGRATING ESIA INTO COASTAL HIGHWAY INFRASTRUCTURE IN AGRICULTURE, FORESTRY, AND FISHERIES (AFF) SYSTEMS IN NIGERIA



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Introduction

- Agriculture, Forestry, and Fisheries (AFF) practices are crucial to human survival and economic growth.
 - Poor planning and weak regulation of development often lead to biodiversity loss, pollution, and social displacement.
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- Coastal highway infrastructure development promises economic connectivity but simultaneously threatens fragile ecosystems for AFF communities.
- Coastal ecosystems are among the most diverse and productive natural habitats on earth. serve as home to countless plant and animal species, many of which are endemic or endangered.



Importance of Coastal Areas

- Location of world's major cities and a large portion of economic activities such as industry, shipping and tourism, coastal fisheries, aquaculture, forestry and agriculture,
- Area for transfer of matter, energy and living organisms between land and sea with high biological productivity
- Habitat for estimated that 90 percent of the world's fish production
- Support livelihood of farmers and fishers
- Support migratory and non-migratory waterfowl, shorebirds, and endangered reptiles
- Reefs and mangrove, are important for the mitigation of the effects of natural disasters, essential in natural processes, such as land accretion, and control coastal erosion and other damages arising from wind and wave action.

Traffic in Lagos, Nigeria

Nigeria with its 242 million people (NBS), faces challenges in housing, transportation, and public services.



Fig 1: Traffic congestion in the city of Lagos, Nigeria.
Source: www.istockphoto.com

Lagos-Calabar Coast Highway Project - Nigeria

- Approximately 700-750 km Lagos-Calabar coast highway project with a dual carriageway with five lanes on each side, and a train track in the middle.
- Parallel to coastlines and traversing ecologically sensitive zones,
- Transverses nine coastal states of Southern Nigeria (**Lagos, Ogun, Ondo, Edo, Delta, Bayelsa, Rivers, Akwa-Ibom and Cross River**)

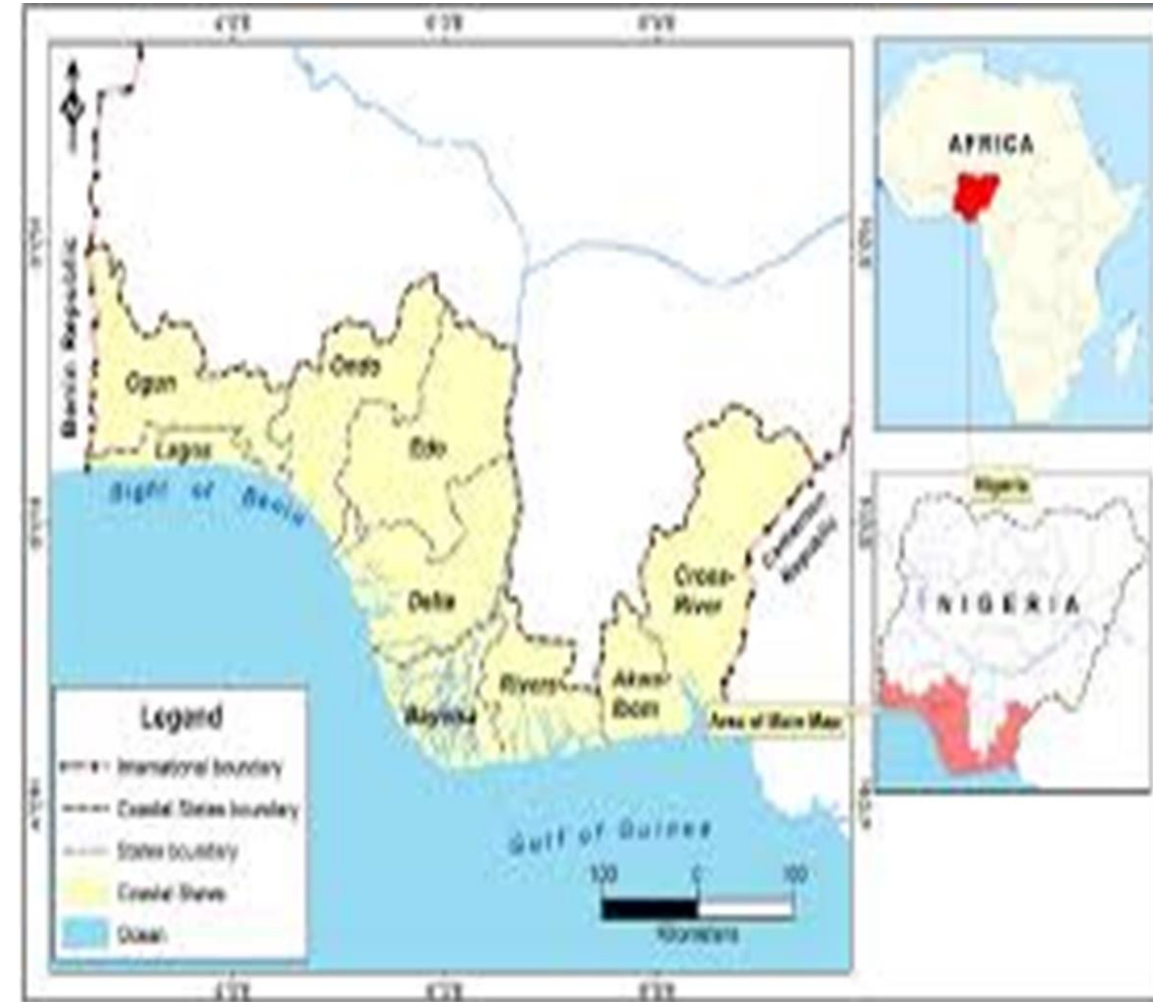


Fig 2 Map of Nigeria showing the coastal states

Coastal Development

- Involves earthworks, waste generation, land reclamation, drainage systems and bridge construction over rivers and estuaries.
- Subject the coastal ecosystems to habitat fragmentation, exposing organisms to the edge effect, roadkill, exotic species invasion, pollution, increase erosion, over-hunting and genetic barriers.



- Vulnerable to the impacts of climate change, including sea-level rise, increase storm intensity and ocean acidification and threatens ecosystems that exist in coral reefs.
- Lead to habitat loss, altered water conditions and increased stress on coastal species, contributing to biodiversity loss.

Construction Activities on Fishing and Farming Communities

- Huge fragmentation of forest and displacement of agriculture and fishing communities, destruction of beaches, forest reserves and wetlands and biodiversity loss.
 - large-scale deforestation, disrupt fisheries and agricultural landscapes, disruption of hydrological systems, social fragility and long-term economic loss, Increased vulnerability to climate change impacts
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Fig 3 The Road Construction

Sources: PENGlobal Associate Vanguard news paper

Activities on Forest Reserves

- Olague and Uremure Yokri Forest Reserves in **Delta** State;
- Apoi and Edumanon National Parks, in **Bayelsa** State
- Eba Island Forest Reserve between **Ogun** State and **Ondo** State - refuges for several endangered species including chimpanzees (*Pantroglodyte elliotte*),
- Stubbs Creek Forest Reserve, a legally gazette forest reserve in **Akwa Ibom** State



Fig 4: Map of proposed Lagos – Calabar Coastal Highway showing route and protected areas.

Assessment process for Lagos-Calabar Coast Highway Project

- Nigeria's **EIA Act (1992)** mandates ESIA for Lagos-Calabar Highway; it aligns with the several **Sustainable Development Goals (SDGs)**, and supports Nigeria's Nationally Determined Contributions (NDCs) under the UNFCCC.
 - Identifies ecological trade offs before construction and ensures stakeholder participation
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- ESIA process started in December 2023, preliminary ESIA approval in May 2024.
 - ESIA done in sections (9 sections)
 - ESIA process in some states has not been completed but full approval and public announcements regarding the highway alignment

Controversy is subject to Misinformation / Disinformation

- Approving or initiating the project before completing a comprehensive ESIA
- Lack of transparent governance and community engagement.
- Reduced prioritization of biodiversity conservation and community /human wellbeing
- Failed due process and adherence to public procurement regulations
- ESIA is a procedural formality; to satisfy regulatory requirements and obtain permits
- Design and routing the highway with the destruction of businesses and biodiversity
- Inefficient redress and feedback
- Potential cost overruns and financial mismanagement

Perceptions

Stakeholder Group	Government Position	Community/NGO Perception	Key Controversies
Federal Government / Ministry of Works	Project is lawful, ESIA requirements met and, compensation ongoing.	Construction before ESIA approval, compensation inadequate.	Timing of ESIA, transparency of procurement, route alignment justification.
Local Communities (Fishing villages, farmers, forest-dependent groups)	Highway will bring development, jobs, and market access.	Fear of displacement, loss of farmland, reduced access to fishing grounds,	Livelihood disruption, inadequate consultation, mistrust of government promises.
Environmental NGOs / Civil Society	Government claims mitigation measures are in place.	ESIA is fragmented, lack cumulative impact assessment, weak climate safeguards.	Risk of ecosystem collapse, mangrove destruction, biodiversity loss.
Investors / Private Sector	Highway will boost trade, tourism, and regional connectivity.	legal disputes, reputational risks, and stalled diaspora investments	Uncertainty over project legality, cost transparency, and long-term viability.
Academics / Independent Experts	Government emphasizes technical necessity of route changes.	Experts argue diversion reasons are unclear, demand independent monitoring of ESIA findings.	Lack of independent oversight, weak scientific justification for alignment.
Judiciary / Legal Stakeholders	Government insists approvals are valid under restrictive procurement rules.	Multiple lawsuits filed challenging legality of ESIA and procurement process.	Legal compliance, executive overreach, accountability gaps.

Coastal Highway ESIA Finding and Implementation

- Emphasis on controlled earthworks (rigid concrete) and site preparation, effective waste management systems and putting traffic and safety controls with continuous environmental monitoring
 - Identify that natural features such as swamps, mangroves, and wetlands require special foundation engineering that will minimize habitat destruction and avoid sensitive ecological zones where possible
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- Identify that altering the coastal landscape will increase vulnerability to erosion and flooding; requiring erosion control structures; flood resilient road elevation and shoreline protection measures
 - Redesign alignments where necessary; Route alignment mitigations were considered to reduce community displacement, avoid areas vulnerable to ocean surges; protect local settlements and communities from ocean surges and reduce long term coastal erosion impacts

Specific Environmental Considerations for AFF

- **Agriculture:** Highway construction risks - farmland fragmentation, soil erosion, runoff and sedimentation and water contamination
- **Soil and Water Management:** mitigation strategies such as buffer zones; soil stabilization and sustainable drainage systems to protect agricultural productivity.
- **Rerouting:** Route Optimization to avoid prime agricultural zones and biodiversity hotspots; Redesign alignments where necessary; ensuring the highway route avoids prime agricultural zones.
- **Community Resilience:** Farmers can benefit from improved access to markets, ESIA ensures that compensation and support programs are in place for those negatively affected.

Specific Environmental Considerations for AFF

Forestry: Deforestation and biodiversity loss are major concerns.

- ESIA identifies critical habitats and forest reserves, supports reforestation and afforestation programs, and ensures compliance with Nigeria's climate commitments under the Paris Agreement.
 - Incentivize agroforestry and climate-smart agriculture to balance productivity with conservation
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 **Fisheries:** disrupt mangroves and breeding grounds, and reduced access to coastal waters.

- ESIA enforces pollution control, relocation support, and alternative livelihood programs for fisher folk. Implement mangrove restoration.
- Rerouting or Avoid active fish spawning areas and mangroves.
- Utilizing Nature-Based Solutions (sandscaping, mangroves, and vegetation) to protect the coastline rather than relying solely on concrete seawalls.

Specific Social Considerations for AFF

- Fishing and small-scale farming depend on natural resources: displacement, livelihood disruption, and cultural heritage concerns are addressed.
- Conduct participatory consultations with farmers, fisher folk, and forest-dependent communities.
- Ensures fair compensation, resettlement packages and livelihood restoration.
- Promotes inclusive stakeholder engagement and equity for marginalized groups
- Align Nigeria's ESIA Act with international best practices of World Bank, IFC standards on resettlement.
- Incorporates cultural heritage assessments to prevent loss of identity.
- Support alternative livelihoods (e.g., aquaculture, agro-processing).
- Establish effective grievance redress mechanisms.
- Establish independent ESIA monitoring units.



Improvement to the ESIA Process

- Cumulative Impact Assessments instead of section-by-section ESIA, the ESIA should assess the combined, long-term impact of the highway, alongside existing projects. Guideline for Strategic Environmental Assessment (SEA) is in the revised EIA Act could be used to tackle cumulative impacts,
- Transparent Stakeholder Engagement: Move beyond procedural compliance to "Free, Prior, and Informed Consultation" with local communities, particularly indigenous fishing villages, ensuring their voices shape the alignment.
- Independent Monitoring Mechanism: Convene an independent body to scrutinize ESIA findings and mitigation claims, ensuring accountability
- Harmonized with international best practices such as IFC Performance Standards, AfDB safeguards, Equator Principles focusing on the resettlement standards, livelihood restoration, biodiversity offsets, and GRM.

Conclusion

- The Lagos–Calabar Coastal Highway illustrates the challenge of balancing infrastructure growth with the protection of coastal Agriculture, Forestry, and Fisheries systems. The ESIA findings show that the project poses significant risks to these systems.
- These risks can be reduced where ESIA is effectively applied through route optimization, biodiversity protection, erosion and flood controls, stakeholder engagement, livelihood restoration, and continuous monitoring.
- Fragmented implementation, weak transparency, limited consultation, and absence of cumulative impact assessment /SEA continue to undermine the process
- Achieving sustainable outcomes will require comprehensive cumulative assessments, independent monitoring, adherence to best practices/safeguards, and genuine community participation to balance economic connectivity with ecological resilience.



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THANK YOU

Let's continue the conversation!

MERCI!

Message me your questions or comments in the IAIA26 app.

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