NIPSS

EXECUTIVE SUMMARY

ON

ROADMAP FOR BLUE ECONOMY AND SUSTAINABLE DEVELOPMENT IN NIGERIA: ISSUES, CHALLENGES AND OPPORTUNITIES

BY

SENIOR EXECUTIVE COURSE 47, 2025
NATIONAL INSTITUTE, KURU

DECEMBER , 2025

BLUE ECONOMY AND SUSTAINABLE DEVELOPMENT IN NIGERIA

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Introduction

Nigeria loses about ₦33.3 trillion annually to untapped blue economy potential due to the underutilisation of its extensive coastal and inland waters, which function as disparate systems rather than a unified economic engine (Deloitte, 2022). Oceans, seas, and inland waters form the backbone of a marine and blue economy that generated about $2.6 trillion in gross value added in 2020 according to recent Organisation for Economic Cooperation and Development (OECD) assessments. This reflects a continued global expansion supported by updated economic modelling (OECD, 2024). It is also projected that by 2030, socio-economic activities facilitated by the maritime environment would be worth over 34.2 trillion dollars yearly, with the potential to generate about 300 million jobs worldwide (World Bank, 2017). These economic activities in the maritime domain make it the seventh-largest economy in the world, supporting the livelihoods of over 3 billion people (World Economic Forum, 2024). Harnessing the vast potential of the maritime environment constitutes a unique economic ecosystem commonly known as the blue economy.

The Blue Economy encompasses a wide range of activities that depend on aquatic ecosystems, which include fisheries, tourism, and renewable energy (World Bank, 2017). Blue Economy, therefore, refers to the sustainable use of ocean, coastal, and inland water-based resources for economic growth while preserving the health of the ecosystem (Food and Agriculture Organization

[FAO], 2022). Sustainable development, on the other hand, focuses on meeting human needs and aspirations while ensuring social inclusivity (United Nations [UN], 1987).

The nexus between the Blue Economy and Sustainable Development, therefore, lies in the capacity of water-based sectors to create jobs, promote equitable growth, and enhance climate resilience. Despite its potential, the blue economy is under severe threat from overfishing, with nearly 90 per cent of global fish stock fully exploited or overexploited (FAO, 2021). It also faces growing challenges from pollution, including the entry of some 11 million tonnes of plastic into aquatic ecosystems annually, as well as many unsustainable human practices (UN Conference on Trade and Development [UNCTAD], 2021). Therefore, several countries are now adopting strategies to enhance their blue economies for sustainable development.

Portugal enhanced its blue economy through an integrated National Ocean Strategy (2021 – 2030) that links ocean growth with environmental protection (Government of Portugal, 2021). It prioritises sustainable fisheries and aquaculture, marine biodiversity conservation, Marine Spatial Planning (MSP), offshore renewable energy, and greener, more efficient ports (European Commission, 2024; OECD, 2025). The country created specialised clusters and innovation hubs, such as Blue Economy Cluster and Hub *'Azul'*, to foster research and entrepreneurship (Portugal Trade and Investment Agency, 2023). Portugal also mobilised blue finance instruments, including the Portugal Blue Investment

Initiative, to de-risk private capital and scale sustainable projects. The country's blue economy now generates about €7.8 billion and supports 295,000 jobs, about 6 per cent of employment (European Commission, 2024).

Norway enhanced its Blue Economy through integrated ocean management plans under a National Sustainable Ocean Plan (Government of Norway, 2023). Policy instruments emphasise ecosystem-based management, precautionary fisheries regulation, joint Barents Sea stock management, and stricter control of activities in vulnerable Arctic waters (Honneland, 2025). Norway promotes low-impact aquaculture, ocean-based renewable energy, carbon-neutral shipping, and marine biotechnology as key growth areas within environmental limits (Government of Norway, 2019). The country also invests heavily in marine research, digital ocean technologies, and international partnerships, while excluding deep-sea mining to reduce ecological risks (Ocean Panel, 2023).

Japan is an island nation with limited land but a vast marine territory. Its blue economy exceeds $40 billion, driven by fisheries, shipping, marine robotics, and tourism (Sasakawa Peace Foundation, 2021). The fisheries sector is facing sharp production declines, dropping over 30 per cent since the 1990s (Huy, 2022). In 2022, fish catch dropped 7.5 per cent from the previous year, to 3.85 million tonnes, due to overfishing and climate change (Xinhua, 2023). To address this, Japan revised its Basic Act on Ocean Policy in 2018, integrating United Nations (UN) Sustainable Development Goals (SDGs) and promoting ecosystem-based

management (Japanese Law Translation, 2024). The government developed autonomous underwater vehicles capable of diving to depths of up to 8,000 meters, enabling seabed mapping and resource exploration (Yomiuri Shimbun, 2022). Artificial Intelligence (AI) initiatives also optimised aquaculture feed production and monitoring of fish stocks, blending technology with maritime tradition (Global Seafood Alliance, 2023). These efforts demonstrate Japan's strategic balance of economic growth with ecological sustainability.

South Africa maintains an Exclusive Economic Zone (EEZ) of 1.5 million square km. In 2014, South Africa initiated '*Operation Phakisa* 'to create over one million employment opportunities by 2030 in sectors like aquaculture, offshore renewable energy, and marine transport (South African Government, 2017). As of 2023, the Strategy had attracted over $3.6 billion in investments and created over 8,000 jobs (Parliamentary Monitoring Group, 2023). However, factors such as marine pollution, Illegal, Unreported, and Unregulated (IUU) fishing, and port inefficiencies continue to impede progress. South Africa is tackling these through maritime law reforms, satellite tracking of vessels, and port upgrades. Coastal cities such as Durban are also investing in climate-resilient infrastructure to mitigate flooding and erosion (World Maritime University, 2023). This strategy blends economic diversification with environmental management, making it one of Africa's most advanced in blue economy governance.

Nigeria has a vast coastline of 853 km, an EEZ extending to 200 nautical miles and inland waterways that cover more than 10,000 km (NIWA, 2025). The

Niger, Benue, and Cross Rivers, alongside water bodies like Lake Chad and the Niger Delta estuaries, support agriculture, fisheries, transport, energy, and community livelihoods. These hydrological systems also provide the basis for a distinct Nigerian blue economy model that integrates coastal and inland water bodies into one sustainability framework. The country's blue economy covers offshore and onshore oil and gas along with fisheries and aquaculture, maritime transport, coastal tourism and renewable energy. Thus, Nigeria's marine and blue economy has the potential to contribute about $296 billion annually to the nation's GDP if fully developed (NIMASA, 2025).

Despite its vast aquatic endowments, the contribution of the marine and blue economy to Nigeria's GDP, however, remains negligible. The country also loses about $70 million annually to IUU fishing (UN Office on Drugs and Crime [UNDOC], 2021). Furthermore, mangrove forests disappear at a rate of between 2 and 3 per cent annually, while pollution and sedimentation affect more than 7,000 km of waterways, particularly in coastal areas (NIMASA, 2023). Some states, such as Bayelsa and Lagos, produce more than 45 per cent of national aquaculture output (FAO, 2024). However, these states continue to face cold-chain gaps, coastal erosion, and poor coordination. Inland freight by water remains below 5 per cent despite its cost advantage, raising logistics cost by 20 per cent above regional averages (World Bank, 2022). Other factors, such as port inefficiencies and regulatory bottlenecks, have also diminished Nigeria's competitiveness within the Gulf of Guinea (World Maritime University, 2024).

These problems reflect fragmented governance, weak data systems, and a lack of integrated Marine and Aquatic Spatial Planning (MASP).

The Federal Government has begun addressing these weaknesses through various initiatives. The National Integrated Infrastructure Master Plan [NIIMP] (2020), the Deep Blue Project (2021), and the National Maritime Transport Policy (2022) signal important shifts. Also, the establishment of the Federal Ministry of Marine and Blue Economy (FMMBE) in 2023 and the adoption of the National Policy on Marine and Blue Economy (NPMBE) in 2025 represent major institutional and policy milestones. These efforts were geared toward enhancing security, maritime safety, port efficiency, and trade, in line with the President's Renewed Hope Agenda for improved economic diversification. However, without a unifying sustainability lens that integrates stewardship, innovation, and inclusion, progress will remain uneven.

It was within this context that the President of the Federal Republic of Nigeria, His Excellency Bola Ahmed Tinubu, GCFR, mandated participants of Senior Executive Course (SEC) 47, 2025 at the National Institute for Policy and Strategic Studies (NIPSS) to research the theme: **"*Blue Economy and Sustainable Development in Nigeria: Issues, Challenges, and Opportunities***." The directive reflects a national commitment to reposition Nigeria's maritime and hydrological endowments as engines of inclusive growth, environmental renewal, and long-term prosperity. The study provides evidence-based insights to guide the implementation of NPMBE 2025 and related frameworks. It demonstrates

how a sustainability-centred blue economy can unify economic diversification, environmental stewardship, and social transformation across Nigeria's coastal and inland water bodies.

Aim of the Study

The aim of this study is to evaluate the Blue Economy and Sustainable Development in Nigeria, with a view to optimising its potential and making actionable recommendations.

Objectives of the Study

The objectives of the study are to:

i. Examine the strategic environment, historical evolution, and current trends of the Blue Economy and sustainable development in Nigeria.
ii. Assess the policy, legal, and institutional frameworks guiding the Blue Economy, with a focus on the roles of key Ministries, Departments, and Agencies (MDAs).
iii. Analyse the roles and interactions of government, private sector, civil society, and local communities in promoting sustainability across marine sectors.
iv. Identify the issues and challenges limiting effective utilisation of Nigeria's marine and resources for sustainable development.
v. Explore emerging opportunities and policy options for achieving an inclusive, innovation-driven, and environmentally responsible Blue Economy.

vi. Conduct a comparative analysis of Blue Economy sectors between Nigeria and some selected countries.

vii. Propose practical recommendations and implementation strategies to strengthen Blue Economy governance and align national efforts with the UN SDGs and Agenda 2063.

Summary of Findings

Based on the above objectives, the following findings emerged from the study.

Findings on Objective 1: Nature of the Strategic Environment with Historical Evolution and Current Trends of the Blue Economy and Sustainable Development in Nigeria

i. An integrated governance is required to support the development of the marine and blue economy sector. This enhances sustainable national development, as demonstrated in all countries visited: Brazil, Greece, Egypt, Indonesia, Algeria, Kenya, the Philippines, the UK, and others, which all operate unified governance and coordination mechanisms.

ii. Consistent and coherent legal and policy frameworks boost investor confidence and enable private sector-driven growth, as seen in Brazil, Greece, Egypt, the UK, Tunisia, Algeria, and Kenya, where harmonised maritime and environmental legislation support long-term investment in fisheries, coastal tourism, ports, shipbuilding, and offshore energy.

iii. Investments in the marine and blue economy require strong safety and security guarantees that integrate coastal and riverine communities, as shown by the success of Kenya, Tanzania, and Greece in reducing maritime crime.

iv. Environmental sustainability underpins all successful blue economies, with Egypt, Kenya, Morocco, and Tanzania showing how mangrove restoration, wetland protection, and ecological zoning strengthen fisheries, tourism, and coastal protection. However, Nigeria continues to experience annual mangrove loss of 2 to 3 per cent and widespread ecological degradation from oil spills.

v. Productive and diversified fisheries depend on modernised governance and scientific management, as demonstrated by Brazil, Egypt, Kenya, and Tanzania, which use digital co-management and basin-level planning to increase output. At the same time, Nigeria meets only one-third of its national fish demand and incurs an annual import deficit of $1 billion.

vi. Efficient inland waterway systems expand national logistics, reduce transport costs, and strengthen trade competitiveness, as seen in Greece, Egypt, Kenya, Morocco, Tanzania, and the UK, where waterways move large freight volumes. In contrast, Nigeria moves less than five per cent of freight due to siltation, insecurity, and inadequate navigation systems.

vii. Globally competitive ports rely on digitalisation and multimodal connectivity, as demonstrated in Suez Canal Port Complexes, Tanger Med in Morocco, Piraeus in Greece, and Mombasa in Kenya. At the same time, Nigeria

continues to face 18 – 21 day port dwell times, limited automation, and weak hinterland linkages.

viii. Integrated water-based tourism, culture, and ecological heritage corridors significantly contribute to economic diversification, as shown in Egypt, Kenya, Greece, and Morocco, while Nigeria derives less than five per cent of GDP from tourism despite its extensive rivers, mangroves, lakes, deltas, and rich cultural assets.

ix. Strong national science, technology, and innovation systems are essential for resource mapping, climate modelling, hydrography, biotechnology, and monitoring, as evidenced in Greece, Egypt, the UK, and Morocco. At the same time, Nigeria has updated hydrographic charts for only 40 per cent of offshore and limited coverage along inland waterways, while investing less than 0.3 per cent of GDP in marine and blue economy-related research and development (R&D).

x. Inland waterways are currently underutilised due to issues such as siltation, inadequate navigation aids, and security concerns.

Findings on Objective 2: Policy, Legal, and Institutional Frameworks Guiding the Blue Economy, with Focus on the Roles of Key MDAs

i. Fragmented governance across RBDAs, NIWA, and state MDAs creates duplication, unclear licensing, and weak coordination, as demonstrated by the Supreme Court ruling in Lagos State versus NIWA, which highlighted overlapping mandates in the management of inland waterways.

ii. Pollution governance is divided among National Emergency Management Agency (NEMA), Nigerian Maritime Administration and Safety Agency (NIMASA), the National Environmental Standards and Regulations Enforcement Agency (NESREA), National Oil Spill Detection and Response Agency (NOSDRA), and State Environmental Protection Agencies (EPAs), resulting in duplication, weak enforcement, and inconsistent responses to oil spills, plastic pollution, wastewater discharge, and industrial effluents.

iii. Environmental Impact Assessments are frequently procedural rather than operational, with many projects showing slow or incomplete remediation, particularly in oil-producing coastal and riverine communities.

iv. Overlapping institutional roles among the Nigerian Ports Authority (NPA), NIMASA, the Shippers Council, Customs, and security agencies slow port clearance processes, increase charges, and reduce competitiveness, as reflected in persistent 18 – 21 day dwell times.

v. Limited automation of about 35 per cent and inconsistent deployment of the National Single Window reduce transparency, hinder cargo visibility, and prolong clearance cycles across major ports.

vi. The absence of a unified offshore renewable energy policy across the Ministry of Power, FMMBE, and ECN discourage investment in offshore wind, tidal, wave, and floating solar resources.

vii. Financing instruments favour land-based solar, with no feed-in tariffs, tax credits, viability gap funding, or guarantees for marine energy development, which constrains investor participation.

viii. Mandates are fragmented across the Federal Ministries of Marine and Blue Economy, Environment, Power, Water Resources and Sanitation, Agriculture, NIMASA, NIWA, NPA, NESREA, and NHA, creating overlapping regulatory responsibilities and inconsistent sectoral coordination.

ix. Vertical coordination between federal and state governments is weak, leading to frequent conflicts over licensing, dredging approvals, waterway control, and revenue authority.

x. Budget fragmentation across MDAs results in isolated small-scale projects, abandoned infrastructure, and inconsistent technical standards for ports, waterways, fisheries, and environmental facilities.

xi. Core legislation remains outdated and misaligned with marine spatial planning, digital regulation, ecosystem management, and climate resilience, limiting Nigeria's ability to adopt modern blue economy practices.

xii. Comparative evidence from Greece, Morocco, and Kenya shows that unified governance models deliver clearer mandates, streamlined regulation, improved investor confidence, and stronger national coordination.

Findings on Objective 3: Roles and Interactions of Government, Private Sector, Civil Society, and Local Communities

i. Environmental degradation and insecurity in littorals and other inland basins have reduced fish output by more than 60 per cent, weakening traditional co-management structures between government regulators, local fishing communities, and other marine and blue economy related community associations.

ii. Weak mandate alignment among federal agencies such as NIWA, RBDAs, and state ministries limits effective collaboration with private hatcheries, cooperatives, and community fishing groups, resulting in inconsistent hatchery standards, inadequate disease surveillance, and underutilised reservoirs.

iii. Comparative examples from Greece, Kenya, Morocco, and Egypt show that community-led conservation initiatives and eco-certified value chains generate income and strengthen cooperation between governments, local communities, and private sector operators.

iv. Nigeria requires stronger coordination among environmental agencies, private recycling firms, local neighbourhood organisations, and coastal communities to establish conservation zones, improve waste governance, deploy digital pollution monitoring, and expand mangrove and wetland restoration.

v. Informal operators dominate fisheries, tourism, and transport services, often providing low service quality because they have limited access to training, finance, and regulatory support from government and formal private sector institutions.

vi. Nigeria's tourism sector requires strengthened partnerships among federal tourism bodies, state cultural agencies, traditional institutions, community cooperatives, and private operators to develop eco-tourism corridors, modular water-based infrastructure, and community-owned tourism enterprises.

vii. Inland waterway safety depends on collaboration across NIMASA, NIWA, the Marine Police, private transport operators, and local communities, but existing gaps in licensing standards, crew training, and river safety protocols weaken shared responsibility.

viii. Insecurity on rivers and creeks reflects coordination gaps between government security agencies, community surveillance groups, and private transport operators, resulting in persistent threats such as cargo theft, banditry, and illegal sand mining.

ix. Cold-chain failures persist because public institutions, private investors, and community-level cooperatives operate in silos, preventing joint development of modern storage hubs, landing sites, and community-managed processing centres.

x. The lack of structured collaboration among MDAs, aquaculture enterprises, civil society organisations, and basin-level communities reduces the

effectiveness of basin-based co-management, particularly for shared water resources used for fishing, irrigation, and navigation.

xi. Community-level knowledge of wetlands, rivers, and fisheries is underutilised in national planning because there is no systematic platform linking local associations, civil society groups, private researchers, and relevant MDAs.

xii. Successful examples from Kenya, Morocco, and Egypt demonstrate that when local communities, private firms, and government agencies jointly manage conservation zones and eco-tourism assets, they generate jobs, diversify income streams, and improve environmental stewardship.

Findings on Objective 4: Key Challenges Limiting Effective Utilisation of Nigeria's Marine and Blue Economy Resources for Sustainable Development

i. Security improvements at sea attributed to the Deep Blue Project contrast sharply with persistent inland waterway vulnerabilities, reflecting unequal programme coverage across Nigeria's marine and inland domains.

ii. The Deep Blue Project reduced offshore piracy to near zero, leading to lower insurance premiums, increased vessel traffic, and improved maritime confidence among international shipping operators.

iii. Mandates across the Nigerian Navy, NIMASA, NIWA, Marine Police, and state security outfits overlap, resulting in a two-speed security system that is robust offshore but weak along rivers, creeks, and inland navigation routes.

iv. Inland accident reporting remains fragmented because many jetties and landing sites operate without manifests, radio communication systems, standardised weather protocols, or compliance monitoring by relevant MDAs.

v. Institutional learning is limited because the operational successes of the Deep Blue Project have not been adapted or transferred to inland waterways, where surveillance gaps and weak patrol coverage continue to enable insecurity.

vi. NIIMP implementation has been slow due to project fragmentation, weak inter-agency coordination, and inconsistent funding, resulting in underperforming waterway transport infrastructure and stalled corridor-based development.

vii. The NPMBE 2025 provides strategic direction for the Blue Economy but requires stronger alignment with existing sectoral laws, clearer implementation pathways, and improved coordination between federal and state institutions.

viii. Inland waterway transport still handles less than 5 per cent of national freight despite NIIMP's emphasis on multimodal integration, demonstrating a gap between policy ambition and operational delivery.

ix. The absence of an integrated marine–inland data system limits the effectiveness of the NPMBE and hinders evidence-based planning, monitoring, and decision-making across fisheries, transport, conservation, and infrastructure sub-sectors.

x. Key programmes under NIIMP and NPMBE face limited private sector participation because project pipelines, feasibility studies, and risk-sharing mechanisms remain underdeveloped, especially for maritime logistics, aquaculture hubs, and cold-chain facilities.

xi. The Deep Blue Project's coastal surveillance assets remain underutilised for inland monitoring because institutional mandates and technical protocols do not support integrated waterway surveillance or shared situational awareness across agencies.

xii. Major national priorities such as dredging cycles, hydrographic charting, port access upgrades, and shoreline protection projects remain inconsistent, revealing gaps between NIIMP's long-term infrastructure planning and actual implementation on the ground.

xiii. Post-harvest losses remain as high as 30 per cent due to inadequate cold-chain systems, unreliable electricity supply, poor fish handling practices, and outdated storage infrastructure at landing sites and markets.

xiv. Hatchery certification is inconsistent across the country, with fewer than 50 per cent of hatcheries meeting national quality standards, which

xv. undermines seed quality and limits aquaculture productivity.

xvi. Reservoirs and irrigation systems with potential for aquaculture and rice–fish integration remain underused because institutional silos, overlapping mandates, and weak extension services prevent coordinated basin-level planning.

xvii. Nigeria discharges an estimated 14 million tonnes of plastic waste into aquatic systems annually, while wastewater treatment capacity remains only 0.04 per cent, resulting in severe pollution of rivers, lagoons, and coastal ecosystems.

xviii. Hydrocarbon contamination in parts of the Niger Delta exceeds safe limits by up to 7,000 micrograms per litre, harming fisheries, biodiversity, and community livelihoods.

xix. EIAs are largely procedural and not operational, leading to slow, incomplete, or poorly monitored remediation for industrial and extractive activities across coastal and riverine communities.

xx. Port access roads, storage facilities, and inland depots remain inadequate, while rail and inland waterway connections are marginal, undermining efficient multimodal logistics.

xxi. Human capacity gaps limit the adoption of port automation, logistics data analytics, and modern maritime technologies, reducing Nigeria's ability to compete with global logistics hubs.

xxii. Offshore wind, tidal, wave, and floating-solar resources remain untapped, with non-hydro renewables contributing less than one percent of Nigeria's energy mix despite significant marine resource potential.

xxiii. The absence of a Marine Energy and Resource Atlas increases project risk because existing oceanographic, seabed, and meteorological data are insufficient to support investment decisions in offshore renewable energy.

xxiv. Insecurity and environmental uncertainty raise operational risks for offshore infrastructure, deterring investors and slowing development of marine-based energy and logistics assets.

xxv. Weak hydrographic charting, inconsistent dredging cycles, and limited navigation aids restrict year-round inland water transport and increase accident risks.

xxvi. Infrastructure delivery is fragmented across Nigerian Maritime Administration and Safety Agency (NIMASA), National Inland Waterways Authority (NIWA), NPA, the Shippers Council, and state governments, causing duplication, conflicting standards, and poorly coordinated infrastructure investments.

xxvii. Public-Private Partnerships (PPP) participation in maritime and inland waterway infrastructure is low because of policy uncertainty, weak project-preparation pipelines, and insufficient risk-sharing arrangements.

xxviii. Research institutions such as the Nigerian Institute for Oceanography and Marine Research (NIOMR), National Hydrography Agency (NHA), and University Marine Programmes operate in silos, sharing minimal data and rarely engaging in joint planning or coordinated resource assessments.

xxix. Nigeria lacks a unified marine–inland data system for planning, regulatory oversight, or investor due diligence, leaving gaps in fisheries stock assessments, hydrography, pollution tracking, and socio-ecological data.

xxx. Severe human-capacity shortages persist in marine engineering, hydrography, robotics, ocean-data science, and related disciplines, weakening the country's ability to utilise and manage marine resources effectively.

xxxi. Technological adoption is weak across the sector, with major ports reaching less than 30 per cent automation and most inland waterways lacking Automatic Identification Systems (AIS), digital surveillance, and modern navigation systems.

xxxii. Inland waterways remain unsafe due to poor surveillance coverage, overloading of vessels, outdated boat designs, inadequate safety regulation, and limited enforcement capacity.

xxxiii. Many inland river stretches lack updated charts, markers, and weather information systems, creating navigational blind spots that increase accidents and discourage commercial use.

xxxiv. The current revenue base from the marine and blue economy sectors remains narrow, informal, and fragmented, with lots of leakages.

xxxv. The dismal 5 per cent inland water-based cargo movement is caused by inadequate infrastructure, silted waterways, lack of integrated planning in the use of waterways and other modes of transportation, as well as insecurity.

xxxvi. Fragmented regulatory mandates result in duplicated fees/charges and inefficiency, while weak enforcement results in revenue leakages, environmental degradation, and overexploitation of marine and aquatic resources.

xxxvii. Fragmented financing architecture limits private sector participation in Nigeria's marine and blue economy and hinders governments at all levels from executing impactful blue projects.

Findings on Objective 5: Emerging Opportunities and Policy Options for Achieving an Inclusive, Innovation-Driven, and Environmentally Responsible Blue Economy

i. Nigeria's key requirements for improved aquaculture include mandate alignment among federal and state agencies, expansion of modern cold-chain hubs, standardisation of hatchery operations, stronger disease surveillance, and basin-level community co-management systems.

ii. Nigeria's environmental priorities include the establishment of conservation zones, modernisation of waste governance systems, deployment of digital pollution monitoring tools, and upscaling of mangrove and wetland restoration programmes.

iii. Nigeria requires a national offshore renewable energy framework supported by coordinated data systems, demonstration or pilot projects, and blended finance mechanisms to unlock investment in offshore wind, tidal, wave, and floating solar resources.

iv. Nigeria's tourism opportunities require coordinated eco-tourism corridors, PPP-driven modular water-based infrastructure, community-led tourism enterprises, and targeted skills development for operators and youth.

v. Nigeria could adopt a corridor-led infrastructure development approach that strengthens dredging cycles, expands PPP participation, and aligns infrastructure delivery with emerging industrial and logistics clusters.

vi. Nigeria requires a network of Blue Innovation Hubs, a national Marine Data Network, a dedicated Marine Research Fund, and upgraded maritime and technical training institutions to support innovation-driven growth.

vii. There is huge revenue potential from concessioning and commercialising underutilised federal and subnational assets along Nigeria's coastal and inland water bodies to increase revenue mobilisation.

viii. The capital market presents a significant but untapped potential and opportunities for Nigeria to expand existing green financing instruments to cover blue sovereign bonds, blue sukuk, and guarantee instruments.

Findings on Objective 6: Comparative Analysis of Marine and Blue Economy Sectors Between Nigeria and Some Selected Countries

i. Comparative models from Greece, Egypt, Indonesia, Morocco, Algeria, the UK, and Kenya show that integrated governance systems, digital co-management structures, and ecosystem-based planning significantly increase fisheries productivity and strengthen sustainable resource utilisation.

ii. Experiences from Kenya, Morocco, and Egypt show that community-led conservation practices and eco-certified value chains support ecosystem restoration while generating income for coastal and riverine communities.

iii. Comparative cases such as Tanger Med in Morocco, Piraeus in Greece, and Mombasa in Kenya demonstrate that unified governance structures and digitalised port operations are central to achieving maritime efficiency and global competitiveness.

iv. Evidence from Kenya, Greece, and Morocco shows that marine spatial planning combined with blended finance instruments accelerates the development of offshore and nearshore renewable energy systems.

v. Global models from Kenya, Greece, and Morocco confirm that integrated cultural and ecological tourism frameworks are effective in attracting investment, diversifying local economies, and creating inclusive tourism opportunities.

vi. Evidence from Greece and Kenya shows that corridor-based, integrated infrastructure planning improves logistics efficiency, expands market access, and reduces duplication across marine and inland transport systems.

vii. Comparative models from Greece, Morocco, Kenya and Tanzania demonstrate that innovation hubs, marine technology incubators, and national data networks enhance competitiveness and support value creation across blue economy sectors.

viii. Evidence from Greece, Kenya, and Tanzania confirms that unified maritime command structures and digital incident reporting systems reduce accidents, improve situational awareness, and strengthen national maritime security outcomes.

ix. Most countries that optimised revenue from marine and blue economy adopted integrated Marine and Blue Corridors pathways like the Nile and Suez corridors in Egypt, the Aegean and Ionian corridors in Greece.

x. Countries such as Morocco, Kenya, and Tanzania have diversified their marine and blue economy through a structured Infrastructure Investment Fund, enhancing project bankability and attracting blended finance.

xi. Countries that leveraged debt-for-nature swaps collaborated with Multilateral Blue-Finance Platforms like PROBLUE, Blue Action Fund, and International Development and Finance Corporation (DFC) from project conception to develop a robust monitoring, reporting, and verification protocol.

Recommendations and Implementation Strategies

Given the foregoing findings of this study, the following recommendations and implementation strategies for promoting the digital economy, youth empowerment, and sustainable job creation in Nigeria:

Recommendation One: Fisheries and Aquaculture

Recommendation One

FGN should launch a **N12 trillion** national fisheries expansion programme leveraging public-private investment for fish production from the current 1.2 million MT to 10 million MT in the next two years.

Implementation Strategies

i. FMMBE to expedite the review and adoption of the Draft National Fisheries and Aquaculture Policy (2024–2028) by First Quarter 2026.

ii. FMMBE in collaboration with the Ministry of Finance Incorporated (MOFI) to establish a Comprehensive Fisheries and Aquaculture Value Chain Framework with an initial capital to mobilise private investment and coordinated financing to boost fish production from Second Quarter 2026.

iii. FMMBE to scale up water- and land-based aquaculture as well as marine, inland and industrial fisheries to create over 7.5 million jobs and generate about N25 trillion from Third Quarter 2026.

iv. FMMBE to facilitate the establishment of hybrid plants and insect-protein production hubs and hatchery infrastructure through public-private partnerships from Third Quarter 2026.

v. FMMBE in collaboration with Federal Ministry of Water Resources and Sanitation, other stakeholders to facilitate the development of aquaculture clusters around existing River Basin Development Areas from Second Quarter 2026.

vi. FMMBE in collaboration with the Nigerian Stored Products Research Institute, Banks of Industry and Agriculture to facilitate the provision and upscaling of cold chain facilities, climate-smart ovens and sun-dryers for inland fisheries clusters by Fourth Quarter 2026.

Recommendation Two: Marine Spatial Planning

FGN should develop a coastal and inland water bodies national Marine and Aquatic Spatial Planning Framework.

Implementation Strategies

i. SGF to set up a committee of relevant stakeholders to conduct a national baseline survey of marine resources and hydrological-ecosystems, by First Quarter 2026

ii. The committee to draft a Marine and Aquatic Spatial Planning Policy and develop a national coastal and inland waterways spatial management plan beginning from Second Quarter 2026.

Recommendation Three: Government Revenue

FGN should expand the revenue base of the Marine and Blue Economy Sector.

Implementation Strategies

i. FMMBE in collaboration with relevant stakeholders to design an expanded revenue generation strategic plan in all Blue Economy revenue subsectors not later than Second Quarter 2026.

ii. FMMBE and Infrastructure Concession Regulatory Commission to embark on the concessioning of underutilised assets along the coastal and inland waterways from Third Quarter 2026.

iii. FMMBE in collaboration with sub-national governments to designate Marine and Blue Corridors across inland and coastal waterways for fisheries, maritime logistics, trade and revenue generation not later than Fourth Quarter 2026.

iv. FMMBE in collaboration with MOD to commence the commercial export of hydrographic services to Gulf of Guinea States not later than Fourth Quarter 2026.

Recommendation Four: Blue Finance

FGN should develop a comprehensive marine and blue economy financing strategy.

Implementation Strategies

i. FMMBE in collaboration with FMF to create a financing window for Blue Marine and Economy sectors by Second Quarter 2026.

ii. CBN to coordinate with Development Finance Institutions to expand their financing windows to the wider Marine and Blue Economy sector projects by Third Quarter 2026.

iii. The FMMBE in collaboration with the Securities and Exchange Commission to regularly sensitise private sector actors in the blue economy on available capital market funding windows and listing opportunities from Fourth Quarter 2026.

iv. FMMBE to collaborate with FMF and Debt Management Office for the issuance of Sovereign Guarantees, Blue Bonds, Blue Sukuk and Risk Mitigation mechanisms for the mobilisation of local and international private equity funds and investments by Fourth Quarter 2026.

Recommendation Five: Governance Frameworks

FGN should review and harmonise all legal, policy and institutional frameworks on Marine and Blue Economy.

Implementation Strategies

i. SGF to constitute a National Technical Working Group comprising relevant stakeholders to review and harmonise all existing legislations on Marine and Blue Economy, not later than First Quarter 2026.
ii. FMOJ to submit the reviewed bills to the National Assembly for passage into law by Fourth Quarter 2026.
iii. SGF to seek presidential approval to transform the current Marine and Blue Economy Policy Advisory Council provided in the NPMBE into a National Blue Economy Coordination Council to be chaired by the President not later than Fourth Quarter 2026.

Recommendation Six: Governance Coordination

FGN should expand and upgrade the NPMBE 2025 Advisory Council into a National Blue Economy Coordination Council (NBECC).

Implementation Strategies

i. SGF to set up a committee to review composition and structure of the NBECC to widen representation by First Quarter 2026
ii. FEC to provide the NBECC with a clear mandate on policy and blue economy coordination oversight by Third Quarter 2026.

iii. FEC to operationalise the NBECC under the Office of the Vice President not later than Second Quarter 2026.

Recommendation Seven: Offshore Renewable Energy

FGN should incorporate Offshore Renewable Energy into the National Renewable Energy Integration Plan.

Implementation Strategies

i. FMP in collaboration with FMMBE to include offshore wind, wave, and tidal energy sources into the National Renewable Energy Integration Plan by Second Quarter 2026.

ii. FMP in collaboration with FMMBE and subnational governments to replicate the Lagos offshore wind model in other coastal states from Third Quarter 2026.

iii. FMP with FMMBE to produce a Marine and Inland Renewable Energy Resource Atlas of solar, wind, wave, and tidal resources across coastal and inland areas in one national platform for targeted investment by Third Quarter 2026.

iv. FMITI in collaboration with FMP and FMMBE to grant pioneer status for offshore renewable projects by Fourth Quarter 2026.

Recommendation Eight: Marine and Blue Skills and Jobs Creation

FGN should establish an Innovative Marine and Blue Skills, Job Creation and Social Inclusion Framework.

Implementation Strategies

i. FMMBE in collaboration with relevant Ministries Department and Agencies to co-design and deliver short-cycle, job-ready marine and blue skills programmes for priority groups including women and youths by Second Quarter 2026.

ii. FMMBE in collaboration with stakeholders to develop marine and blue skills vocational pathways through technical colleges, community hubs and certified private providers. by Second Quarter 2026.

iii. FMMBE to set up a committee to carry out needs' assessment for upgrade and expansion of training facilities and the financial implications at Maritime Academy of Nigeria, Oron and submit their report for approval not later Second Quarter 2026.

iv. FMMBE to begin the upgrade and expansion of the Academy not later than Third Quarter, 2026.

v. FMMBE in collaboration with Federal Ministry of Labour and Employment and private partners to link graduates' apprenticeship to job-placement schemes in Marine and Blue Economy sectors from Third Quarter 2026.

Recommendation Nine: Science, Technology and Innovation

FGN should develop National Blue Growth Innovation Hubs.

Implementation Strategies

i. FMMBE with FMF and FMSTI to establish one Innovation Hub in each geopolitical zone with basic laboratories, training halls and a digital backbone by First Quarter, 2026.

ii. FMMBE with NUC, NBTE, and relevant MDAs to design National Marine and Blue Innovation Programmes for acquisition of marine and blue skills by the First Quarter of 2026.

iii. FMMBE with BOI, ICRC, to invest in enterprise support systems for the hubs from Third Quarter of 2026.

iv. FMMBE in collaboration with NITDA to integrate the hubs into the National Digital Innovation Platform by the Second Quarter of 2027.

Recommendation Ten: Social Inclusion

FGN in collaboration with subnational governments should expand the mandate of Community Development Councils to include Community-Based Marine and Blue Governance across coastal and riparian states.

Implementation Strategies

i. FMMBE in collaboration with subnational governments to consult with the CDC on expansion guidelines for inclusion of community-based marine and blue governance in their mandate by Second Quarter 2026.

ii. FMMBE to collaborate with Coastal States Ministry of Environment and coastal communities to expand mangrove replanting to 10,000 hectares to be funded through climate finance from the Green Climate Fund, by First Quarter 2026.

Recommendation Eleven: Data Governance

FGN should establish a National Marine and Blue Data Network.

Implementation Strategies

i. FEC to approve the full participation of all relevant MDAs in a National Marine and Blue Data Network coordinated by NBS by First Quarter 2026.

ii. NBS in collaboration with FMMBE and FMCIDE to establish national marine and blue economy data governance reporting standard by Second Quarter 2026

iii. NBS in collaboration with FMMBE and subnational governments to set up data collection and reporting nodes across priority coastal and inland states by Fourth Quarter 2026.

iv. The FDFA in collaboration with FISON and NBS, to establish a Centralised Database for tracking production and supply by Fourth Quarter, 2026.

Recommendation Twelve: Maritime Safety and Security

FGN should enhance safety and security of inland waterbodies.

Implementation Strategies

i. FMMBE to collaborate with MOD, MOI and Police Affairs to strengthen security, safety, surveillance and vessel monitoring standards across inland waterways beginning First Quarter 2026.

ii. FMMBE to enhance surveillance and inspections at ports, jetties and shipping routes using Automated Identification System, drones, and satellite monitoring by Second Quarter 2026.

iii. FMMBE to develop an Inclusive Coastal Security Network to integrate youth, women, and local communities into maritime security and surveillance framework by Fourth Quarter 2026.

Recommendation Thirteen: Ecotourism and Recreation

FGN should develop coordinated corridors for blue tourism and ecological conservation.

Implementation Strategies

i. FMMBE working with States Ministries of Tourism, Arts and Culture to develop a Blue Tourism Masterplan, focusing on eco-resorts in coastal and inland water areas by First Quarter 2026.

ii. FMACCE in collaboration with subnational governments to develop and enforce a hospitality service national standard benchmark by Second Quarter, 2026.

iii. FMMBE to collaborate with relevant MDAs to develop eco-tourism integrated marketing and promotion programmes, to attract tourists by Third Quarter 2026.

iv. FMMBE in collaboration with subnational governments and private sector to develop a national offshore and aquatic sports framework for Nigeria not later than Fourth Quarter 2026.

v. FMMBE in collaboration with subnational governments, NDE, SMEDAN and relevant stakeholders to conduct training and capacity enhancement, including Education-to-Employment in Community-Based Eco-Tourism by Second Quarter 2027.

Recommendation Fourteen: Multi-Modal Transport and Security

FGN should develop a Masterplan for a Multi-modal Transport System.

Implementation Strategies

i. FMMBE in collaboration with relevant MDAs and private sector to dredge non-navigable inland water corridors to a 10-meter draught to improve vessel access, connectivity and trade by Third Quarter 2026.
ii. FMMBE in collaboration with relevant partners to link up ports with a multi-modal transport system by Fourth Quarter 2026.
iii. FMMBE to collaborate with MOD, MOI and Police affairs to create an Inland Waters Security Task Group by Fourth Quarter 2026.
iv. FMMBE in collaboration with relevant stakeholders to strengthen vessel licensing, monitoring and safety regime across inland water systems not later than Third Quarter 2026.

Recommendation Fifteen: Marine Biotechnology

FGN should accelerate a coordinated national programme on Marine Biotechnology Research and Innovations.

Implementation Strategies

i. FMMBE to collaborate with relevant stakeholders to promote collaborative capacity building in marine biotechnology R&D and innovations by First Quarter 2026.

ii. FMMBE to collaborate with FMoE to strengthen curriculum on Marine Bio-technology Research and Innovations by Second Quarter 2026.

iii. FMMBE to collaborate with relevant stakeholders to create linkages between academia and industry to commercial marine biotechnology R&D innovations not later than Third Quarter 2026.

iv. FMMBE to coordinate the National Biotechnology Research and Development Agency (NBDRA) and NIOMR to develop a national marine Biotechnology policy and roadmap by the Second Quarter 2026.

Recommendation Sixteen: Marine and Blue Manufacturing and Value Chain

FGN should expand industrial value-addition and blue manufacturing clusters across inland basins.

Implementation Strategies

i. FMMBE in collaboration with BOI and private actors to establish inland fish-processing, packaging, and storage parks not later than Fourth Quarter 2027.

ii. FMMBE in collaboration with NIWA and NIMASA to designate industrial river corridors for boatyards, vessel repair centres, and maritime SMEs by Third Quarter 2027.

iii. FMMBE in collaboration with FMF and ICRC to deploy a PPP pipeline for maritime manufacturing and processing facilities beginning Second Quarter 2026.

iv. FMMBE, in collaboration with River Basin Development Authorities, to establish hatchery and aquaculture service centres across inland states by the Second Quarter 2027.

Recommendation Seventeen: Environmental Stewardship

FGN should develop a control programme for marine and inland waters pollution control.

Implementation Strategies

i. The FMMBE to collaborate with FMEnv and NESREA for the expansion of its existing monitoring networks to provide comprehensive coverage of marine and inland water systems ensure monitoring data meets international standards for both regulatory enforcement and policy development needs by First Quarter 2026

ii. FMMBE in collaboration with relevant MDAs to establish a Joint Monitoring Coordination Committees that bring together technical experts to develop monitoring strategies and coordinate monitoring activities by Second Quarter 2026

iii. FMMBE working with relevant MDAs to develop ship-source pollution monitoring programmes that track pollution from vessels operating in Nigerian waters while developing real-time monitoring capabilities for

ship discharges, ballast water, and other maritime pollution sources, port-related pollution, and maritime transportation impacts on marine water quality by Third Quarter 2026

iv. FMMBE to coordinate with NOSDRA to develop early warning monitoring systems for oil spills and pollutions that support both spill response and blue economy protection by Third Quarter s2026

Recommendation Eighteen: Regional Cooperation and Collaboration

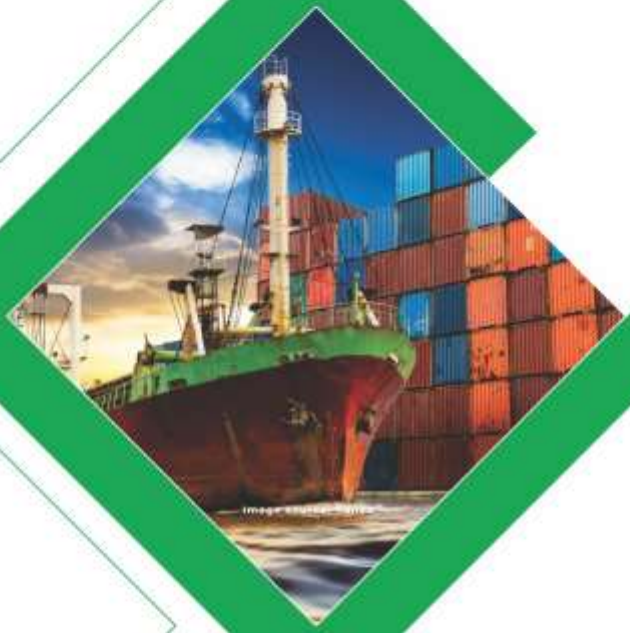
FGN in collaboration with other GoG States to enhance regional cooperation on marine resource conservation.

Implementation Strategies

i. The Presidency to host a marine conservation Summit for Gulf of Guinea Heads of States and Governments to develop a subregional mechanism for marine resource conservation, governance, and enforcement not later than Second Quarter 2026.

ii. MFA in collaboration with MOD to liaise with signatory countries to the Yaoundé Agreement and expand the mandate of the International Maritime Coordination Centres for ECOWAS and Economic Community of Central African States (ECCAS) Zones to cover Illegal Unreported Unregulated (IUU) Fishing and other marine conservation-related offences, from Second Quarter, 2026.

iii. FMMBE in collaboration with Ministry of Defence (MOD) to expand the mandate of the Deep Blue Project to cover deep-sea anti-IUU Fishing and marine conservation, not later than Fourth Quarter 2026.



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