**The Nigerian Institution of Marine Engineers and Naval Architects (NIMENA)**

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# The Place of Security in the Development of the Maritime Sector in Nigeria

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## Abstract

Nigeria's extensive maritime domain and strategic location have enabled it to command over 70% of shipping and commerce in West Africa. However, escalating security threats from piracy, kidnapping, oil theft, and cyber hacking are incurring major economic losses and reputational damage. This research analyses the importance of maritime trade for Nigeria's development ambitions and role as the foremost regional maritime power. Assessment of current security dynamics spotlights economic and strategic impacts across ports, shipping, and offshore oil infrastructure. The naval, coast guard, and maritime agency protection capacities require urgent modernization to stabilize the maritime environment. Board interagency coordination alongside international partnerships and ship security protocols offer vital complements toward rebuilding maritime security.

**Key words**: Maritime security and safety; Blue economy; Ships and Ports Security; Combating Maritime Crimes

## 1    Introduction

The seas have long served as catalysts for human civilization and prosperity, underpinning exploration, migration, and global trading systems that transpire predominantly via maritime channels. Today, seaborne commerce transports approximately 90% of all world cargo and remains indispensable for development in coastal countries like Nigeria (Crist, 2003). Nigeria possesses extensive maritime endowments, including over 853 nautical miles of coastline and a network of ports and inland waterways that provide vital access to international shipping (Atakpa, 2023). The African Atlantic Countries include Nigeria, Morocco, Mauritania, Senegal, Gambia, Cape Verde, Guinea, Guinea Bissau, Sierra Leone, Liberia, Côte d'Ivoire, Ghana, Togo, Benin, and Cameroon.

Blessed with a robust coastline spanning about 853 nautical miles (from Badagry in the Southwest to Calabar in the Southeastern fringes) and a labyrinth of navigable Inland Waterways stretching for about 3,000 kilometres all emptying into the vast Atlantic Ocean. Nigeria commands about 70% of trade and commerce in the sub region as shown in Figure 1, a position that also bequeaths her with enormous responsibilities in the realm of maritime security in the Gulf of Guinea (GoG). Located at the heart of the GoG which stretches from Senegal to Angola in the Southern part of Africa, Nigeria, among the maritime nations in the region, has had her fair share of challenges in the quest to create an enabling environment for her maritime trade to thrive. Cardinal among these is the issue of insecurity across her channels and water ways.

Figure 1: Map showing countries making up GoG

However, despite the tremendous wealth generation enabled by maritime assets, Nigeria's coastal waters and adjoining GoG now face intensifying threats from piracy, hijacking, kidnapping, and oil theft which incur major economic losses alongside reputational damage (Ogbonnaya & Igwe, 2019). The GoG is known to be rich in abundant fisheries, cobalt and other minerals and crude oil. Explorers from far and wide have toured the GoG in search of these resources hence the reason for several maritime related crimes bedevilling the GoG as indicated in Figure 2. This phenomenon has equally given rise to an upsurge in terrorism, piracy, smuggling, human trafficking, trade in narcotics and dangerous arms and ammunitions, poaching even in maritime protected areas and

armed robbery attacks on vessels and their crew, etc. All of these have posed monumental challenges to the development of the global maritime industry. This article analyses the escalating maritime security challenges Nigeria faces and their deepening impacts on national development ambitions. Assessment spotlights economic repercussions across ports, shipping fleets, and offshore oil infrastructure as maritime crimes escalate.



Figure 2: Maritime Piracy Attacks

Strategic analysis further examines the naval and coast guard protection roles and coordination with the maritime safety agency alongside international partnerships within the region. Collectively, findings underscore the imperative of upgrading naval capacity and law enforcement operations, strengthening inter-agency coordination, and employing comprehensive ship security protocols as vital to stabilizing Nigeria's maritime sector and restoring an environment conducive to sustainable prosperity.



Figure 3: Naval gunboat stops a Pirate Attack in the GoG

## 2    The Economic Importance of Nigeria's Maritime Sector

### 2.1    Nigeria's Advantageous Coastal Geography

Nigeria possesses a highly favourable maritime geography marked by direct access to the Atlantic Ocean and a concentration of regional trade flows in the GoG were Nigeria spearheads economic activity. By virtue of its coastal location and steadily developed port infrastructure, Nigeria now commands dominance over regional shipping, handling an estimated 70% of all maritime commerce in West Africa (Atakpa, 2023). In total, Nigeria controls over 315,950 square kilometres of territorial waters and exclusive maritime economic zones rich in fish stocks, aquatic life, and offshore hydrocarbons (Ogbonnaya & Igwe, 2019).

### 2.2    Infrastructure Foundation

The current maritime infrastructure foundation traces back over a century, beginning with the pioneering Port Harcourt facility built in 1912 and the Apapa Port in Lagos in 1921 (Ogbonnaya et al., 2019). Deep seaports, oil export terminals, and navigational jetties have extensively expanded since the 1960s, with the recent Lekki Deep Sea Port commissioned in 2023 set to reinforce shipping capacity (Ogbonnaya et al., 2023). This entrenched port, terminal, and inland waterways ecosystem now catalyses and sustains vibrant international trade.

### 2.3    Revenue and Trade Catalyst

In total, Nigeria's maritime assets and activities facilitate tremendous economic value for domestic prosperity and global commercial exchange. Ports operations and inland barging generate substantial employment and incomes while petroleum exports clearly form the major source of national revenue since the 1970s (Igwe & Ogbonnaya, 2019). Services support for offshore oil/gas activity also contributes significantly to GDP. The strategic location enables Nigeria to mediate a higher proportion of regional trade flows, thus, benefiting from demands for importer and exporter services. However, despite the immense potential maritime assets confer, their productivity and income generation remain hampered by increasing insecurity from seaborne criminals and insurgents.
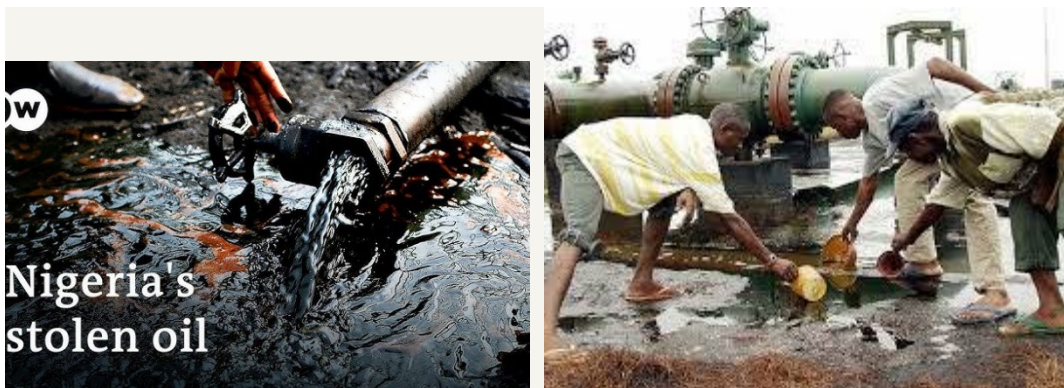
Figure 4; Oil pipeline vandalism and stealing

## 2.4 Rising Tide of Maritime Insecurity

Myriad security threats have increasingly afflicted vital global sea lanes and now severely undermine stability closer to Nigerian shores (Mejia Jr., 2003). Key contemporary risks centre around piracy, hijacking, kidnapping, oil theft, and cyber hacking targeting commercial ships, port infrastructure and offshore platforms (Ogbonnaya & Nwaorgu, 2019). Costs from maritime crime worldwide now exceed billions of dollars annually and the forecast trends point higher without interventions to reverse the tide. As indicated in Figure 5, the military fierce intervention of using kinetics and bombing of illegal refineries have grossly polluted the environment with noxious liquids and gases, damaged marine habitats and vegetations, and killed aquatic lives. This adversely affects the prospects of harnessing a sustainable blue economy.



Figure 5: The hazards of bombing illegal refineries and incessant oil spills on marine lives and habitats

## 2.5 Piracy and Terrorism Menace

Each year numerous attacks afflict commercial ships globally, despite preventive efforts by vessel crews and maritime security forces. More than 80% of world piracy acts occur in African waters, notably the

GoG, Strait of Malacca, and Horn of Africa basins (Efanga, 2016). Sophisticated cyber hacking has been especially problematic recently, including events where ransomware viruses temporarily disabled major port terminals in Barcelona and San Diego alongside a breach costing Maersk shipping lines $200 million (Ogbonnaya & Igwe, 2019). Environmental terrorism groups like Sea Shepherd also interdict ships and offshore oil platforms as political protest.

**Gulf of Guinea Epicentre**

The GoG has become an epicentre of intensifying international piracy alongside Niger Delta militancy affecting onshore energy infrastructure. In 2020 alone the region recorded 84 attacks and 135 crew kidnappings for ransom - exceeding the combined global total elsewhere (Atakpa, 2023). And signs in 2023 show further spikes as foreign gangs and local insurgents capitalize on turmoil amid limited deterrence. Figure 6 displays maritime criminals operating in the GoG.



Figure 6: Maritime criminals robbing and kidnapping commuters at sea

## 3    Impacts on Nigeria's Maritime Sector

Threats of piracy and kidnapping for ransom have made ship owners more reluctant to operate in Nigerian waters, instead diverting journeys towards perceived safer routes often farther from shore (Ogbonnaya et al., 2019). Nigerian ports outside Lagos report reductions in shipping traffic and revenue since owners view southern hydrocarbon terminals as higher risk. The costs and consequences of stolen cargoes, delayed shipments, and securing the release of kidnapped sailors also take heavy financial toll on shipping firms and oil companies (Crist, 2003).

## 3.1 Reputational Damage

In addition to direct economic costs, perceptions that Nigeria's coastal security is rapidly deteriorating also tarnish its standing within the global maritime industry (Igwe & Ogbonnaya, 2019). International stakeholders urge Nigeria to elevate protections more forcefully if it hopes to sustain smooth operations. However, low progress, further reprisals by foreign partners have severely restricted maritime trade flows.

## 3.2 Implications for Development

Ultimately maritime insecurity severely undercuts Nigeria's development ambitions, imposing barriers against trade while shrinking income from what should be a burgeoning arena of economic growth cantered on its extensive coastal resources and ecosystems (Ogbonnaya & Igwe, 2019). Until tangible headway curtails risks from seaborne crime, kidnap and oil theft, Nigeria's aspirations towards industrialization and sustainable prosperity in the blue economy will remain deeply constrained. Rebuilding maritime security is thus an urgent national priority.

## 4 Maritime Security Concerns to Nigerian Blue Economy

The international market is replete with the massive movement of cargo by sea. This phenomenon has equally given rise to an upsurge in terrorism, piracy, smuggling, human trafficking, trade in narcotics and dangerous arms and ammunitions, poaching even in maritime protected areas and armed robbery attacks on vessels and their crew, etc. All of these have posed monumental challenges to the development of Nigerian blue economy.

## 4.1 Maritime cybercrime and the Blue Economy

Of greatest concern to global maritime security is the issue of maritime cybercrime in which the criminals have perfected the art of breaching maritime cyber security systems to enable them gain access into the strongholds of classified and sensitive data and information to perform their nefarious activities. This, they do in collaboration with hackers who are adept at compromising even very sophisticated digital systems. These crimes are committed across all facets of the industry including during port operations, port paperwork, at voyage times, and information transmission from ports of departure to destination ports, etc. Systems that could be rendered vulnerable by the maritime cyber criminals include Bridge systems, Cargo handling and management systems, Propulsion and machinery management and power control systems and

access control systems. Others are passenger servicing, administrative systems, crew welfare systems, and communication systems. This hampers maritime businesses and the blue economy.

## 4.2 Kidnapping and Piracy at Sea

According to the International Maritime Bureau, the GoG in the year 2020 alone, witnessed 84 attacks on ships, with 135 seafarers kidnapped for ransom. The GoG experienced a nearly 50 % increase in kidnapping for ransom between 2018 and 2019, and around 10 % increase between 2019 and 2020. However, the GoG region where Nigeria plays a critical role in maritime trade witnessed a lull in criminal activities, especially piracy, between year 2020 and late 2022. This was sequel to signing into law, of the Suppression of Piracy and other Maritime Offences (SPOMO) Act by President Muhammadu Buhari in June 2019.

Beginning from January 2023 however, maritime insecurity in the region has spiked once again, thus making the GoG to account for about 95 % of all kidnappings for ransom at sea globally. By this, the region has overtaken the Gulf of Aden between Somalia and Yemen and the Strait of Malacca between Malaysia and Indonesia as the hotbeds of maritime insecurity on a global scale. This is indicative of the fact that the Nigerian military has a lot of work to do in ensuring safer waters for the nation's maritime industry and by extension, the Nigerian blue economy.

## 4.3 Disuse of some Seaports in Nigeria.

Being the main maritime powerhouse in the West and Central African sub-region and the GoG in general, the Nigerian waterways have in recent times experienced untold incidences of criminal attacks on vessels and unwholesome activities ranging from kidnappings, piracy, crude oil theft, poaching, smuggling and trade in narcotics and illegal arms. All of these have served to undermine the security architecture of the nation's maritime environment and by extension, the development of a pluralistic blue economy. Ugly scenarios such as these have continued to send negative signals to the international shipping community whereby ship-owners have become weary and very reluctant to send their vessels to ports, especially in the Niger Delta region. Thus, Ports such as Warri, Koko, Port Harcourt and Calabar in the central and southeastern areas of Nigeria have experienced unmitigated doldrums in their operations in recent years. This constitutes a monumental threat to sustainable blue economy.

# 5　Strategic Institutional Roles & Capabilities

Multiple domestic and international institutions retain strategic roles and capabilities to help tackle maritime threats and reinforce stability along Nigeria's expansive 853-kilometer coastline and web of adjoining waterways which constitute its lifeblood. However, operational scale and technologies require upgrades to counter intensifying risks.

## 5.1　Role of the Military in Tackling Insecurity on Nigerian Waters.

Nigeria is one of the signatories to the Gulf of Guinea Commission (GoGC), a treaty signed at Libreville, Gabon, on the 3rd of July 2001 with the objective of establishing mutual confidence, peace, and security across the region. Other signatories include Angola, Congo, Gabon, Equatorial Guinea, Sao Tome and Principe, Cote d'Ivoire, Ghana, Guinea, Liberia, Togo, and Sierra Leone. Consequently, Nigerian military provides a sophisticated technology driven intelligence and military fire power to ensure safer waters for the sustenance of her fledgling maritime trade. The Navy maintains a specialized Maritime Guard Command co-located with local facilities run by the Nigerian Maritime Administration and Safety Agency (NIMASA) to promote close interagency coordination on patrols and rapid response contingencies (Atakpa, 2023).

In addition, the Federal Government through the NIMASA, recently launched the Integrated National Security and Waterways Protection Infrastructure project also known as the 'Deep Blue Project' on the 10th of June 2021. It is headquartered at the NIMASA Maritime Resource Centre in Kirikiri, Lagos. Better known as the C4 (Command, Control, Coordination and Computer) Centre, the Deep Blue Project is equipped with very sophisticated digital gadgets and other infrastructure capable of monitoring the movement of vessels in and around Nigeria's territorial waters. These include Interceptor Boats, Special Mission Vessels, Helicopters, Special Mission Aircrafts, Maritime Intelligence Systems, Armoured Vehicles for ground operation and an Intervention Unit which includes trained personnel for swift action purposes (DefenceWeb, 2023). Figure 7 shows NN Offshore Patrol Vessel (OPV) escorting a cargo ship.

Figure 7: NN Offshore Patrol Vessel (OPV). in action at sea

Armed with the Suppression of Piracy and other Offences Act of July 2019 and working in conjunction with the NN, NIMASA acted swiftly in foiling a pirate's attack on a Chinese fishing vessel off the Nigerian coast in June 2020 using an NN - OPV. Ten of the pirates were arrested, tried by a Federal High Court, and sentenced to 48 years imprisonment each, to serve as deterrent to other maritime criminals. In a similar incident, a Chinese fishing vessel, MARINE 707 with 51 crew members which included 48 Ghanaians and 3 South Koreans was interdicted by the NN on the 18th of May 2021, operating illegally in the GoG. The vessel and her crew members were promptly arrested and handed over to the Ghanaian and South Korean Authorities for further investigation and action. Tranquillity on our waterways is sine qua non to the growth and development of the nation's blue economy.

5.2     **Role of Nigerian Institution of Marine Engineers and Naval Architects (NIMENA)**

NIMENA being the foremost maritime engineering society in Nigeria, should:

(i)      ensure the training of seafarers in line with the Standards of Training, Certification and Watchkeeping (STCW)'95 Protocol.

(ii)     establish code and standards for maritime professionals. It should inculcate timeless values of discipline, ethics, and professionalism to its members.

(iii)    play a crucial role in enhancing maritime security and safety of ships and ports in Nigeria by contributing significantly to the development and implementation of policies that ensure the strict implementation of IMO regulations and rules.

(iv)     facilitate the exchange of knowledge and expertise among its members, through conferences, seminars, and workshops. The institution should promote continuous

learning and skill development, enabling marine engineers and naval architects to stay abreast of the latest security technologies and strategies.

(v) collaborate with relevant stakeholders to develop and enforce standards that enhance the resilience of maritime infrastructure against security threats.

(vi) conduct research to identify emerging security issues in the maritime industry, providing valuable insights for policymakers and security agencies.

(vii) raise awareness about the importance of maritime security among industry stakeholders, policymakers, and the general public.

(viii) serve as a knowledge hub, disseminating information on best practices and innovative approaches to enhance security; and

(ix) through its code of ethics and professional standards, encourage a high level of integrity and accountability within the marine engineering and naval architecture professions, contributing to the overall trustworthiness of individuals working in the maritime sector.

## 6 Conclusion

In conclusion, Nigeria's extensive 853-kilometer coastline and concentration of regional shipping in proximate waters have conferred tremendous advantages in harnessing maritime assets to generate national prosperity from ports, fishing, and offshore oil. However, intensifying predation from pirates, kidnappers, and Niger Delta militants are now incurring major losses for maritime commercial activity while tarnishing Nigeria's international standing as a reliable economic partner. The Nigerian Institution of Marine Engineers and Naval Architects should play a multifaceted role in promoting and enhancing maritime security in Nigeria, encompassing advocacy, education, research, and collaboration with various stakeholders. Curtailing risks by expanding naval capacities, coordinating enhanced coastal surveillance and interdiction operations with modern agencies like NIMASA, and fast-tracking implementation of the comprehensive international ship and port security protocols are vital first steps toward stabilizing Nigeria's maritime operating environment to restore confidence essential for sustainable development of its maritime sector.

## Recommendations

Finally, the recommendations are as follows:

(i) being a littoral state, Nigeria should adopt all aspects of IMO especially on SOLAS;

(ii) there should be more OPVs provided for Nigerian maritime patrol;

(iii)  the digital system on the forward operational bases should be well equipped;

(iv)  piracy and illegal activities onboard in the ocean should be controlled accordingly; and

(v)  the relationship between NIMASA, NN and NIMENA should be strengthened.

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