

The Nigerian Blue Economy: Opportunities and Difficulties for Economic Development

Stephen Adi Odey

Department of Sociology, University of Calabar, Cross River State, Nigeria.

Email: adiodey@unical.edu.ng

ABSTRACT

The agricultural sector of the Nigerian economy played a pivotal role in Nigeria's economic growth prior to the oil boom of the 1970s. The inherent volatility of the global oil market, upon which the Nigerian economy heavily relies, has been repeatedly questioned in recent times. There is a growing call to diversify into other sectors, with the blue economy emerging as a potential driver of economic growth—a subject of considerable debate in both developed and less developed countries. This study, therefore, centers on the blue economy and its impact on the economic growth of the Niger Delta region and the Nigerian state. The findings reveal that the blue economy contributes to Employment, Job Creation, and Poverty Eradication, while also addressing challenges such as Ending Hunger, Securing Food, Promoting Physiological condition and Sustainable Fisheries, Sustainable Energy and Natural Resources, Innovative Industries, and fostering People, Culture, Communities, and Societies. However, the study highlights various challenges facing the blue economy, including sea piracy, illegal arms trafficking, terrorism, the destruction of maritime ecosystems, pollution, global climate change, and the overreliance on oil and gas, particularly among the Niger Delta states. The survival of the blue economy is intricately linked to addressing these challenges. To address these issues, the study recommends comprehensive policy reforms to enhance the blue economy. Additionally, it suggests the employment of youths as coast guards along waterways and deep-sea areas to mitigate sea piracy and related problems. The establishment of maritime education and skills training centers/schools and the formulation of policies that extend beyond the oil sector are also recommended for each Niger Delta state and the Nigerian nation.

Keywords: Blue Economy, GDP, Economic Growth, Agriculture, Niger Delta.

INTRODUCTION

The Nigerian economy, until the late 1960s, heavily relied on agricultural products and a few solid minerals for its foreign exchange. However, the oil discovery in abundance and subsequent boom in the oil industry during the 1970s led to the abandonment of other predominant sectors, particularly agriculture (blue economy) (Adeyemi & Abiodun, 2013). Blue economy activities, associated with ocean resources, are globally recognised for playing a crucial role in alleviating extreme poverty and hunger through employment and economic opportunities. Nigeria, endowed with a coastline of about 870km and approximately 3,000 kilometres of inland waterways, possesses various natural resources such as petroleum, natural gas, tin, columbite, iron ore, coal, zinc, limestone, lead, and other minerals. The adverse implications of over-dependence on oil underscore the need to diversify towards the blue economy, prompting a shift in focus from oil to alternative economic sectors.

Proponents argue that increasing agricultural outputs, particularly from the blue economy, holds significant potential to stimulate growth and development in the Niger Delta region and the broader Nigerian economy. The blue economy, integral to biodiversity, ecosystems, food chains, livelihoods, and climate

regulation, offers an innovative approach to sustainable development for a growing global population (Abdullahel, 2017). As the ocean covers about 75% of the Earth's surface and supports more than half of all living things, sustainable management becomes paramount to ensuring its ability to sustain human populations, especially for small island nations like those in the Niger Delta region.

The study recognises the potential linkage between the blue economy, sustainable development, and economic growth, aligning with the 2030 Agenda for Sustainable Development. SDG target 14.7 specifically focuses on enhancing economic benefits to small island developing states (SIDS), water-enclosed areas, and less developed countries (LDCs), such as the Niger Delta, through the sustainable use of marine resources. The Niger Delta region is at the forefront of blue economy development, acknowledging the crucial role oceans play in humanity's future and providing an approach to sustainable development tailored to the region's circumstances, constraints, and challenges.

CONCEPTUAL CLARIFICATION

Origin and Conceptualization of the Blue Economy

The emergence and evolution of the blue economy concept underscore its importance as an alternative economic model for sustainable development, acknowledging nations' dependence on oceans (UNECA, 2016). It reflects a modern view that emphasises sustainability, social justice, and intergenerational equity as guiding principles for further development.

The term "blue economy" was first introduced by Professor Gunter Pauli in 1994 as an economic philosophy reflecting business models for the future (Pauli, 2010). The concept gained prominence during the Rio+20 summit in 2012, introduced by the United Nations Environment Programme (UNEP) as an application of green economy principles to the ocean realm. The blue economy seeks to promote economic growth, social inclusion, and the preservation of livelihoods while ensuring environmental sustainability. It aims to decouple socioeconomic development from environmental degradation and optimise the benefits derived from marine resources.

Various definitions highlight the blue economy's focus on the sustainable use of ocean resources for economic growth, improved livelihoods, and job creation while safeguarding the health of ocean ecosystems. The concept covers a wide range of economic activities associated with oceans, seas, and coasts, including established and emerging sectors. Additionally, the blue economy recognises non-marketable economic benefits, such as carbon storage, coastal protection, cultural values, and diversity.

In summary, the blue economy is viewed as an innovative approach to economic exploitation, encompassing oceans, lakes, rivers, and other bodies of water. The concept promotes economic growth, social inclusion, and livelihood preservation while ensuring environmental sustainability. This study aims to explore the blue economy and its potential contributions to the national economy, particularly in regions like Nigeria and the Niger Delta, emphasising job creation and improved living conditions for coastal communities and islands.

GEOGRAPHICAL PERSPECTIVE OF THE NIGER DELTA

The Niger Delta region is situated between latitudes 4°N and 6°N of the Equator and longitudes 5°E and 8°E of the Greenwich meridian. This region experiences a hot and humid sub-equatorial climate with hot, rainy weather and dense vegetation comprising mangroves and extensive, lush forests. Geographically, it spans between the estuaries of the Benin River to the west and the Cross River to the east of the River Niger itself. The Niger Delta is recognised as the world's most inhabited delta, being Africa's largest and the world's second-largest (Afolabi, 1998; Nyananyo, 1999; Anderson & Peek, 2002). Covering approximately 7,000 square kilometres, with one-third comprising water, it houses the world's largest mangrove, spanning 5,400–6,000 km² (Afolabi, 1998; Nyananyo, 1999).

Amaechi (2018) has highlighted the Federal Government's initiatives to integrate the blue economy concept into its Economic Recovery and Growth Plan. This includes the formulation of a draft National Transport Policy awaiting approval by the Federal Executive Council, providing a framework for the sustainable exploitation and protection of Africa's maritime domain.

ECONOMIC GROWTH

Economic growth is defined as the sustained increase in the production of goods and services within an economy, typically measured by the percentage increase in real gross domestic product (RGDP), adjusted for inflation. RGDP is the market value of all final goods and services produced in a nation. Economic growth can be expressed as per capita income, where the aggregate production is divided by the population, either in nominal or real terms (Economist Intelligence Unit, 2015). Economic development, on the other hand, encompasses sustainable increases in output and incomes, considering factors such as equal income distribution, healthcare, education, environmental preservation, and social justice.

PRINCIPLES FOR A SUSTAINABLE BLUE ECONOMY

The world's oceans, seas, and coasts are vital ecosystems crucial to the livelihoods, food security, and economic development of billions of people globally (DESA, 2017). To ensure a sustainable blue economy, the following principles must be adopted:

1. Access and Communicate Performance: Monitor and communicate progress on sustainable blue economy goals and targets.
2. Produce a Fair Economic and Legislative Playing Field: Implement economic instruments that internalise environmental and social benefits and risks. Frame and enforce international and national laws that support a sustainable blue economy.
3. Plan, manage, and effectively govern marine use: Account for all uses of marine space and resources through inclusive,

transparent, and sustainable processes. Implement governance that considers human activities both on land and at sea.

4. Develop and apply standards, guidelines, and best practices: Adopt global sustainability standards, guidelines, and best practices for responsible and accountable conduct.
5. Acknowledge Interlinkages between Maritime and Land-Based Economies: Address land-based impacts on marine ecosystems. Promote the development of a sustainable green economy on land.
6. Actively Collaborate and Share Information: Foster collaboration across borders, sectors, and organisations. Share information, knowledge, best practices, lessons learned, and ideas to achieve a sustainable and prosperous future.

To ensure that the economic development of the ocean contributes to true sustainable and flexibility, these days and long into the future, with special recognition of the desires of developing countries, WWF is proposing the subsequent Principles for a sustainable Blue Economy (WWF Baltic Ecoregion Programme, 2015). These Principles offer a definition of a sustainable Blue Economy and a roadmap to assist us to get there. They're universal and may be applied to any part of the oceans, seas or coasts, still as utilized by any actor concerned within the economic development of the ocean, as well as governments, non-public and financial sector actors, international agencies, and civil society teams. WWF requests all Blue Economy actors to use these Principles for a sustainable Blue Economy and to embed these definitions, descriptions, and actions into marine policy and activities, all round the world. For clear, measurable, and internally consistent goals and targets for a sustainable Blue Economy, governments, economic sectors, individual businesses, and different actors should gear up relevant and measurable goals and targets for a sustainable blue economy to produce their designing, management, and activities with a transparent direction.

Goals and targets for various economic, social and ecological areas still as connected policies and activities should be created as integrated and coherent as potential, to avoid conflicts and contradictions. However, the following were considered (WWF Baltic Ecoregion Programme, 2015).

Access and communicate their performance on these goals and targets

The goals and targets for a sustainable blue economy should be frequently monitored and progress communicated to all or any stakeholders, as well as the overall public, in a remarkably clear and accessible method.

Produce status economic and legislative enjoying field that has the Blue Economy with adequate incentives and rules

Economic instruments like taxes, subsidies, and charges sought to be geared toward internalizing environmental and social edges, prices and risks to society. International and national laws as well as non-public agreements ought to be framed, enforced, and continuously improved in conduct in which support a sustainable blue economy.

Plan, manage and effectively govern the utilization of marine area and resources, applying inclusive strategies and therefore the scheme approach

All relevant uses of marine area and resources should be accounted, planned, managed and ruled through progressive, preventative, reconciling and integrated processes that make sure the longrun health and sustainable use of the ocean, whereas additionally taking under consideration human activities onto land. Such processes should be self-governing, responsible, transparent, even-handed and inclusive, to be alert to gift and future human uses and wishes, as well as the desires of minorities and therefore the most vulnerable teams in society. To make educated tradeoffs, such processes ought to additionally use applicable tools and strategies to capture the variety of advantages that scheme merchandise and services will rouse different stakeholders.

Develop and apply standards, tips and best practices that support a sustainable blue economy

All actors, as well as governments, businesses, non-profit enterprises, investors and customers, should develop or apply the global sustainability standards, guidelines, best practices, or different behaviors that square measure relevant to them. For organizations, application of such standards shouldn't solely make sure that their activities square measure conducted in a remarkably accountable method, however additionally improve their performance and fight, these days and within the future.

Acknowledge that the maritime and land-based economies square measure interlinked which several are threats facing marine environments originate onto land

To attain a sustainable blue economy within the seas and coastal regions, land-based impacts to marine ecosystems should be addressed and actors should additionally work to market the event of a sustainable inexperienced economy onto land.

Actively join forces, sharing info, knowledge, best practices, lessons learned, views, and ideas, to comprehend a sustainable and prosperous future for all

All actors in an exceedingly sustainable blue economy have a responsibility to participate within the method of implementation, and to succeed in out across national, regional, sectorial, structure, and different borders, to confirm the collective situation of our common marine heritage.

Elements of Principles to Building a Sustainable Blue Economy

Promote economic activities per conservation and long run capability of the ocean, seas, lakes, and rivers to stay healthy and resilient.

- Apply relevant information and science to tell policy and decision-making
- Interact relevant stakeholders within the development and conservation of blue economy resources.
- Strengthen social and environmental company responsibility
- Develop information and understanding of the worth of the market and non-market merchandise and services of the blue economy
- Alien funding to support inclusive economic activities that enhance the health of blue economy resources.
- Support growth of little and medium enterprises within the blue economy.
- Produce markets for rising and innovative blue economy connected industries.

Key parts of a Blue Economy Policy Direction: D.I.R.E.C.T. + MAX

Develop and/or strengthen national policies to higher integrate blue economy issues into national and sub-national policy and governance frameworks. These policies ought to be told by the measures steered, with clear targets set for the blue economy.

Implement policies for healthy, flexible, and productive ocean areas as a result of while not it, citizens, and significantly the poor can feel the pinch. This study has emphasized the importance of factorization within the role of natural capital surrounded by the blue economy, and active measures and management of those capital stocks to confirm the 3 dimensions of sustainable development: Social, Environmental, and Economic.

Raise Awareness (including building a typical virtual education platform) to higher education stakeholders on what the blue economy is and why it matters. This includes attention on removing informational barriers that genuinely typically created a minimum of part by a plane figure focus, through educating public, private, and civil society, and youth in sectors that forecasts recommendation can offer successive generation of recent jobs (i.e. blue economy). As a result of a number of these, growing sectors could need skills and training that haven't antecedently been in demand, academic and training systems can get to respond.

Ensure ocean wealth is unbroken nationally and locally. Promote effective observation, control and police investigation victimization enabling technology because it becomes offered.

Construct infrastructure (soft/hard, blue/green) to support a transition to a blue economy. Vulnerability to coastal flooding poses grave risks to the financial

system and positively the blue economy, and can need combinations of 3 adaptation strategies: building barriers against the water, ever-changing structures to cut back damages, and relocating structures to areas with lower flood risks. Marine and coastal construction would possibly amend from having a subsidiary role within the blue economy to seizing far a lot of central role within the blue economy.

Transform R&D and national or regional knowledge/know-how centers via institutional links with rising international expertise and platforms. As different countries genuinely embarking on similar processes, there could also be opportunities for exchange and collaboration that would build skills and enhance the analysis and development of blue economy industries.

Maximize Finance for Development to unlock non-public capital. Deploy scarce public funds to cut back impediments for personal sector investment and secure innovative and sustainable finance for blue clusters. Blue economy principles square measure being developed that would facilitate support flow of personal capital to investments that square measure per the broad objectives. Such principles might be applied across totally different public agencies to guide comes and inform developers.

The Cabotage Act of Nigeria

In pursuance of the success of Nigeria on maritime reforms (Blue economy), Nigeria made a bold attempt to change the face of maritime business within its coasts when it enacted the Coastal and Inland Shipping (Cabotage) Act 2003, though designed to restrict foreign participation in Nigeria's domestic coastal trade, nevertheless a lot of opportunities exist for foreign involvement.

Cabotage has been defined as follows:

The carrying out of trade along a country's coast; the transport of goods or passengers from one port or place to another in the same country. The privilege to carry on this trade is usually limited to vessels flying the flag of that country, **Black's Law Dictionary (8th Ed.)**. The navigation and movement of ships in coastal waters; restriction of the use of coastal waters and airspace by a country to its domestic traffic, The Webster Dictionary.

Section 2 of Coastal and Inland Shipping (Cabotage) Act 2003 incorporates the above definitions and also defines cabotage as:

- the carriage of goods and passengers by vessel from any place above or under Nigerian waters to any place above or under Nigerian waters about the exploration, exploitation or transportation of mineral or non-living natural resources;

- engaging, by vessel, in any other marine transportation activity of a commercial nature in Nigerian waters;
- carriage of any goods or substances whether or not of commercial value within Nigerian waters.

A "place above Nigerian waters" as used in the definition above means –

- "any vessel, offshore drilling unit, production platform, an artificial island, sub-sea installation, living accommodation, storage structure, loading or landing platform, dredge, floating crane, pipe laying, barge, pipeline, and an anchor cable or rig pad used in connection therewith."

Aims: Nigerian Cabotage Regime aims to:

- Restrict the use of foreign vessels in domestic coastal trade;
- Promote the development of Indigenous tonnage;
- Establish a cabotage vessel financing fund;
- Reserve the bulk of coastal trade for vessels built, owned, registered in Nigeria and manned by qualified Nigerian seafarers.
- Stimulate and expose Nigeria's indigenous shipping firms to shipping business in the coasts as a stepping stone to the deep sea/international shipping;
- Encourage acquisition of shipping technology by creating and diversifying employment opportunities in the industry;
- Improve environmental safety;
- Protect the nation's security interests;
- Enhancing domestic waterborne transportation;
- Increase national fleet/tonnage;
- Develop shipbuilding and repair capability;
- Create opportunities for employment;
- Conserve foreign exchange;
- Protect the national economy and security, etc.

The objective of the Cabotage Act is primarily to reserve the commercial transportation of goods and services within Nigerian coastal and inland waters to vessels flying the Nigerian flag and owned by persons of Nigerian citizenship. When the Coastal and Inland Shipping, otherwise known as Cabotage Act was conceptualized in 2003, stakeholders in the maritime industry were agog that the regulation would herald a new dawn in the domestic shipping business and particularly empower indigenous operators to own ships and operate without intimidation from their foreign counterpart, but 16 years after, the implementation has become a herculean task for the regulator. Most enlightenment, orientation, persuasion, and threats appear to have fallen off the ears of the violators of the act, while the

domestic shipping operators continued to groan under an unpalatable operating environment dominated by foreign shipping firms.

Chagrined by the number of irregularities in the sector, the Nigerian Maritime Administration and Safety Agency (NIMASA), recently declared its intention to move against violators of the Cabotage Act 2003.

Potential and the Natural Resources of the Blue Economy

The development of the blue economy is not solely the development of ocean economy. However, property development of the marine economy is also included in the development considerations. The blue economy has various elements, as well as established ancient ocean industries like fisheries, tourism, and maritime transport, however additionally new and rising activities, like offshore renewable energy, cultivation, ocean bottom extractive activities, and marine biotechnology and bio-prospecting. variety of services provided by ocean ecosystems, and that markets don't exist, additionally contribute considerably to economic and different activities like carbon sequestration, coastal protection, waste disposal and therefore the existence of diversity. The combo of oceanic activities varies in every country, betting on their distinctive national circumstances and therefore the national vision adopted to mirror its conception of a blue economy.

The World Bank (2017) highlights that to qualify as elements of the blue economy activities got to (as illustrated by Table 1.1):

- Offer social and economic edges for current and future generations.
- Restore, protect, and maintain the variety, productivity, flexibility, core functions, and intrinsic worth of marine ecosystems. Be supporting clean technologies, renewable energy, and circular material flows which will cut back waste and promote employment of materials

Table 1: The elements of the Blue Economy

Type of Activity	Ocean Service	Industry	Drivers of Growth
Harvesting of living resources	Sea food	Fisheries	Food security
Aquaculture		Demand for protein	
Marine biotechnology	Pharmaceuticals, chemicals		Research and Development for healthcare and industry
Extraction of non-living resources, generation of new resources	Minerals	Seabed mining	Demand for minerals

Energy	Oil and gas	Demand for alternative energy sources	
Renewable			
Fresh water	Desalination	Demand for fresh water	
Commerce and trade in and around the oceans	Transport and trade	Shipping	Growth in seaborne trade; International regulations
Port infrastructure and services			
Tourism and recreation	Tourism	Growth of global tourism	
Coastal Development		Coastal urbanization	
Domestic regulations			
Response to ocean health challenges	Ocean monitoring and surveillance	Technology and R&D	R&D in ocean technologies
Carbon Sequestration	Blue Carbon	Growth in coastal and ocean protection and conservation activities	
Coastal Protection		Habitat protection and restoration	
Waste Disposal		Assimilation of nutrients and wastes	

Source: International Bank for Reconstruction and Development, April 2016

As shown by Table 1, the contribution of marine and fresh ecosystems includes:

- **Food Security, Nutrition and Health:** Fish contributes over 60% of the animal macromolecule consumed by the world's population and 6.5 % of all macromolecule consumed, with one billion persons counting on this supply of macromolecule. Fish is additionally a very crucial supply of nutrition. Even in little quantities, the provision of fish is effective in addressing food and organic process security among the poor and vulnerable populations around the world.
- **Livelihoods:** The Food and Agriculture Organization (FAO) estimates that fishers, fish farmers and those activity services and merchandise to connected industries assure the livelihoods of as many as 660–820 million people worldwide. Oceans and coasts also form the foundation for extensive employment in tourism, one of the top five industries in most small island states.
- **Mitigation of Climate Change:** Oceans represent a serious sink for phylogeny emissions, fascinating 25% of the additional carbonic acid gas additional to Earth's atmosphere by burning fossil fuels. 'Blue carbon' sinks.

Potentials and Opportunities of the Blue Economy to Economic Growth in Niger Delta and Nigeria

Smart Shipping, Ports, Transportation and International Sustainable: In recognition of the immense contribution from maritime transport within the international economy, the sustainable development places the role of mobile trade as a catalyst for sustainable and inclusive development. Economies have invested heavily in infrastructural development, operations, and capability development.

Opportunities:

- Maritime Autonomous Surface Ships (MASS) developments and implementation gift an excellent chance to alter the mixing and ability of all information points, therefore totally supporting a property ocean management approach.
- Cooperation and communication between shipping, ports and supplying to facilitate trade and foster economic growth and development.
- Development of energy economical technologies, adoption of renewable sources of energy, use of huge information and within the shipping and maritime sector.
- Development of inland waterways, as well as dredging in lakes and rivers to boost sustainable.
- Expected growth of world maritime trade volume, because of globalization.
- Improved environmental friendliness and potency of shipping.
- Adoption of blockchain technology.
- Increase volumes of cargo to draw in immense ships at our ports.
- Developing and supporting cabotage to draw in investment in the national shipping fleet.
- The partnership between the coastal and land barred countries to maximize on edges of the blue economy and improved development.
- Shut collaboration with municipalities and cities to sensitize the players to deal with the challenges of marine pollution.
- Development and growth of existing dry-docking and different maintenance facilities.

Employment, Job Creation and Poverty Eradication: The blue economy creates employment opportunities across a spread of industries, contributing over USD 1.5 trillion to the world economy, which is targeted on making sustainable, environmentally-friendly jobs within the blue economy sectors towards poverty eradication.

Opportunities

- With over 50% of Niger Delta population below 25 years, Niger Delta encompasses a goldmine of human capital that if befittingly sensitized, trained and integrated, can alter the region or country to sustainably reap the advantages of the blue economy through job and wealth creation;

- Women comprise half the world fisheries' hands. If supplied with crucial tools of the trade as well as fashionable technology, means that of communication, reasonable funding and market access the might drive a multibillion-dollar blue economy and cause poorness reduction;
- Investment in inland water resources like lakes and rivers that square measure underutilized in the least developed and developing countries;
- There's immense potential for future cooperation among the context of (Forum on ChinaAfrica Cooperation (FOCAC) and similar frameworks in such areas as; marine resource utilization, marine piece of ground construction, ports and shipping, marine science analysis and technology, marine business enterprise, marine energy, marine setting protection, and data sharing and services to enhance people's keep through job creation and poverty reduction;
- Fixing place a people-centered economy that prioritizes the promotion of the interests of standard staff, small-scale food producers and vulnerable communities, we've got a chance to use a blue economy to shut the difference gap.

Cities, Tourism, Resilient Coasts, and Infrastructure: As the world continues to focus in the event of the blue economy for sustainable growth, coastal and lake facing cities still attract a lot of population, business enterprise activities still as different infrastructural developments. These new investments in infrastructure and job creation are going to be required to stay up with such zoom and resource consumption.

Opportunities

- Enhancing diversification of business enterprise products as well as cruise ships and desegregation coastal business enterprise and hinterlands as the way of generating spill over into inland countries.
- Harnessing the potential of the blue economy in the creation of jobs, and in addressing food security, employment and poverty reduction.
- Development of urban and marine abstraction designing through ecosystem-based management to realize sustainable blue economy and to market sustainable cities.
- Harmonization of existing and new policies and endeavor necessary institutional reforms that will enhance sustainable businesses and promote a circular economy for healthy rivers, lakes, seas, and oceans.
- Education, capability development, training, collaboration and partnerships inclusive of all stakeholders within the implementation of the blue economy agenda.

Sustainable Energy and Natural Resources and Innovative Industries: the Blue economy is leveraged to produce reasonable, sustainable and reliable energy and meet mineral resource wants through sound into renewable energy sources still as sustainable harvest home of natural resources. This presents various opportunities for investments within the energy and minerals sector still as an institution of innovative industries.

Opportunities

- The worldwide market place for Marine Biotechnology is predicted to succeed in 5.9 Billion by 2022. This may produce extra demand for international marine biotechnology thus presenting a chance for more investments on identical.
- The Blue Economy offers immense potential for renewable energy from wind, tides, waves, biomass sources and salinity gradient, all that need technology to harness sustainably thus this offers a chance for investment in technology which will support the exploration of those sources of energy.
- The Blue Economy has the potential to act as carbon sinks, bio-prospecting, and organic compound sources, a chance which may be explored as an economic activity still as to serve to preserve marine diversity.

Management and Sustaining Marine Life, Conservation and sustainable Economic Activities: The world's aquatic ecosystems offer a large variety of resources and services. They contribute to the livelihoods of the group and socio-economic development around the world. It gives room for analysis establishments, policy-makers, development partners, practitioners and personal sector to deal with challenges moving most utilization of aquatic ecosystems whereas safeguarding the setting.

Opportunities

- There square measure several innovative funding opportunities in support of the blue economy e.g, World's 1st sovereign Blue Bond in Seychelles. It rises funding from capital market investors for comes that support the sustainable use of blue economy resources.
- Building collaboration between policy manufacturers, researchers, communities and business to confirm policies and methods promote sustainable management and harnessing of blue economy resources;
- Marine abstraction designing to attain sustainable ecological, economic and social outcomes.

Ending Hunger, Securing Food provides, Promoting Physiological condition and Sustainable Fisheries: The UN's Sustainable Development Goal 2 seeks sustainable solutions to ending world hunger all told its forms by 2030 and achieving food and organic process security. Sustainable fisheries, mariculture and cultivation square measure well placed to meaningfully contribute to the action of this goal.

Opportunities

- Sharing of recent concepts, technologies, and innovations and also forming partnerships to draw in investments and improve productivity in fisheries and cultivation.
- Sharing of experiences, best practices on the development of policy frameworks and implementation of ways to boost food security.
- Development and roll-out of innovative funding products for the fisheries sector.

- Leverage on research to develop proof-primarily based policies and methods for sustainably developing the fisheries sector.
- Investment in observation management and police investigation technologies to guard the marine scheme.
- Comes that promote community-based management of marine and different aquatic resources.
- Replicate best world practices for native communities' economic direction e.g. the creation of a fishing village as traveler attraction in Morocco.
- Enhance resilience against natural disasters to guard bone ecosystems.

Climate Action, Agriculture, Waste Management and Pollution-Free Oceans

Human activities contribute to global climate change and pollution of marine and different aquatic resources. This shrinks the potential of blue economy resources to contribute to the economic process and regulation of the setting.

Opportunities

- New technologies and innovations will produce new businesses and new opportunities for investment around agriculture and waste management solutions.
- Scaling from tried mechanisms for waste management.
- Substitution of unsuitable subsidies with the proper incentives that limit GHG emissions,
- Actualizing ideas like 'circular economy.
- Partnerships and information sharing towards the restoration of degraded ecosystems.
- Collaboration with the relevant stakeholders in key deciding processes on investment within the blue economy.

Maritime Security Safety and Regulative Social Control

A safe and secure maritime domain is crucial for international ocean-borne trade, job and wealth creation still as sustainable utilization of blue economy resources. The Niger Delta states and non-state actors should figure along to secure the maritime domain.

Opportunities

- National, regional, and international mechanisms for sharing information and best practices as well as capacity building in addressing maritime threats.
- Non-public sector involvement through joint plus possession and investment in Regional Security Systems.
- Development of recent technologies in maritime area management.
- Collaboration among states to comprehend a rule primarily based on international order as well as for improved ocean governance.
- Funding maritime safety and security capabilities.

People, Culture and Communities and Societies: The inclusive Blue Economy

The skew development of the blue economy, characterized by the marginalization of ladies, youth and autochthonic communities could be a major challenge that has got to be overcome for the positive impact of the blue economy to be accomplished globally.

Opportunities

- Building synergies between ancient blue sectors (fisheries and aquaculture, tourism, energy, maritime transport) and different rising sectors (deep ocean mining, bioprospecting);
- Empowering native communities to diversify into different blue economy activities like marine instrumentality repairs and pairing, maritime services, ocean port operations, recreational yachting, inland navigation, offshore offer, and maritime works.
- Promoting interface between the blue economy and cultural heritage (archeology and anthropological) like shipwrecks, decommissioned ferries, and bridges among others.
- Mapping and protective shipwrecks have nice potential to boost business enterprises, produce jobs and generate economic benefits for local communities.

Challenge Facing the Blue Economy

Despite the advantages of victimization the aquatic resources, there square measure regulative challenges include:

- Wide selection of maritime security threats as well as Piracy, Illegal, Unregulated and Unreported (IUU) fishing, importation of individuals, arms trafficking, narcotics and different felonious merchandise, terrorism, cybercrimes, proliferation of Weapons of Mass Destruction (WMDs), threats to freedom of navigation, environmental risks, and natural disasters.
- The destruction of maritime ecosystems, pollution or global climate change, still as poorness or maritime insecurity caused by terrorist acts or piracy.
- Over smitten by oil and gas among the Niger Delta states for her survival.
- The granting of economic incentives to little fishermen to adopt property practices, or the rise in protected maritime areas, to recover the habitats and productivity of the seas.
- The slow uptake of technology in shipping and maritime transport and supplying and lack of ordinary electronic systems.
- Global climate change, marine pollution, unsustainable extraction of marine resources and destruction of coastal habitats.
- Non-inclusivity, gender difference, and unequal purchase equal work are done.
- Lack of correct education and coaching framework that promotes maritime education and skills for a sector that needs an extremely hot labor force.
- Negative effects of human activities and environmental degradation on marine ecosystems that shrink the potential of the blue economy resources.

- Inadequate capability (human skills and technology) to faucet into the energy and natural resources among the blue economy sustainably.
- Over-reliance on rain-fed agriculture resulting in unsustainable production.
- Inadequate inclusion of the Niger Delta native communities and peoples in the blue economy.
- Lack of capability among native communities to participate within the blue economy.

PATH FORWARD FOR THE BLUE ECONOMY

1. Enhance awareness to deepen comprehension of the Blue Economy concept, alongside relevant international regulations, including recent UN agency guidelines on maritime cybersecurity threats and risk management.
2. Establish coast guards within waterways to bolster security.
3. Develop an international framework and advocate best practices for adopting blockchain technology in maritime transport.
4. Implement comprehensive policies for maritime education and skills training, addressing identified gaps.
5. Ensure inclusivity in the formulation and implementation of blue economy policies by involving local communities, especially indigenous groups, women, and youth, as key stakeholders.
6. Foster regional and global cooperation for the exchange of experiences, information, and best practices.
7. Invest in accessible maritime information systems to facilitate informed and inclusive decision-making.
8. Implement sound urban planning and marine abstraction strategies to preserve marine ecosystems.
9. Promote entrepreneurship through diversified business products.
10. Invest in essential blue infrastructure and relevant technologies, and strengthen funding mechanisms, human capabilities, and talent utilisation.
11. Empower women and youth to play vital roles in championing sustainable energy resources and mineral exploration, given their significant representation in the Niger Delta and the global population.
12. Establish effective policy, regulatory, and institutional frameworks to safeguard marine resources.
13. Facilitate technology transfer and capacity building for small-scale fisherfolk to enhance their engagement in sustainable fish production and processing.
14. Implement commitments outlined in maritime safety, security, and regulatory frameworks.
15. Strengthen structures and frameworks for policy formulation, implementation, and evaluation.

CONCLUSION

The Blue Economy holds substantial potential for contributing to accelerated GDP growth in the Niger Delta and Nigeria, offering opportunities for innovation and development in the coastal, marine, and maritime sectors. Diversifying the

national or regional economy beyond the oil, coastal, marine, and maritime sectors is crucial for achieving the Sustainable Development Goals (SDGs) and fostering sustainable, inclusive economic growth. This policy brief aims to raise awareness about the importance of the blue economy in the Niger Delta, emphasising its potential for advancing both forward and backward linkages with the oil sector. The brief provides insights into necessary policies for promoting and developing the blue economy to achieve sustainable development and inclusive economic growth in the Niger Delta and Nigeria at large. It serves as a foundational document for further policy development supporting the blue economy in the Niger Delta region.

IMPLICATIONS OF THE STUDY

This study carries significant implications for social change, as effective blue economy operations can benefit not only the Niger Delta region but also contribute to the overall economic growth of Nigeria. The study suggests a shift from reliance on oil revenue to developing and enhancing the blue economy, offering improved livelihoods, sustainable integration, employment opportunities, and enhanced living standards for the region's inhabitants. Additionally, the study findings can assist Niger Delta states and the Nigerian government in formulating policies and regulations to maximise the blue economy's potential for economic growth.

RECOMMENDATIONS

1. **Improve Measures of the Blue Economy:** Develop fundamental measures for monitoring and evaluating the blue economy, considering the best development pathways.
2. **Model Policy Reform Scenarios for a Blue Economy:** Articulate various policy scenarios for the Niger Delta's ocean economy, analysing costs and benefits to set specific targets and establish public investment strategies.
3. **Prioritise the Nigerian Institute for Oceanography and Marine Research:** Enhance attention and support for the institute and consider reopening all seaports in the Niger Delta for comprehensive maritime development.

SUGGESTIONS

1. **Employ Youths as Coast Guards:** Address sea piracy issues by deploying youth as coast guards in waterways and deep-sea regions.
2. **Enhance Maritime Education and Skills Training:** Develop and implement policies for comprehensive maritime education and skills training centres, upgrading and certifying existing institutions.
3. **Diversify Investments in Marine Projects:** Invest in various marine projects, including cultivation value chains and coral protection.
4. **Encourage Youth Participation in the Blue Economy:** Motivate and involve youth in blue economy initiatives, leveraging their energy, knowledge, and skills for sustainable growth.
5. **Government Focus Beyond Oil:** Shift the focus of each Niger Delta state and the Nigerian nation beyond oil to prioritise the blue economy.

6. Revamp Niger Delta States Golf Club: Renovate golf clubs and other recreational facilities in the Niger Delta region to support community engagement.

7. Invest in Marine Initiatives: Allocate resources to diverse marine projects, fostering economic growth and sustainability.

This comprehensive approach underscores the importance of combining strategic policy reforms, supportive institutions, and community engagement to realise the full potential of the blue economy in the Niger Delta and Nigeria at large.

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