



## Centralization of blue economy activities in Nigeria for proper coordination and monitoring

Sule Abiodun,

Oluwajoba Edward;

Ayaobu-Cookey, Ibifubara

Ojutalayo John

Nigerian Institute for Oceanography and Marine Research

Date of Submission: 04-10-2023

Date of Acceptance: 16-10-2023

### Abstract

The blue economy is one that thrives by using ocean resources responsibly while safeguarding the oceans. The Commonwealth defines Blue Economy as the use of the ocean to stimulate economic growth while managing its resources to guarantee long-term sustainability. The Blue Economy is an offshoot of the Green Economy, which emphasises the responsible and fair use of natural resources. Its primary mission is to manage maritime resources and protect the marine environment. This study investigated centralization of blue economy activities in Nigeria for proper coordination and monitoring. Using questionnaire and 50 participants selected from across five Shipping and Maritime companies located in Lagos state, the result of the study revealed that weak marine policy, Unsustainable use (UU fishing), marine pollution, Climate challenge, Lack of advanced technology, Poor education and training, and Underdeveloped ship building are among the challenges affecting the centralization of blue economy activities. The study further showed the benefits of centralising blue economy activities in Nigeria, including reduced marine pollution, coastal urbanisation, global tourism growth, improved markets for coastal communities, and greater opportunity beyond the economy and environment. Finally, the study revealed that centralising Blue Economy activities in Nigeria can improve coordination and monitoring to maximise ocean resource use, enable sustainable management and protection of marine and coastal ecosystems, eliminate destructive fishing practises, boost small-scale businesses' economic benefits, and provide access to marine resources and markets. Based on this results, the study concluded that centralising blue economy operations are crucial due to their various advantages, especially as it enhances proper monitoring and coordination of the blue economy in Nigeria.

**Keyword:** Blue economy, proper coordination, monitoring

### Background to the study

The environment has been greatly and extensively impacted by global warming. These crises have been centred on marine ecosystems (Thuo & Wilson, 2020). Moreover, the Covid-19 made already-existing world-wide disparities in the marine industry worse. The blue economy has gained attention in the last ten years as a need for comprehensive management of the intricate marine social-ecological system. Moreover, it has shown the ability to synchronise action to counteract the consequences of climate change.

A "blue economy" is one that preserves the health of these assets while fostering economic development via the sustainable use of its resources (Sarker, Bhuyan, & Rahman, 2018). According to The Commonwealth, the Blue Economy is one that sees the sea as a vehicle for economic expansion while emphasising the need for responsible resource management to ensure sustainability (Mittra, 2017). The Blue Economy is an extension of the Green Economy, which emphasises the fair and sustainable use of natural resources. Its main focus is on water, with the goal of making sure that marine resources are managed appropriately and that the health of the marine environment is sufficiently preserved.

Although oil spills from drilling and plastic pollution are the most well-

known sources of pollution in the maritime environment, the shipping sector also plays a significant role in marine deterioration (Hamdy & Bevilacqua, 2023). In order to promote growth and development, particularly in the investment arena, experts have recommended for Nigeria to optimise its blue economy—

using ocean resources for economic growth—since this would also lessen the country's dependency on oil as an economic determinant (Mittra, 2017).

A blue economy prioritises protecting marine health just as much as it does human progress. It also involves expanding maritime commerce and possibilities, as well as including other sectors like tourism, renewable energy, and fisheries development. Particularly in industries like fisher-



ies, aquaculture, marine transportation, and maritime tourism, the blue economy—which includes the ocean, its resources, and the people wholly on them—has the potential to boost employment and standard of living (Bennett, et al., 2019).

Approximately 71% of our world is made up of oceans, and the most productive regions are those found in the coastal seas at the edges of the continents (Wenhai et al., 2019). These regions include naturally existing big marine ecosystems that together account for 75% of the world's marine fish harvests and generate over 12 trillion US dollars in economic output yearly (Thu & Wilson, 2020). However, the benefits that people depend on from healthy marine ecosystems are being undermined by factors like overfishing, marine pollution, and climate change, which are posing an increasing danger to these rich coastal waters. The majority of maritime operations have therefore been managed with a very limited emphasis. Rather than controlling individual commodities without considering the effects on other sections of the ecosystem, the goal is to preserve the production capacity for products and services found in ecosystems. A concerted effort is needed to accomplish the structural changes necessary for a circular economy. Both upstream and downstream of the value chain must see these activities. The African continent requires well-coordinated institutions with the requisite expertise and competence, supported by well-defined missions, in order to establish a sustainable Blue Economy (Bennett, et al., 2019). Africa's adoption of blue economy ideas indicates a larger recognition of the relevance of this topic on a world-wide scale. This opens doors for the establishment of public, private, and public-private partnerships (PPPs), as well as bilateral, regional, and international collaboration and partnerships (Nagy & Nene, 2021). Africa must, therefore, coordinate policies and forge its own course in order to define and comprehend prosperity and development for the continent and to promote creative thinking and actions that will advance both the ecological and human growth. Creating sufficient institutional structures to direct planning and activities across different sectors, levels, and jurisdictional borders helps increase coordination. In order to provide effective coordination and oversight, this paper evaluates the significance of centralising blue economy operations in Nigeria.

#### Statement of research problem

Natural resources, both living and non-living, abound in the continent. Furthermore, Africa has the capacity to expand its blue economy. Africa has a wonderful geographic location to enhance regional and international commerce, as shown by the fact that over 90% of its imports and exports are carried by water (Mittra, 2017). Large bodies of water and lakes provide African nations enough chance to diversify their economy. Nevertheless, poverty still afflicts most of Africa despite the conti-

nent's wealth in natural resources and blue economy. The susceptibility to environmental deterioration and climate change is heightened by the high rates of poverty. African governments are gradually putting into practice a blue economy, or one centred on the water, as a means of creating economic development that would enhance social welfare and fairness and lessen ecological and environmental issues across the continent. Due to factors including pollution, overcrowding, oil spills, mining operations that harm ecological habitats, global warming, and pollution, Africa's blue spaces are severely degraded, overexploited, and seeing a decline in human activity. Particularly in areas where millions of people from several nations share transboundary spaces, the administration of these waters has been progressively dispersed, abandoned, and often neglected (Wenhai et al., 2019). Because of its great diversity and interdependence, the blue economy is challenging to oversee and administer. Because there are numerous sectors that make up the ocean economy, they are interrelated, where one sector affects other businesses, it has a variety of ramifications across the supply chain (Vince & Hardesty, 2017). Innovation in governance and the economy are both necessary for the shift towards sustainability. This serves as the justification for considering how important it would be to centralise Blue Economy operations in Nigeria in order to ensure effective coordination and oversight.

#### Research objectives

The general aim of this study is to examine the significance of centralising Blue Economy activities in Nigeria for proper coordination and monitoring. Specifically, the study seeks to:

1. Identify the factors challenging the centralization of Blue Economy activities in Nigeria.
2. Ascertain the importance of centralizing Blue Economy activities in Nigeria.
3. The extent to which centralization of Blue Economy activities can improve proper coordination and monitoring in Nigeria.

#### Research questions

1. What are the factors challenging the centralization of Blue Economy activities in Nigeria?
2. What is the importance of centralizing Blue Economy activities in Nigeria?
3. To what extent will centralization of Blue Economy activities can improve proper coordination and monitoring in Nigeria?

#### Literature review

##### Concept of Blue Economy

In recent years, the notion of the Blue Economy has gained traction, especially in the context of progress and expansion. This fresh strategy prioritises conserving marine ecosystems while boosting economic growth by making responsible use of ocean resources. Sustainable management, protection, and preservation of our oceans, for the



sake of present and future generations, is essential to achieving all 17 Sustainable Development Goals (SDGs) set forth by the United Nations (Vince & Hardesty, 2017). The blue economy recognises that this will require ambitious and coordinated actions. The aim is for Member States to take coordinated, eco-

centric measures to ensure the safety of the world's water ways. Transitioning to low-carbon or to the development of marine cluster economies (Mulazzani et al., 2016) causes systemic changes that can have far-reaching effects on regions, employees, and owners. Garland et al. (2018) explain the importance of governance, politics, and governments in mitigating and managing the effects. For this reason, there has been a rising need for governments to recognise the necessity of connecting social and environmental challenges with innovation goals for a better future. According to Adetona (2020), the problems and prospects for science, technology, and innovation policy have shifted due to climate change, the elimination of poverty and pollution, and rising inequality.

### Theoretical review

#### The Self Organized Resource Governance

The Self Organised Resource Governance System was developed by a consortium of experts in response to the case of Garret Harding's work in 1968. According to Olson (1965), resource scholars concur with Harding's assertion that the establishment of an organisational framework is necessary in order to delineate the authorised users and their corresponding rights and responsibilities pertaining to a public good among the concerned parties. According to Okemwa (2019), there is a belief that the implementation of self-

organized resource governance systems requires significant dedication of time and effort in order to develop effective regimes for the governance and management of common pool resources. Secondly, the author argues that appropriators are more likely to adhere to expensive regulations if they perceive that other appropriators are also complying. Thirdly, the author suggests that appropriators will engage in monitoring activities to ensure conformity with the regulations, and may impose sanctions on each other, even at a personal cost. Lastly, the author posits that the governance and management of complex resources often lead to unforeseen outcomes and initial mistakes. Elinore emphasised the need of resolving this difficulty in order to develop an efficient governance framework for common pool resources. This challenge pertains to the organisation and establishment of rights and responsibilities for the layers involved in resource appropriation.

According to Sarker, Bhuyan, and Rahman (2018), a crucial aspect of advancing theoretical integration is in comprehending the intricate interactions among many features, which subsequently influence the fundamental cost-

benefit calculations made by a group of appropriators in relation to a particular resource. Moreover, she emphasises that the effectiveness and sustainability of self-governance in common pool resource regimes depend on several key factors. These factors include the establishment of well-defined boundaries, the alignment of rules regarding benefits and costs, the establishment of collective choice agreements among appropriators, and the monitoring of compliance with the established rules. Implementing efficient conflict resolution techniques; The establishment of a basic acknowledgment of the right to organise, supported by comprehensive legal frameworks, and the presence of nested companies, which entails a multi-layered approach to resolving conflicts (Ostrom, 2005). One of the obstacles of the theory is the size or number of attributors. Studies indicate that the theory is more successful in circumstances with a smaller number of attributors, as indicated by Burchanan and Tullock (1962). Another important aspect to consider is the problem of heterogeneity. Research has shown that the framework is a success in instances when the appropriators have more homogeneous features, such as ancestry and ethnicity. This theory is deemed suitable for this study due to two primary factors. Firstly, the resources within the Blue Economy domain are reclassified as common pool resources. Secondly, the implementation of Blue Economy policies involves multiple policy actors from various government agencies. These actors compete for limited financial resources allocated in the budget to execute their respective programmes and activities. This scenario can be viewed as attributors vying for a common pool resource.

#### Empirical review

In their study, Thuo and Wilson (2020) conducted an analysis on the level of engagements shown by policy players towards the State Department of Maritime and Shipping Affairs within the context of the Blue Economy. These researchers used coordination mechanisms, information exchange, and resource mobilisation as key metrics to assess their engagement. The primary aim of this research was to examine the influence of these variables on the use of Kenya's Blue Economy. The research sample consisted of individuals employed by the State Department. The data gathering devices used in this study consisted of questionnaires and interview guides. The research conclusively shows that the three factors significantly influenced the utilisation of Kenya's Blue Economy. The research findings indicated a lack of effective institutional routes for information exchange between the various Ministries, Departments, and Agencies (MDAs) and the State Department in the utilisation of Kenya's Blue Economy. Disaggregation of Business Economics (BE) data was seen in the distribution process among the personnel of the State Department. In conclusion, the research determined that technology presents a significant potential for addressing the challenge



se encountered in Information Sharing while also harnessing Kenya's Blue Economy. The research findings indicate that Domestic Resource Mobilisation alone is insufficient for the effective exploitation of the blue economy. Consequently, it is imperative to develop alternate fundraising strategies to address this limitation. The research further determined that there was competition in resource allocation among the Ministries, Departments, and Agencies (MDAs) engaged in the development of Kenya's Blue Economy, particularly in the context of budgetary allocation.

### Methodology

The research method used in this study was descriptive, since it is considered the most suitable approach for evaluating the degree of centralization in Blue Economy operations in Nigeria, with the aim of facilitating effective coordination and monitoring. The data for this research was obtained via the use of questionnaires that were issued to a sample of 50 staff members who were randomly chosen from five Shipping and Maritime enterprises situated in Lagos state. A total of 50 staff members will be picked, with 10 individuals chosen from each of the five organisations, in order to determine the necessary number of participants for his research. The collected data was subjected to descriptive analysis using frequencies and percentages.

### Data presentation and analysis

#### Participants demographic information

Table 1: Analysis of demographic data

Demographics	Perimeter	Participants (n=50)	
		Frequency	Percentage
Gender	Male	22	44.0
	Female	28	56.0
Educational qualification	Secondary school certificate	10	20.0
	Bachelor's degree	30	60.0
	Postgraduate	09	18.0
	Others	1	2.0
Years of working experience	0-5 years	02	4.0
	6-10 years	28	56.0
	More than 10 Years	20	40.0

#### Field Survey, 2023

Table 1 above presents the demographic information of the participants in the study. The result indicates that the participant sample constitutes both male and female who have achieved different levels of educational qualification and has diverse years of working experience. The table above has the details of the participants. This implies that the sample size, despite being small, is representative as the respondents have diverse characteristics.

1. What are the factors challenging the centralization of Blue Economy activities in Nigeria?

Table 2: Factors challenging the centralization of blue economy activities in Nigeria

Statement	SA	A	Mean	S.D
Weak marine policy	21 (42.0%)	29 (58.0%)	4.58	0.4986
Unsustainable use (UU fishing) marine pollution	15 (30.0%)	35 (70.0%)	4.70	0.4629
Climate challenge	21 (42.0%)	29 (58.0%)	4.58	0.4986
Lack of advanced technology	27 (54.0%)	23 (46.0%)	4.58	0.4986
Poor education and training	21 (42.0%)	29 (58.0%)	4.58	0.4985
Underdeveloped ship building industry	25 (50.0%)	20 (50.0%)	4.58	0.4985
<b>Weighted Average Mean</b>			<b>4.22</b>	

#### Field survey, 2023

The first research question was formulated to be able to identify the challenges confronting the centralization of blue economy. With all the participants in the study selecting solely strongly agree and agree to all the statements in the table. This implies that with 100% percentage approval and a weighted average mean of 4.22, the study concludes that: Weak marine policy, Unsustainable use (UU fishing), marine pollution, Climate challenge, Lack of advanced technology, Poor education and





raining, and Underdeveloped shipbuilding industry, respectively, are the factors challenging the centralization of blue economy activities in Nigeria.

1. What is the importance of centralizing Blue Economy activities in Nigeria?

**Table 3: The importance of centralizing blue economy activities in Nigeria**

Statement	SA	A	Mean	S.D
Reduced marine pollution	28(56.0%)	22(44.0%)	4.2	0.50
Coastal urbanisation	23(46.0%)	27(54.0%)	4.6	0.46
Growth of global tourism	26(52.0%)	24(52.0%)	4.4	0.49
Increased opportunities for coastal communities through improving markets	27(54.0%)	23(46.0%)	4.5	0.50
Offer of greater opportunity beyond the economy and the environment	25(50.0%)	25(50.0%)	4.6	0.51
<b>Weighted Average Mean</b>			<b>4.18</b>	

Field Survey, 2023

The study further revealed that, although centralizing blue economy is quite challenging in Nigeria, yet, it is important that blue economy activities be centralized in Nigeria. With 100% in support of all the items in the table, thus showing the following as the importance of centralizing blue economy activities in Nigeria: Reduced marine pollution, Coastal urbanisation, Growth of global tourism, Increased opportunities for coastal communities through improving markets, Offer of greater opportunity beyond the economy and the environment.

2. To what extent will centralization of Blue Economy activities can improve proper coordination and monitoring in Nigeria?

**Table 4: the extent to which centralization of Blue Economy activities can improve proper coordination and monitoring in Nigeria**

Statement	SA	A	Mean	S.D
Ensure maximum utilization of ocean resources	21(42.0%)	29(58.0%)	4.3	0.46
Enable sustainable management and protection of marine and coastal ecosystems	23(46.0%)	27(54.0%)	4.6	0.49
Elimination of destructive fishing practises	21(42.0%)	29(58.0%)	4.3	0.49
Increased economic benefits to small scale businesses	27(54.0%)	23(46.0%)	4.5	0.50
Provision of access to marine resources and markets	25(50.0%)	25(50.0%)	4.6	0.51
<b>Weighted Average Mean</b>			<b>4.23</b>	

Field Survey, 2023

The results show that all the participants in the study either selected agree or strongly agree to all the items in the table with none opposing any. This implies that the following are the extent to which centralization of Blue Economy activities can improve proper coordination and monitoring in Nigeria: Ensure maximum utilization of ocean resources, Enable sustainable management and protection of marine and coastal ecosystems, Elimination of destructive fishing practises, Increased economic benefits to small scale businesses, and Provision of access to marine resources and markets.

**Discussion, Conclusion and recommendations**

The outcome of this study have clearly acknowledged that there are several challenges affecting the centralization of blue economy activities among which are Weak m

arine policy, Unsustainable use (UU fishing), marine pollution, Climate challenge, Lack of advanced technology, Poor education and training, and Underdeveloped shipbuilding industry, respectively. This result is in consonance with earlier studies such as: Mittra (2017) and Vince and Hardesty, (2017) who also identified these challenges as a major impediment for centralizing blue economy activities.

Despite the challenge, the study revealed the importance of centralizing blue economy activities in Nigeria to include: Reduced marine pollution, Coastal urbanisation, Growth of global tourism, Increased opportunities for coastal communities through improving markets, Offer of greater opportunity beyond the economy and the environment. This result is in agreement with earlier studies



uchas: Hamdy, and Bevilacqua (2023), Nagy and Nene (2021) and Adetona (2020), respectively. Finally, the result of this study revealed the extent to which centralization of Blue Economy activities can improve proper coordination and monitoring in Nigeria to include: Ensure maximum utilization of ocean resources, Enable sustainable management and protection of marine and coastal ecosystems, Elimination of destructive fishing practices, Increased economic benefits to small scale businesses, and Provision of access to marine resources and markets. This is supported by Hamdy, and Bevilacqua (2023) and Adetona (2020) respectively. Based on this result, the study concludes that it is important to centralize blue economy activities because of the many benefits associated with it. With this result, the study recommends that blue economy activities be centralized in Nigeria. To achieve this goal, all fingers must be on deck, beginning from best practices that ensure that these areas remain uncontaminated through enacting policies that will checkmate the activities of fish farmers, and other users of the sea.

#### References

[1]. Adetona, T. (2020). The Nigerian maritime sector: actualising the blue economy dream. <https://unilaglawreview.org/2020/09/11/the-nigerian-maritime-sector-actualising-the-blue-economy-dream/>

[2]. Bennett, N.J.; Cisneros-Montemayor, A.M.; et al. (2019). Towards a sustainable and equitable blue economy. *Nat. Sustainability*, 2, 991–993.

[3]. Hamdy, N., & Bevilacqua, C. (2023). Assessing the Role of the Blue Economy in the Comprehensive Development of Lagging Coastal Areas. A Case Study of Calabria. In: Bevilacqua, C., Balland, P.A., Kakderi, C., Provenzano, V. (eds) *New Metropolitan Perspectives. NMP2022. Lecture Notes in Networks and Systems*, vol 639. Springer, Cham. [https://doi.org/10.1007/978-3-031-34211-0\\_2](https://doi.org/10.1007/978-3-031-34211-0_2)

[4]. Mittra, S. (2017). Blue economy: Beyond an economic proposition. *Obs. Res. Found*, 173, 1–6

[5]. Mulazzani, L., Trevisi, R., Manrique, R., and Morigio, G. (2016). Blue growth and the relationship between ecosystem services and human activities: the Salento artisanal fisheries case study. *Ocean Coast. Manag.* 134, 120–128.

[6]. Nagy H, & Nene S. (2021) Blue Gold: Advancing Blue Economy Governance in Africa. *Sustainability*, 13(13):7153.

[7]. Okemwa, E.M. (2019). Harnessing the potential of the blue economy for Kenya's sustainable development. [Master's thesis, World Maritime University] World Maritime University Dissertations. 1145. [https://commons.wmu.se/all\\_dissertations/1145](https://commons.wmu.se/all_dissertations/1145)

[8]. Sarker, S., Bhuyan, M. A. H., and Rahman, M. M. (2018). From science to action: exploring the potential of Blue Economy for enhancing economic sustainability in Bangladesh. *Ocean Coast. Manag.* 157, 180–192

[9]. Thuo, K. & Wilson M. (2020). Determinants of Exploitation of Kenya's Blue Economy among Policy Actors Case of the State Department of Maritime and Shipping Affairs in Kenya. *International Journal of Research and Innovation in Social Science*

[10]. Vince, J., and Hardesty, B. D. (2017). Plastic pollution challenges in marine and coastal environments: from local to global governance. *Restor. Ecol.* 25, 123–128.

[11]. Wenhai L, Cusack C, Baker M, et al. (2019) Successful Blue Economy Examples With an Emphasis on International Perspectives. *Front. Mar. Sci.* 6:261

#### SECTION A: DEMOGRAPHIC INFORMATION

##### Tick (✓) as applicable

1. Gender
  - a. Male
  - b. Female
2. Educational qualification
 

Secondary school certificate	<input type="checkbox"/>
Bachelor's degree	<input type="checkbox"/>
Postgraduate	<input type="checkbox"/>
Others	<input type="checkbox"/>
3. Years of working experience
 

0-5 Years	<input type="checkbox"/>
6-10 Years	<input type="checkbox"/>
More than 10 Years	<input type="checkbox"/>

#### SECTION B



Kindly tick the option that is most suitable for you  
 SA=Strongly Agree  
 A=Agree  
 Un=Undecided

D=Disagree  
 SD=strongly disagree

S/N	ITEM	S A	A	U N	D	S D
<b>R Q1</b>	<b>What are the factors challenging the centralization of Blue Economy activities in Nigeria?</b>					
1	Weak marine policy					
2	Unsustainable use (IUU fishing, marine pollution)					
3	Climate challenge					
4	In advanced technology					
5	Poor education and training					
6	Underdeveloped shipbuilding industry					
<b>R Q2</b>	<b>What is the importance of centralizing Blue Economy activities in Nigeria?</b>					
7	Reduced marine pollution					
8	Coastal urbanisation					
9	Growth of global tourism					
10	Increased opportunities for coastal communities through improving markets					
11	Offer of greater opportunity beyond the economy and the environment					
<b>R Q3</b>	<b>To what extent will the centralization of Blue Economy activities improve proper coordination and monitoring in Nigeria?</b>					
12	Ensure maximum utilization of ocean resources					
13	Enables sustainable management and protection of marine and coastal ecosystems					
14	Elimination of destructive fishing practises					
15	Increased economic benefits to small scale businesses					
16	Provision of access to marine resources and markets					