ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26nov402

The Role of library and Information Services in Development of Blue Economy in Maritime Institutions in Southern Nigeria

Posigha Bassil Ebiwolate[1]; Ewoh Godfrey Frank[2]

[1]Professor, Nigeria Maritime University, Okerenkoko, Delta State
[2]Nigeria Maritime University, Okerenkoko, Delta State Department of Maritime Economy and Finance

Publication Date: 2026/11/17

Abstract: The study investigated the role of library and information services in the development of blue economy in maritime institution in Southern Nigeria. Five research questions and two hypotheses guided the study. The study adopted descriptive research methodology. Population of 104, comprises academic librarians and lecturers in maritime institutions in Sothern Nigeria. Questionnaire was used as instrument to elicited data. Data was analysed using descriptive and inferential statistics. The findings revealed promoting of education, research and development, facilitating access to information, etc. as the roles of library and information services in developing BE. The study established that BE stakeholders are aware of library and information services that are available. The findings further reveal that BE stakeholders' extent of use of library services is relatively low, and the rapid development of BE sector is attributed to availability of relevant quality information. The study established lack of knowledge of the importance of library services, poor awareness and sensitization programmes, the use of AI and other information and communication technologies, etc. as major challenges militating against the provision of effective and quality services. Some recommendations were made to include: Stakeholders of BE and management of marine institutions should prioritize the development and needs of libraries to enable library management to meet the continuous changing information needs of users, government, government agencies, private sector and other stakeholders in BE should attach library and information centres to all institutions and agencies that are responsible for the development and operation of the blue economy sector, etc.

Keywords: *Blue Economy; Ocean and Sea; Sustainable Development; Library Roles, Information Services; Southern Nigeria.*

How to Cite: Posigha Bassil Ebiwolate; Ewoh Godfrey Frank (2026) The Role of library and Information Services in Development of Blue Economy in Maritime Institutions in Southern Nigeria. *International Journal of Innovative Science and Research Technology*, 11(11), 515-524. https://doi.org/10.38124/ijisrt/26nov402

I. INTRODUCTION

Blue economy (BE) which encompasses oceanic and sea related activities is increasingly being widely recognised in Africa and other parts of the world as a major source of income or revenue for sustainable development. The concept has also been recognised as central for sustainable development that incorporates socio-economic benefits and ecological conservation (Okafor-Yarwood, et.al, 2020). In other words, World Bank (2017) described blue economy as the sustainable use of ocean resources for economy growth, improved health of the ocean ecosystem. According to Purcell (2023), is a concept that holds the promise of sustainable development and responsible resources utilization within vast oceans and coastal areas. The author further stressed that blue economy encompasses all economy activities that are directly or indirectly linked to the ocean, seas and coasts. The term "blue economy" is also referred to as ocean economy, is used to define or describe the socio-economic activities associated with oceans, seas, coastal and marine environment (Agunsoye, et.al, 2025). All sectors using oceans and inland waters such as fisheries, aquaculture, tourism, shipping, biotechnologies, marine security, mining oil and gas, and renewable energy are referred to as BE (Lahsen & Cheryl, 2015). In this study, BE is described as sustainable utilization of oceans, seas and coastal resources for sustainable economic growth.

The term blue economy (BE) was first highlighted at the United Nation Conference on Sustainable Development held in Rio de Janeiro in 2012 (UNCTED, 2014). Redefining the role of the coastal and marine space in sustainable development as well as economic growth, while bringing to the fore the need to ensures ocean health in the face of progressively increasing demand on global ocean's renewable and non-renewable resources (Benzaken, et.al, 2022). The main emphasis on blue economy or ocean economy is to support sustainable development in the marine sector, creating awareness on the potentials of oceans, seas, and coasts. It also involves creating jobs, as well as spurring economic growth while ensuring the long-term sustainability of marine ecosystem (European Commission, 2020).

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26nov402

According to Bertazzo cited in Agunsoye, et.al (2025) blue economy comprises various socio-economic activities that mostly exploit the natural habitat provided by oceans, seas, coastal areas, and the marine environment.

It is evident in literatures that blue economy has attracted national and international interest due to diversified investment opportunities and anticipating prospects for sustainable development. Organization for Economic Cooperation and Development (OECD) predict a 'blue growth' that would yield a double economic-worth of 3 trillion US dollars by the year 2030, (OECD, 2024). Based on the prediction and potential, both developed and developing nations have realised the need to develop and strengthen blue economy activities in their respective countries. Nigeria is not left out in this direction. Nigeria with vast marine and coastal resources, is also aiming to achieve sustainable blue economic growth that will facilitate job creation, improve livelihoods, and as well protect the marine environment (Anammah & Ezenyimulu, 2023). In the past few decades observation shows that, Nigeria abandoned the blue economy sector for the oil boom particularly in the 1970s. There was no clear policy framework, implementation strategies and as well definite ministry to oversees the sector. Perhaps, the pressing need for the diversification of the nation economic and the discovery of the potential benefits of the blue economy have that may have led resulted to the recent establishment of the Federal Ministry of Marine and Blue Economy, which is a proactive step towards exploiting and optimising the potential of blue economy.

In Southern Nigeria, there is a belief that the development and prudent management of the potential benefits of blue economy for sustainable development of the region deeply depends on the stakeholders (government, organizations, maritime institutions, educators etc.) of the blue economy sector. This is because of the several issues such as policies, security, infrastructure etc. that are eminent challenges in the region. In Agunsoye, et.al (2025) point of view, implementing the blue economy in Nigeria faces several issues and challenges, including inadequate operational infrastructure, poor security risk perception along coastal communities, yet-to-be released official blue economy policy framework, poor stakeholder sensitization, awareness, and buy-in. Addressing these challenges requires a genuine collaborative effort that involves the public and private sectors, setting out clear and measurable goals and milestones, effective policy frameworks and structures for the blue economy, and sustainable practices that ensure economic growth (Benzaken, 2022). Similarly, Okafor-Yarwood, et.al (2020) in an affirmation posited that, blue economy in Africa remains unattainable as sustainable exploration of the sea is undermined by inadequate knowledge and technological capacity. To address the challenges that are mostly related to inadequate knowledge and information, libraries as custodial of past and present knowledge and as well gateway to information will no doubt play significant role in addressing such issues.

Libraires are educational institutions established to curate, acquire, organize, store and dissemination information to all categories of information users. Libraries are fundamental asset for nation building and economy development. They are strategically position to provides current information for research and development, and as well proffer solutions for the survival of nations economy. The quest for survival in a knowledge-driven economy highly depends on the ability to seek, analyse and utilise knowledge for advancement and economic development (Akinola & Oloyede, 2020). Manjunath and Mariraj (2022) attested that libraries as a social institution have been considered being integral part of the society. Library and society are interconnected and depend on each other. The authors further stated that, we are all living in an information age. So, we recognized library significant role in the all-round human development, enabling people to develop their full potentials with appropriate education and skills preparing them for paradigm shift from education stage to work. It is noted that libraries provide the basic conditions for life-long learning independent decision making and cultural development of the individuals and groups of the society (Manjunath & Mariraj, 2022). Librarians as information providers are committed to responding to global issues and are playing roles in various ways (Lusiana, et.al, 2024). Professionally, libraries are saddled with information provision role; educational role; custodial role, selective dissemination of information SDI role, etc.

Specifically, library act as information hub with core mandates of providing access to all kind of information, educating stakeholders in all the sectors, creating awareness, serves as repository, selecting and acquiring information on the activities (fisheries, shipping, marine, ecosystem, etc.) of blue economy, supporting research and development, knowledge sharing and providing access to data and statistics for sound decision making. Marine institutions that have core responsibility of training manpower to manage and promote blue economy needs library and information services to support their teaching, learning and research objectives. For the achievement of the aims and objectives of maritime and other educational institutions, according to Manjunath & Mariraj (2022) needed libraries to support formal and informal education, learning activities, to support literacy, check digital divide and help shape the new ideas and perspectives that are central to a creative and innovative society. Library is an integral part of the blue economy sector and as well as the Nigeria ministry of blue economy which may have challenges of implementation.

It is sad to observed in available literatures reviewed that, in spite of the important roles (information, educational, research and development role, etc.) of library, only very few numbers of study have been carried out in Africa on the role and utilisation of library and information services in developing blue economy for sustainable development in maritime institutions. The existing literatures revealed that very few studies have been carried-out by library and information professional on the role of library and information services towards achieving the aims and objectives of blue economy in maritime institutions in southern Nigeria. Therefore, a gap is created, hence this study targeted at filling the gap.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26nov402

➢ *Problem Statement/Justification*

Implementing blue economy in Nigeria faces several issues and challenges, such as inadequate operational infrastructure, poor security risk perception along coastal communities, yet-to-be released official blue economy policy framework, poor stakeholder sensitization, lack of awareness, and buy-in (Agunsoye, et al, 2025). These challenges have become a major setback in developing a strong blue economy for sustainable development in maritime institutions in southern Nigeria. Therefore, addressing these challenges needs a collaborative approach that involves libraries and information centres, educators, other stakeholders, etc. to address issues that are keenly related to poor stakeholders' sensitization, lack of awareness, poor security perception among the coastal communities, access to quality information, etc. Also, in spite of the potential ability of libraries in addressing these challenges library and information services, stakeholders (educators) in blue economy sector are may be ignorant of the role of libraries and information services in developing a strong blue economy for sustainable development in maritime institutions.

➢ *Objectives of the Study*

The main objective of the study is to investigated the role of library and information services in the development of blue economy (BE) in Southern Nigeria. Consequently, the specific objectives of the study are:

- To examine the role of library and information services towards the development of blue economy in maritime institutions in Southern Nigeria.
- To know if the stakeholders (educators) of blue economy have the awareness to utilize library and information services in developing the activities of the blue economy for sustainable development in maritime institutions in southern Nigeria.
- To know the extent stakeholders (educators) of BE are using libraries in addressing the challenges of implementing the activities of the blue economy in maritime institutions in Southern Nigerian Nigeria.
- To know if the success in the growth of blue economy recorded in Nigeria is as a result of the availability of relevant and technical information on oceans and seas activities in maritime institutions in southern Nigeria.
- To identify the challenges of library in providing it role in supporting research and development in developing blue economy in maritime institutions in Southern Nigeria.

➢ *Significance of the Study*

The study investigated the role of library and information services in the development of blue economy in maritime institution in Southern Nigeria. Therefore, the results of this study will be of great benefit to library administrators, blue economy stakeholders, coastal communities and government and her agencies. The results of the study will provide significant data and insight into the important of the role of libraries in achieving the potential benefits of blue economy in maritime institutions in Nigeria. The findings will also generate important suggestions for librarians, educators and other stakeholders in the blue economy and the ministry of blue economy in Nigeria.

Consequently, the results of the study will serve as catalyst for the adoption and utilization of library and information services among blue economy stakeholders for sustainable development in maritime institutions in southern Nigeria. This is because the adopt the findings and recommendations in day-to-day activities of the sector. The study will equip librarians and stakeholders the opportunity to identify areas in the blue economy sector to collaborate and generate fund for the libraries and maritime institutions in southern Nigeria.

The results of the study will provide a good bases for librarians and educator to articulate strategics role to promote the activities of blue economy in Nigeria, to the benefits of maritime institutions for sustainable development in southern Nigeria.

Similarly, the results of this study will equip librarians, libraries and information professionals' new innovations, ideas and knowledge that will improve on library and information services to achieve the potential benefits of BE for sustainable development in maritime institutions in southern Nigeria.

The result of this study will create awareness among coastal community, educators and other stakeholders on available opportunities in blue economy sector through the use of libraries and information services. The utilization of library and information services will equip the stakeholders in the sector the requisite knowledge needed in the sector by practically applying the results of the study in the various activities of the sector.

➢ *Research Question*

- What are the roles of library and information services towards the development of blue economy in maritime institutions in Southern Nigeria?
- Do the stakeholders of blue economy have the awareness to utilise library and information services in promoting the activities of the blue economy development in maritime institutions in southern Nigeria?
- To what extent stakeholders (educators) of BE are using libraries in addressing the challenges of implementing the activities of the blue economy in maritime institutions Southern?
- Does the success in the growth of blue economy recorded in Nigeria is as a result of the availability of relevant and technical information on oceans and seas activities in maritime institutions in southern Nigeria?
- What are the challenges of library in providing it professional roles in supporting research and development in the development of blue economy in maritime institutions in Southern Nigeria?

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26nov402

➢ *Research Hypotheses*

- There is no significant relationship between stakeholders (educators) awareness and utilisation of library and information services in promoting blue economy activities in maritime institutions in southern Nigeria.
- There is no significant relationship between educator's utilisation of library and information services and the rapid growth of BE in maritime institutions in southern Nigeria.

II. LITERATURE REVIEW

Agunsoye, el.al (2025) in their study revealed that blue economy presents a viable and alternative path to Nigeria's economic diversification and growth in a manner that is not damaging to the environment and ecosystem, but boosts empowerment, job and wealth creation as key indices of sustainable development and economic growth. The results of the study show the reality of the financial status of the sector. This is evident in corruption allegation of billions of US dollars and naira leveled against the various head of Nigerian Maritime Administration and Safety Agency (NIMASA) that have the statutory responsibility of managing the blue economy sector before the creation of the Ministry of blue economy. However, by harnessing its vast marine and coastal resources, Nigeria can achieve sustainable economic growth that will impact job creation, improve livelihoods, while protect the marine environment (Anammah & Ezenyimulu, 2023).

➢ *The Role, Awareness, and Utilisation of Libraries Among Blue Economy Stakeholders*

Libraries are established with defined role. And as well strategically posited and equipped with relevant information resources (print and non-print) and modern information and communication technologies to deliver their professional roles such as provision of access to electronic and printed information resources, promoting education, packaging and re-packaging of knowledge, advocacy for knowledge sharing and as well creating awareness among coastal and inland communities to achieved sustainable development.

It is on this background that, Omona (2020) conducted a study on the roles of library and information services in achieving Sustainable Development Goals (SDGs) in Uganda. The findings revealed that effective and sustainable management of library and information services will be central to the attainment of all the SDGs as reflected in the Uganda's Vision 2040. On identifying the significant roles of the author recommended that, the government of Uganda needs to provide the needed status for this sector and put it on its agenda to usher a new spirit of library and information services professionalism that will go a long way to enhance literacy and enlightenment that is needed if Uganda is to achieve the SDGs as reflected in its Vision 2040 plan. The study adopted both theoretical and empirical literature review to established its facts.

In addition, Rowley (2006) posited that, the vision for library and information services for the twenty first century is to make significant contribution towards information and knowledge-based society through promoting democracy, inclusiveness, public information, lifelong learning, knowledge creation, innovation, economic growth and business success. The 21st century libraries are strategically positioned as information hub, that are focus on creating awareness and facilitating access to e-resources in diverse field of studies to develop a sustainable blue economy sector in Nigeria and other parts of the world.

Similarly, in emphasizing on the role of library in achieving sustainable development, Abata-Ebire (2018) reported that libraries play an important role in achieving Sustainable Development Goals (SDGs) as it is globally considered a center of research and knowledge generation to empower people and address human challenges. Deducing from the above findings, one can draw conclusion that, libraries play important role in the achievement of blue economy.

In addition, Manjunath and Mariraj (2022) posited that libraries are gateways to knowledge and cultural development. Institutions in all sectors of economy, be it an education, research or services sectors - needed libraries for the overall development. They need them because library is one of the most effective means of making information available for cultural, economic, education and recreation and social development. Regardless of the standard of libraries, educational institutions needed libraries to support formal and informal education, learning activities, literacy, check digital divide and help shape the new ideas and perspectives that are central to a creative and innovative society. In this regard, libraries are expected to meet their responsibilities in providing relevant information, facilitating collaboration among faculty members in supporting teaching and learning activities, and research and development and as well supporting the blue economy sector through outreach educational and informative programmes, information literacy programme, sensitization and awareness programmes.

In the same vein, Lusiana, et.al (2024) investigate the contribution of community-based libraries in climate action to strengthen the face of climate change supports. The research method used is literature study. The research results show that libraries can act as media that teach climate change literacy to the public. Libraries act as providers of information; libraries play a role in teaching environmental health literacy by educating the public to learn information about climate change. The library becomes an example of reduce and reuse behaviour by showing examples of how to reduce waste disposal emissions through actions to reduce the use of paper materials and the role in implementing go green.

III. RESEARCH METHODOLOGY

The study adopted descriptive research design. According to Cristobal Jr (2013) the descriptive type of research endeavours to describe systematically, factually, accurately and objectively a situation, problem or phenomenon. Five research questions and two hypotheses

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26nov402

guided the study. The total size of the population is 104. The population comprises all the librarians in maritime institution libraries, librarians in conventional university that are running maritime programmes, and lectures in maritime institutions in southern Nigeria. Questionnaire method was used to elicit data from the respondents. In retrieving the data, the researchers observed that some questions were not attended to, hence there are variations in the population size in the various tables. The data retrieve from the questionnaire were analysed using descriptive and correlation coefficient statistics. The research questions were analysed with mean score of 2.50. Scores greater than 2.50 were interpreted agreed while, scores less than 2.50 were interpreted disagreed. While, Pearson Moment Correlation Coefficient was used to analyzed the two hypotheses in the study. Consequently, Nwana (1981) opinion was used. The correlation coefficient (r) with scores:

0.0 – 0.20 = Very low relationship, 0.020 – 0.40 = Low relationship

0.40 – 0.60 = Moderate relationship, 0.60 – 0.80 = Very high relationship

➢ *Data Analysis and Discussion of Findings*

- RQ 1: What are the roles of library and information services towards the development of blue economy activities for sustainable development in Nigeria?

Table 1 The role of library and information services in blue economy BE development.

S/N	The role of library and information services in blue economy BE development.	SA 4	A 3	D 2	SD 1	Total	Mean X	SD
1	Promoting education in developing BE.	72 (288)	24 (72)	6 (12)	3 (3)	105 (375)	3.57	0.73
2	Promoting Research and development in BE development.	72 (288)	24 (72)	6 (12)	3 (3)	105 (375)	3.57	0.73
3	Facilitating access to relevant and strategic information.	69 (276)	30 (90)	4 (8)	1 (1)	104 (375)	3.61	0.61
4	Creating awareness of BE activities among coastal communities' dwellers.	54 (216)	39 (117)	9 (18)	2 (2)	104 (353)	3.39	0.73
5	Promoting awareness about sustainable use of marine and aquatic resources.	57 (228)	42 (126)	9 (18)	5 (5)	113 (377)	3.34	0.81
6	Promoting the use of library and information services among stakeholders in BE industry.	54 (216)	45 (135)	3 (6)	3 (3)	105 (360)	3.43	0.69
7	Providing information services to educators and researchers in maritime institutions.	57 (228)	36 (108)	7 (14)	4 (4)	104 (354)	3.40	0.78
8	Advocating for the development of strategic policy and adequate funding of maritime institutions and industry.	57 (228)	41 (123)	3 (6)	3 (3)	104 (360)	3.46	0.69
9	Promoting Selective Dissemination of Information SDI.	54 (216)	36 (108)	9 (18)	3 (3)	102 (345)	3.38	0.77
	Total Mean	**60 (240)**	**35 (105)**	**6 (18)**	**3 (9)**	**104 (372)**	**3.50**	**0.73**

Cut-off mean = 2.50; N = 104

The data presented in table 1 shows that, all items mean scores of 3.57, 3.57, 3.61, 3.39, 3.34, 3.43, 3.40, 3.46 and 3.38, are greater than the cut-off mean score of 2.50. In all the total mean score of 3.50 was also greater than the cut-off mean score of 2.50. This simply implies that the above indicated roles of library and information services are some major roles library provide developing blue economy (BE) in Nigeria.

- RQ 2: Do the stakeholders of blue economy have the awareness to utilise library and information services in promoting the activities of the blue economy for sustainable development in maritime institutions in southern Nigeria?

Table 2 Stakeholders awareness of library and information services in developing BE in maritime institutions in Southern Nigeria

S/N	Stakeholders' awareness of library and information services	SA 4	A 3	D 2	SD 1	Total	Mean X	SD
1	Blue economy (BE) stakeholders are aware of library Promoting education in developing BE.	30 (120)	54 (162)	14 (28)	0 (0)	98 (310)	3.16	0.65

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26nov402

2	BE stakeholders are aware of library promoting research and development in BE development.	27 (108)	72 (216)	4 (8)	0 (0)	103 (332)	3.22	0.50
3	BE stakeholders are aware of library promoting access to relevant and strategic information.	39 (156)	54 (162)	4 (8)	0 (0)	97 (326)	3.36	0.56
4	BE stakeholder are aware of library creating awareness about the activities of BE among coastal communities' dwellers.	33 (132)	60 (180)	3 (6)	2 ()	98 (320)	3.27	0.62
5	BE stakeholders are aware of library promoting awareness about sustainable use of marine and aquatic resources.	33 (132)	60 (180)	4 (8)	3 (3)	100 (323)	3.23	0.66
6	**BE s**takeholders are aware of library promoting the use of library and information services among stakeholders in BE industry.	45 (180)	39 (117)	7 (14)	0 (0)	91 (311)	3.41	0.63
7	BE stakeholders are aware of library providing information services to educators and researchers in maritime institutions.	42 (168)	61 (183)	0 (0)	0 (0)	103 (351)	3.41	0.49
8	BE stakeholders are aware of library advocating for the development of strategic policy adequate funding of maritime institutions and industry.	30 (120)	42 (126)	15 (30)	3 (3)	90 (279)	3.10	0.79
9	BE stakeholders are aware of library promoting Selective Dissemination of Information SDI services.	27 (108)	72 (216)	1 (2)	1 (1)	101 (327)	3.24	0.51
	Total Mean	**34 (102)**	**57 (171)**	**6 (18)**	**1 (1)**	**98 (292)**	**3.33**	**0.60**

Cut-off mean = 2.50; N = 104

The data presented in table 2 shows that, all items mean scores of 3.16, 3.22, 3.36, 3.27, 3.23, 3.41, 3.41, 3.10 and 3.24, are greater than the cut-off mean score of 2.50. In all the total mean score of 3.33 is also greater than the cut-off mean score of 2.50. This simply indicated that stakeholders of blue economy (BE) in Nigeria are aware of library and information services in developing maritime institution in Southern Nigeria.

- RQ 3: To what extent stakeholders (educators) of BE are using libraries in addressing the challenges of implementing the activities of the blue economy in maritime institutions?

Table 3 The Extent of BE Stakeholders Use of Library Services in Addressing Challenges in Implementing the Activities of BE in Developing BE in Maritime Institutions in Southern Nigeria

S/N	The extent of BE stakeholders use of library services	VHE 4	HE 3	ME 2	LE 1	Total	Mean X	SD
1	To what extent are BE stakeholders using research and development services in library.	5 (20)	12 (36)	69 (138)	18 (18)	104 (212)	2.04	0.69
2	To what extent are BE stakeholders using access created by library to access relevant and strategic information services.	3 (12)	30 (90)	48 (96)	23 (23)	104 (221)	2.12	0.78
3	To what extent are BE stakeholders using awareness activities of BE among coastal communities' dwellers created by library?	15 (60)	27 (81)	35 (70)	27 (27)	104 (238)	2.29	1.01
4	To what extent are BE stakeholders using the awareness of sustainable use of marine and aquatic resources created by library?	18 (72)	23 (69)	30 (60)	33 (33)	104 (234)	2.25	1.08
5	To what extent are BE stakeholders using library and information services in BE sector?	15 (60)	26 (78)	39 (78)	24 (24)	104 (240)	2.31	0.98

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26nov402

6	To what extent are BE stakeholders making use of information services available in the library?	15 (60)	24 (72)	42 (84)	23 (23)	104 (239)	2.30	0.97
7	To what extent are BE stakeholders using selective dissemination of information SDI services available in library?	15 (60)	29 (87)	30 (60)	30 (30)	104 (237)	2.28	1.03
8	To what extent are BE stakeholders using educational services provide by library.	15 (60)	32 (96)	24 (48)	33 (33)	104 (237)	2.28	1.06
	Total Mean	**13 (52)**	**25 (75)**	**39 (78)**	**26 (26)**	**103 (231)**	**2.23**	**1.00**

Cut-off mean = 2.50; N = 104

The data presented in table 3 shows that, all items mean scores of 2.04, 2.12, 2.29, 2.25, 2.31, 2.30, 2.28, and 2.28, were less than the cut-off mean score of 2.50. In whole, the total mean score of 2.23 is also less than the cut-off mean score of 2.50. This implies that the extent of blue economy stakeholders' use of library services in addressing the challenges of implementing the activities of the blue economy in maritime institutions is relatively low.

- RQ 4: Does the rapid growth of blue economy recorded in Nigeria is as a result of the availability of relevant and technical information on oceans and seas activities in maritime institutions in southern Nigeria?

Table 4 The Rapid Growth of Blue Economy and Availability of Technical Information on Oceans and Seas.

S/N	The growth of blue economy and the role of library and information service	SA 4	A 3	D 2	SD 1	Total	Mean $\underline{X}$	SD
1	The growth of blue economy (BE) is a result of library promoting education in developing BE.	15 (60)	81 (243)	3 (6)	0 (0)	99 (309)	3.12	0.41
2	The rapid growth of BE is attributed to the promotion of research and development in the sector.	21 (84)	63 (189)	20 (40)	0 (0)	104 (313)	3.01	0.63
3	The increase development of BE is a as result of creating access to relevant and strategic information.	15 (60)	45 (135)	44 (88)	0 (0)	104 (283)	2.72	0.70
4	The rapid growth of BE is attributed to creating awareness of the activities of BE among coastal communities' dwellers.	30 (120)	57 (171)	15 (30)	0 (0)	102 (321)	3.15	0.65
5	The rapid development of BE is attributed to the promotion awareness of sustainable use of marine and aquatic resources.	32 (128)	54 (162)	15 (30)	0 (0)	101 (320)	3.17	0.66
6	The rapid growth of BE is attributed to the promotion the use of library and information services among stakeholders in BE industry.	24 (96)	66 (198)	12 (24)	2 (2)	104 (320)	3.08	0.65
7	The increase development of BE is attributed to the provision of information services to stakeholders in blue economy.	18 (72)	75 (225)	11 (22)	0 (0)	104 (319)	3.07	0.52
8	The rapid growth of BE sector is attributed to advocate for the development of strategic policy and adequate funding of maritime institutions.	30 (120)	60 (180)	0 (0)	14 (14)	104 (314)	3.02	0.91
9	The development of BE is attributed to the provision of Selective Dissemination of Information SDI services.	21 (84)	63 (189)	20 (40)	0 (0)	104 (313)	3.01	0.63
		23 (92)	**63 (189)**	**15 (45)**	**2 (2)**	**103 (328)**	**3.04**	**0.64**

Cut-off mean = 2.50; N = 104

The data presented in table 4 shows that, all items mean scores of 3.12, 3.01, 2.72, 3.15, 3.08, 3.07, 3.02, and 3.01, were greater than the cut-off mean score of 2.50. In whole the total mean score of 3.33 is also greater than the cut-off mean score of 2.50. This simply indicated that the rapid growth of blue economy in Nigeria is as a result of the availability of relevant and technical information on oceans and seas activities in maritime institutions in southern Nigeria.

- RQ 5: What are the challenges militating against library in providing it statutory role in supporting research and development in BE development in maritime institution in Southern Nigeria?

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26nov402

Table 5 Challenges of Library in Providing it Statutory Roles in Supporting Research and Development in the Development of Blue Economy in Maritime Institutions in Southern Nigeria

S/N	Challenges prohibiting library from effectively providing its roles	SA 4	A 3	D 2	SD 1	Total	Mean X	SD
1	Inadequate skill librarians and supporting staff	19 (76)	30 (90)	35 (70)	20 (20)	104 (256)	2.46	1.00
2	Lack of adequate operational infrastructure in the library	36 (144)	36 (108)	17 (34)	15 (15)	104 (301)	2.89	1.04
3	Lack of knowledge among BE stakeholders of the importance of library services	63 (252)	26 (78)	15 (30)	0 (0)	104 (360)	3.46	0.73
4	Poor awareness and sensitization programmes on the use of library services among BE stakeholders	66 (264)	24 (72)	9 (18)	5 (5)	104 (359)	3.45	0.84
5	BE stakeholders' awareness and use of other sources of information gathering system rather than the library	30 (120)	24 (72)	30 (60)	20 (20)	104 (272)	2.62	1.09
6	The use of AI and other information and communication technologies	60 (240)	33 (99)	8 (16)	3 (3)	104 (358)	3.44	0.76
7	Poor Interment facilities	66 (264)	24 (72)	11 (22)	3 (3)	104 (361)	3.47	0.80
8	Inadequate subscription of digital databases and other information resources	80 (320)	15 (45)	9 (18)	0 (0)	104 (383)	3.68	0.62
9	Lack of regular staff development programmes to update library staff skills	66 (264)	29 (87)	6 (12)	3 (3)	104 (366)	3.52	0.73
10	Inadequate patronize of the library by BE stakeholders	66 (264)	26 (78)	6 (12)	3 (3)	101 (357)	3.53	0.74
11	Poor visitation and use of library resources and services due to AI, Google, ChapGPT, etc. available to stakeholders of BE.	81 (324)	15 (45)	4 (8)	4 (4)	104 (381)	3.66	0.73
	Total Mean	**56 (224)**	**26 (78)**	**13 (26)**	**9 (9)**	**104 (337)**	**3.30**	**0.83**

Cut-off mean = 2.50; N = 104

The data presented in table 5 reveals that, all items mean scores of 2.89, 3.46, 3.45, 2.62, 3.44, 3.47, 3.68, 3.52, 3.53 and 3.66, except item 2.46 were greater than the cut-off mean score of 2.50. In whole, the total mean score of 3.30 is also greater than the cut-off mean score of 2.50. This simply indicated that the above outlined challenges are some challenges prohibiting library from providing it statutory roles in supporting research and development in blue economy in maritime institutions in Southern Nigeria.

IV. DISCUSSIONS OF FINDINGS

- *The Role of Library and Information Services in the Development of Blue Economy BE in Maritime Institutions in Southern Nigeria*

The findings on the role of library and information services in blue economy development shows that libraries play significant roles such as promoting education for blue economy development, promoting research and development, facilitating access to relevant and strategic information, creating awareness about BE activities among coastal communities' dwellers through libraries outreach programmes, etc. to support BE development in maritime institution in Southern. From the findings perhaps, these roles and services were made possible as a result of information and communication technologies, social Websites, chapGPT, mobile devices adopted in libraries, etc. From the findings of the study, one can argue that these roles and services are made available and as well accessible to stakeholders of BE with the aid of digital libraries. This finding corroborates the finding of Lusiana, et.al (2024) that revealed that libraries can act as media that teach climate change literacy to the public. Libraries act as providers of information; libraries play a role in teaching environmental health literacy by educating the public to learn information about climate change. The library becomes an example of reduce and reuse behaviour by showing examples of how to reduce waste disposal emissions through actions to reduce the use of paper materials and the role in implementing go green.

- *Blue Economy Stakeholders' Awareness of Library and Information Services in the Development of BE in Maritime Institutions in Southern Nigeria*

The investigation on BE stakeholders' awareness of library and information services in the development of BE maritime institutions in Southern Nigeria revealed that stakeholders of blue economy (BE) in maritime institutions in Southern Nigeria are aware of library and information services available in maritime institutions libraries. Perhaps, the awareness is a result advance libraries users' education and literacy programmes, departmental and faculties collaborative initiatives, advocacy and inclusiveness, and other awareness seminars and programmes organized by librarians. The 21st century librarians' responsibilities are drastically changing as a result of new innovations in library services delivering system, emergence of new Web-based technologies, mobile communication devices, etc. These new innovations are forcing librarians to create awareness among information users and as well reaching to potentials users of information, educating them of the significant of library's

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26nov402

roles and services. Perhaps, this is more reason why the government and her various agencies are recognizing the importance and the place of library and information services in nation building. However, awareness may not reflect the actual utilization of the available library and information services.

➢ *The Extent of BE Stakeholders use of Library Services in Addressing Challenges of Implementing the Activities of BE in Maritime Institutions in Southern Nigeria*

Research question three further probe the extent of BE stakeholders use of library and information services in solving challenges of implementing the activities of BE in maritime institutions in Southern Nigeria. The findings revealed that the extent of blue economy stakeholders' use of library services in addressing the challenges of implementing the activities of the blue economy in maritime institutions is relatively low. This might be because the new digital technologies have provided stakeholders the opportunity to access and use online resources that are relevant to their needs at their comfort zone through mobile devices and computers. Today, libraries are known as a repository of information and knowledge through subscription of digital databases, building of digital institutional repositories, hosting of diverse Web-sites, etc. and as well providing seamless access to the available information. The findings are in agreement with Omona, 2020 finding that revealed that effective and sustainable management of library and information services will be central to the attainment of all the SDGs as reflected in the Uganda's Vision 2040.

➢ *The Rapid Growth of Blue Economy and Availability of Technical Information on Oceans and Seas.*

Research question four source establish if the rapid growth of BE in Nigeria is a result of the availability of technical information on oceans and seas activities. The investigation shows that the rapid growth of blue economy in Nigeria is as a result of the availability of relevant and technical information on oceans and seas activities in maritime sector in southern Nigeria. There is no doubt that availability of information relevant and technical information on any sector will yield or produced fruitful and successful outcome. This is in agreement with the saying that information is one of the prominent and important factors of production, as no economy in the world can driver without relevant, efficient and technical information. This is because every sector of the economy requires reliable and quality information to survive and have competitive edge over other sectors.

➢ *Challenges of Library in Providing it Statutory Roles in Supporting Research and Development in the Development of Blue Economy in Maritime Institutions in Southern Nigeria*

Research question five source to ascertain the challenges militating against library in providing it statutory roles in supporting research and development in BE in maritime institutions in Southern Nigeria. The analysis revealed that lack of knowledge among BE stakeholders of the importance of library services, poor awareness and sensitization programmes on the use of library services among BE stakeholders, the use of AI and other information and communication technologies, inadequate subscription of digital databases and other information resources, lack of regular staff development programmes to update library staff skills, inadequate patronize of the library by BE stakeholders, etc. are some challenges prohibiting libraries from providing it statutory roles in supporting research and development in blue economy in maritime institutions in Southern Nigeria. Some of these challenges might because of the non-chalant attitude of academic libraries stakeholders that are of the belief that academic libraries are not an important integral part of the institutions. Therefore, they failed to realize that libraries of all categories are growing organisms that continually adapt to changing information needs of users, emergence of innovations and digital technologies. These findings corroborate Agunsoye, et.al (2025) finding that revealed that, implementing blue economy in Nigeria faces several issues and challenges, including inadequate operational infrastructure, poor security risk perception along coastal communities, yet-to-be released official blue economy policy framework, poor stakeholder sensitization, awareness, and buy-in.

➢ *Testing of Hypotheses*

- H1: There is no significant relationship between stakeholders (educators) awareness and utilisation of library and information services in promoting blue economy activities in maritime institutions in southern Nigeria.

N	Correlation Coefficient (r)	Remark
104	.44	Moderate Positive Relationship

The analysis presented in table six shows the nature of relationship between BE stakeholders' awareness and the utilization of library and information services in promoting blue economy activities in maritime institutions in Southern Nigeria. The result shows a moderate positive relationship between BE stakeholders' awareness and the utilization of library and information services in promoting blue economy activities in maritime institutions in Southern Nigeria. (r=.44, n=104).

- H2: There is no significant relationship between educator's utilisation of library and information services and the rapid growth of BE sector in maritime institutions in southern Nigeria. Similarly, the result presented in table seven revealed the kind relationship BE educators' utilization of library and information services and growth of blue economy sector in maritime institutions in Southern Nigeria. The result shows a very weak positive relationship the two variables. (r=.008, n= 104)

N	Correlation Coefficient (r)	Remark
104	.008	Very Weak Positive Relationship

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26nov402

V. CONCLUSION

The study investigated blue economy (BE) development in maritime institutions in Southern Nigeria with focus or emphasis on the role of library and information services in the development of blue economy in maritime institutions in Southern Nigeria. Based on the findings, it was concluded library promoting education, research and development, facilitate access to relevant information, create awareness among stakeholders, etc. in supporting BE development in maritime institutions in Southern Nigeria. Blue economy stakeholders have a moderate awareness of available library and information services. However, the extent of utilization of the service provide by libraries is relatively very low. In spite of the low usage of library services, the rapid growth of the BE sector was attributed to availability of relevant and quality information. However, libraries were prohibited by several challenges, such as inadequate subscription of digital databases and other information resources, lack of regular staff development programmes, inadequate patronage of the library by BE stakeholders, etc. in providing quality and efficient services to BE stakeholders in addressing BE challenges in maritime institutions in Southern Nigeria.

RECOMMENDATIONS

- Stakeholders of BE and management of marine institutions should prioritize the development and needs of libraries to enable library management to meet the continuous changing information needs of users in maritime institutions.
- The government, government agencies, private sector and other stakeholders in BE should as matter urgency provide or attach library and information centres to all institutions and agencies that are responsible for the development and operation of the blue economy sector.
- The federal and state governments, their agencies and as well management of marine institutions should recognize and accord library as integral part of the BE sector to encourage libraries initiatives and drive for collaboration, inclusiveness, advocacy for better management of the BE in maritime institutions in Southern Nigeria.

REFERENCES

[1.] Abata-Ebire, B. D., Adebowale, J. A. & Ojokuku, B. Y. (2018). Achieving sustainable development goals (SDGS) in Nigeria: The roles of libraries. *International Journal of Applied Technologies in Library and Information Management*. 4(2), 89-95.

[2.] Agunsoye R., Okoye C. & Sankey Z. (2025). Blue economy, sustainable development and economic growth in Nigeria. *International Journal of Development and Economic Sustainability*, 13(1), 1 – 17. Doi: https://doi.org/10.37745/ijdes.13/vol13n1117.

[3.] Akinola, A. A. & Oloyede, O. E. (2020). Emerging role of libraries in today's knowledge-based economy. International *Journal of Applied Technologies in Library and Information Management*, 6(2), 24 - 30.

[4.] Anammah, R. & Ezenyimulu, L. (2023). The regulatory framework of the Nigerian blue economy. AELEX Legal Practitioners and Arbitrators.

[5.] Benzaken, D., Voyer, M., Pouponneau, A. & Hanich, Q. (2022). Good governance for sustainable blue economy in small Islands: Lessons learned from the Seychelles experience. Frontiers in political science.

[6.] Cristobal, A. P. Jr. (2013). Research made easier: step-by-step process. Manila: C&F Publishing

[7.] Lashen, A. & Cheryl, C. (2015). Background paper: fisheries and aquaculture in the context of blue economy. Feeding Africa: an action plan for Africa agricultural transformation, *Abdiouf International Conference Centre*, 21 – 23 October, 2015. http://www.un.org/disabilities/documents/rio20_outcome _document_complete.pd

[8.] Lusiana, E., Yanto, A., Nursari, T., Samson, C. M. S. & Suryadi, D. F. (2024). The contribution of community-based libraries in climate action to strengthen the face of climate change supports the SDGs. *Journal of Law and Sustainable Development,* 12(1), 01 – 22.

[9.] Manjunath, G. L. & Mariraj, V. S. (2022). Role of Libraries in national development: An overview. *International Journal of Research in Library Science (IJRLS)*, 8(1), 277 - 282.

[10.] Nwana, C. O. (1981). Introduction to educational research for student – teachers. *Ibadan: Hieneman Educational Books Limited.*

[11.] OECD (2024). The blue economy in cities and regions: A territorial approach, OECD Urban Studies, OECD Publishing: Paris. Retrieved from > https://doi.org/10.1787/bd929b7d-en.

[12.] Okafor-Yarwood I, Kadagi N. I, Miranda N. A. F, Uku J, Elegbede I. O. & Adewumi, I. J. (2020). The blue economy–cultural livelihood–ecosystem conservation triangle: The African Experience. Front. Mar. Sci. 7:586. doi: 10.3389/fmars.2020.00586.

[13.] Omona, W. (2020). The roles of library and information services in achieving Sustainable Development Goals (SDGs) in Uganda. *Library Philosophy and Practice* (e-journal). 4018. https://digitalcommons.unl.edu/libphilprac/4018.

[14.] Purcell, N. (2023). What is the blue economy? Retrieved from > https://bluerobotics.com/what-is-the-blue-economy/.

[15.] Rowley, J. (2006). Libraries and environmental management. *Library Management*, 27(4/5), 269-279.

[16.] UNCTAD (2014). The oceans economy: opportunities and challenges for small island developing states. New York, NY: United Nations Conference on Trade and Development.

[17.] World Bank. (2017). The potential of the blue economy: Increasing long-term benefits of the sustainable. Use of Marine Resources for Small Island. Retrieved from https://openknowledge.worldbank.org/handle /10986/26843.