

Problems and Prospects of Developing Inland Water Transportation in Nigeria: The Case of Calabar River

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Abstract: This study is aimed at assessing the problems and prospects of developing inland water transportation in Nigeria with Calabar River as a case study. The development of Calabar River as one of the inland water transportation system in Nigeria has been faced with many challenges. They include: lack of infrastructural development, poor funding, lack of dredging and poor maintenance. The study adopted the survey research design, stratified sampling technique was used in selecting the sampled population of the study. Data for the study were sourced through secondary and primary sources (eg. Questionnaire administration, oral interview and personal observation. A total number of four hundred (400) questionnaires were administered in the study area and 350 were retrieved. Pearson Product Moment Correlation Coefficient was adopted in the test of hypothesis which produced the following result ($r = -1.15$; $t_c = -1.51$; $t_r = 2.78$ at 00.05 sig level & d/f 4). The findings revealed that there was no significant relationship between the provision of inland transportation facilities/services and level of socio-economic development and in the study area. The study also revealed that the development of the water transportation system in the area could have positive impact on trade and commerce, job creation, revenue generation, provide tourism etc. Finally, government policies should be made to focus on the proper development and maintenance of inland water ways in the area. There was also need for private sector or community involvement in fostering development, maintenance and sustainability of inland water transportation in the region.

Key Words: *Inland waterways, Inland water transportation, Calabar River and Transport Infrastructure.*

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I. INTRODUCTION

Inland waterways are made up of navigable rivers, lakes, creeks, lagoons and canals (Aderemo and Mogaji 2010). The movement of goods and services along inland waterways is one of the oldest means of transporting goods and services from one point to another (Fellinda, 2006). This was largely due to the fact that inland water transportation offers the most economical, energy efficient and environmentally friendly means of transporting all types of cargoes from place to place (Ojile, 2006). It also offered safe and cheaper transportation in areas with watercourses. This facilitates commerce, promote wealth creation, poverty alleviation and create job opportunities for the youths within such regions. The building industry also generate employment through active engagement of the youths in welding and fabrication process (Gray, 2004).

According to Owena (2003), Nigeria has the second longest length of waterways in Africa with a total of 8,600 kilometres. The two longest rivers in Nigeria; River Niger and River Benue run into each other at Lokoja and flows into the Atlantic Ocean. The coastal region extends from Badagry region through Warri to Calabar (Ezenwaji, 2010). It was noted that inland waterways transverses 20 out of the 36 states within the country, and the areas adjacent the navigable rivers represented the nation's most important agricultural and mining regions. According to Abubakar (2002), the direct impact of inland water transportation for instance was highlighted at the Delta Areas of Southern Nigeria. He noted that inland water transportation was very vital in the development of the region.

Abams (2004) outlined the physical impediments to improved performance in the sub-sector to include non-channelization and dredging of navigable rivers, inadequate construction and rehabilitation of the river ports, limited water transport infrastructure (comfortable boats, jetties and bouys), safety and security facilities along the navigable waterways. However, Calabar inland waterways have been a major route for socio-economic and political activities, as it serves as a travelling route to neighbouring settlements like Creek Town in Cross River State, Oron in Akwa Ibom State and up to the Republic of Cameroon.

Inland water transportation in Calabar is faced with several challenges which include; lack of funding and basic infrastructure, neglect in the rehabilitation of the waterway in terms of dredging, lack of training and retaining of sailors and regular appraisal of equipment to ascertain their level of efficiency. These challenges have particularly hindered socio-economic activities and generally caused setbacks in the promotion of inland water transportation particularly between the settlements covered by the Calabar River. The challenges have basically resulted to operational constraints and ineffective management of the waterways. For any meaningful progress, these challenges needed to be addressed which called for this study.

Though related studies may have been carried out in other countries and regions, there is lack of an in-depth empirical study on the subject matter of this paper, particularly with reference to Calabar River. It was on the above premise that this work was envisaged and also meant to identify the future prospects of proper development and maintenance of the Calabar River to the neighbouring settlements, Cross River State and Nigeria in general.

II. THE STUDY AREA

The study which focused on the challenges militating against the effective development of inland water transportation and the possible prospects in Nigeria used Calabar River as a case study. The Calabar River in Cross River State, Nigeria flows from the north past the city of Calabar, joining the larger Cross River about 8 kilometres to the south. The river at Calabar forms a natural harbour deep enough for vessels with a draft of 6 metre (Encyclopedia Britannica, 2011). The Calabar River was once a major source of slaves brought down from the interior to be shipped west in the Atlantic slave trade. Slaving was suppressed in 1860, but the port of Calabar remained important in the export of palm oil and other products, until it was eclipsed by Port Harcourt in the 1920s. With improved roads into the interior, Calabar has regained importance as a port and is growing rapidly. The tropical rain forest in the Calabar River basin is rapidly being destroyed, and pollution is decreasing fish and shrimp catches in the estuary.

The Calabar River drains part of the Oban Hills in the Cross River National Park (CRNP, 2010). The geology of the river basin includes the Pre-Cambrian Oban Massif, Cretaceous sediments of the Calabar flank and the recent Niger Delta sedimentary basin (Eze&Effiong, 2010). The basin is about 43 kilometres wide and 62 kilometres long, with an area of 1,514 square kilometre (Eze&Effiong, 2010). At one time it was entirely covered by tropical rainforest (Eze&Effiong, 2010). The region has a rainy season from April until October, during which 80% of the annual rain falls, with peaks in June and September. Annual rainfall averages 1,830 millimetres. Average temperatures range from 24 °C in August to 30 °C in February. Relative humidity is high, between 80% and 100%. The basin has 223 streams with a total length of 516 kilometres. This is a small number given the size of the basin. Drainage is poor, so the basin is subject to flooding, gully erosion and landslides. A 2010 study said that flooding had increased in recent years (Eze&Effiong, 2010).

The river system formed by the Calabar River, Great Kwa River and other tributaries forms extensive flood plains and wetlands that empty into the Cross River estuary. The system has an estimated area of 54,000 square kilometres (see Figure 1).



Figure I: Map of the Cross River Estuary

Source: (Ekwu and Sikoki, 2005).

Calabar today has regained its importance as a port with the completion of roads providing good access to South-Eastern Nigeria and Western Cameroon. Exports include palm produce, timber, rubber, cocoa, copra, and cassava fibre. Industries include sawmills, a cement factory, boat builders and plants to process rubber, palm oil and food. Artisans make ebony artifacts for the Lagos tourist market (see Figures 2 and 3). The development of the port, and the neighboring Calabar Free Trade Zone and Tinapa Free Zone & Resort have been held back in recent years by bureaucratic problems, and also by poor power supply, poor roads and lack of dredging of the shallow Calabar River channel (Nigerian Pilot, 2010).



Figure 2: Calabar River Port in 1981

Source: (Effiong, 2011).

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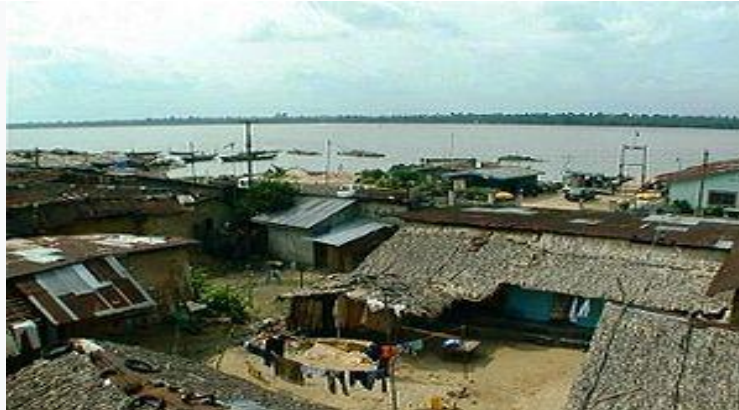


Figure 3: Calabar River and its Environs

Source: (Effiong, 2011).

The city of Calabar is bounded by the Calabar River to the west, Great Kwa River to the east and the wetlands of the Cross river estuary to the south (see Figure 4). The city can only grow towards the north, into the Calabar River catchment area (Effiong, 2011). The Calabar River watershed was originally covered by tropical rainforest. Much has now been replaced by agriculture, road construction, forestry, industry and housing for the growing population of Calabar.^[5] For example, the National Integrated Power Project covers a large area of land besides the Calabar-Itu highway at IkotNyong in Odukpani Local Government Area (Effiong, 2011).

A study of changes in land use in the Calabar River catchment between 1967 and 2008 showed that the area covered by high forest decreased by almost 30% during that period. In 1967, high forest covered almost 70% of the basin area. By 2008 it covered less than 40%, mostly in the north. Industrial quarrying began in the 1980s and now affects a significant area. It may be causing stream siltation and flooding as well as air and water pollution (Effiong, 2011).The built-up area more than doubled from 3.5% to 7.6% of the land area (Effiong, 2011). The study is particularly confined to the following communities which are bounded by the river: EsukObutung, IkotEsu, EsukUtun, EsukNsidung, Essien Town among others. Calabar is located between latitude 8 15 N and longitude 8° 22 E of the Greenwich meridian.

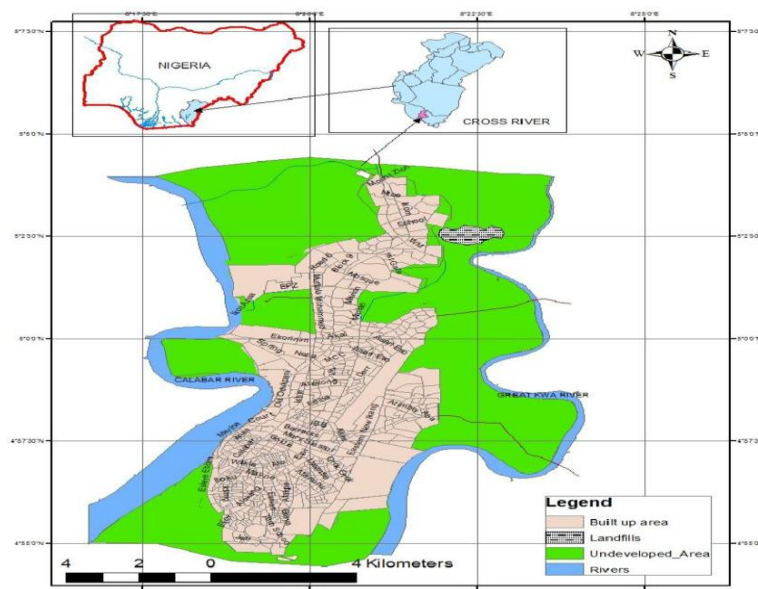


Figure 4: Map of Calabar Metropolis showing Calabar and Great Kwa Rivers

Source: Cross River Geographic Information Agency, Calabar

III. DEVELOPMENT OF INLAND WATER WAYS

Nigeria is endowed with an extensive inland waterway system. The principal drainage is formed by the River Niger, the third longest river in Africa, running about 1,271.3 km in Nigeria and its main tributary, the River Benue which runs for 796.6 km in the country. The Benue River originates from the Cameroon mountains and flows into Nigeria through Yola. The Gongola and Kongo Rivers are its main tributaries. The River Niger enters Northern Nigeria through Republic of Niger and receives the Sokoto and Kaduna Rivers. It forms a confluence with the River Benue at Lokoja. The Anambra River joins the Niger at Okija town. The river finally divides into fourteen outlets into the sea. Two of the main outlets are the Bonny and Forcados Rivers. The former provides Port Harcourt with an outlet to the sea while the latter is the gateway to the ports of Warri and Burutu. There are many rivers along the southern coast. The major ones include the Ogun River which flows into the Lagos Lagoon, the Benin river, the

Escravos, the Sombteiro, the Qua Iboe Rivers and Cross River. Another major drainage system is provided by the Central Plateau Lake Chad, These Rivers constitute an impressive network of in-land waterways that have served as transportation routes for passengers and freight for many decades in the past. Various ferry routes on these rivers are at present used to provide transport services.

Nigeria has about 10,000 kilometres water ways of which if developed through dredging and provision of the necessary facilities would provide all year round navigation for transportation of bulky cargos and passengers (David, 2004). The development of inland water ways is the primary responsibility of the National Inland Water Ways and the Authority carrying out regulatory services, transportation services, survey services marine and the general environmental services to ascertain the functionality and sustainability of inland transport system (Hugo, 1998).

Despite the immense benefits of the transport system to the economy, Inland Water Transport in Nigeria has a long history of neglect by both the government and private sector (Berger, 2005). Little effort had been made to develop inland water transport facilities prior to the 1980s. This stems largely from policy inconsistency, limited private sector involvement and conflict by agencies involved in water transportation in Nigeria. However since the 1990s the Federal Government has been taking a number of initiatives to turn the sector around and make transport attractive without much success (David, 2002).

IV. INLAND WATER TRANSPORTATION

Water transportation is the cheapest and safest among the other modes and can be relied upon for pleasurable and relaxing journeys when good quality services are provided. Nigeria's earliest involvement in importation and exportation of goods depended largely on maritime transport, because other modes - air, rail, pipeline, and roads were either nonexistent or less developed or very expensive. With adequate dredging, the inland waterways can take 10,000 tons Flat bottom ship and barges. Inland water transport can still be explored to serve as interconnecting links among the major sea-ports and as ready supplements to land modes of transport to the interior. Among other advantages, water transport excels in the long haul freighting. It plays an important role in the development of a nation's transport system. The concept is applicable in the transportation of tones of agricultural products from the Middle Belt Areas to the Delta Areas through water ways (Griffin, 1978). Unfortunately, very little use is presently made of inland waterways both as passenger and freight carrier even though the country's seaports are responsible for over 90% of its international trade traffic.

The problem is that in spite of our confused and chaotic transportation situation resulting largely from our heavy dependence on an unbalanced investment in favour of the roads for our intra and inter-city movements, this great national resource has remained neglected and unexploited. Yet considerable man-hours are lost daily in places like Lagos by commuters who wait endlessly for the rickety buses or taxis on our poorly maintained roads to and from the various activity centres. Therefore, it is pertinent to determine the extent of optimal development of our waterways in the interest of our overall economic development.

Inland water transportation involves the use of boats, canoes, ships etc. It entails the movement of goods, people and services, through river, seas, oceans, or large water bodies linking regions together (Albert, 1998).

V. LAW GOVERNING INLAND WATERWAYS TRANSPORT

The law that regulates activities in the inland water ways is the Coastal and Inland Shipping Act, 2003. The Act is a legislative apparatus for restricting access or reserving main time trade within the geographical space of a country to indigenous capacity. The provision includes restrictions, waivers to meet lack of capacity, enforcement of cabotage vessel financing funds amongst others. The government being conscious of the need to develop the local shipping industry attempted different policies and programmes at different stages of Nigeria maritime development to encourage indigenous vessel acquisition. Amongst the efforts in this regard is the acquisition of 24 vessels by the defunct Nigerian National shipping line (NNSL) in the 1970s and the establishment of the Ship Acquisition and Ship Building Fund (SABF) by decree no 1987 (cap. 44 LFN 1990.)

However with the advent of democracy in 1999, stakeholders and professionals in the shipping industry made carrion calls for the restructuring of the maritime industry as it affects domestic trade for the benefit of the citizenry and the economic well-being of Nigerians. Hence, the reform proposal is the enactment of the Coastal and Inland Shipping Act (cabotage), 2003 to be enforced by the National Maritime Authority (NMA) now Nigerian Maritime and Safety Agency (NIMASA). On this premise Nigeria became the first country in west and central Africa sub-region to enact cabotage law which was signed into law on the 30th of April 2003. This eventually catapulted Nigeria into lime light as the 41st country in the world to operate cabotage law (Ajiye, 2013). It is important to note that major maritime nations have a long history of devising water transportation. The Cabotage Act clearly has the following parameters in section 3;

- a. Cabotage vessel must be usually owned by Nigerian citizens
- b. Cabotage vessel must be managed by Nigerians
- c. Cabotage vessel must be registered by Nigerians
- d. Cabotage vessel must be built by Nigerian shipyards.

It follows that in the event of non-availability of certain local capacity, the Act introduced a liberal cabotage policy in which three of the four parameters can be incorporated by the Corporate Affairs Commission under Companies and Allied Matters Act Law of Nigeria (CAMA, LFN, 2004). Therefore a vessel other than a vessel wholly owned and managed by a Nigerian citizen, built and registered in Nigerian shall not engage in the domestic coastal carriage or cargo and passengers within the coastal territory, inland waters or any point within the waters of the Exclusive Economic Zone of Nigeria. Inland waterways operations and management would be more recognized and appreciated if not globally when the cabotage policies related to all its sectors are fully reasonably enforced.

VI. PROBLEMS OF INLAND WATER TRANSPORT IN NIGERIA

Adams (1999) found out that the capacity of Nigerian navigable waterways has increased to about 10,000 kilometers plus an extensive coastline of about 852 kilometres. Based on this, he noted that the country has a huge potential to move goods and passengers from the coast to the hinter land by water. Also, Anyam (2003) regretted that the immense opportunities which the Nigerian inland waterways provided for business was yet to be tapped by potential investors. He established that despite her huge potential inland water transport was yet to become an alternative means of transportation to road and air. Adams (2004) lamented that inland water transport is yet to receive the attention it deserved from the federal government particularly in the twin areas of funding and infrastructural development. He outlined the physical impediments to improved performance in the sector to include non-channelization and dredging of navigable rivers, inadequate construction and rehabilitation of river ports, limited water transport infrastructures (comfortable boats, jetties and bouys) and safety and security concern along the navigable waterways. The problems of inland waterways could be summed up to lack of funding and infrastructural neglects from the relevance authorities. These problems resulted to operational constraints.

VII. IMPORTANCE AND BENEFITS OF INLAND WATERWAYS TRANSPORT

Inland waterways transportation means the carrying of goods and persons by water (inland waters like river, lake, canals, creek etc.) supported by boats, ferries, coastal vessels of less than 500 gross tonnage (Ekong, 1984). Igbokwe (2013) enumerated the benefits of inland waterways transport to include the following;

- i. Transportation
- ii. Revenue generation and availability of finance
- iii. Trade and commerce
- iv. Promotion of tourism
- v. Employment and job opportunities
- vi. Enhancement of industrial growth

i). Transportation

Inland water transportation relieves other means of transport like rail, road and air and their infrastructure of available pressure and congestion that they would otherwise have been under had there not been inland waterway transport carrying heavy cargo at less expensive cost. This helps to ensure that other modes of transport and their infrastructure are not overstretched for example, ferry services from mile 2 in Lagos to Apapa and/or to CMS reduces traffic-jams on road transportation and the slowing down of economic activities and as a cheap and energy efficient means of transportation, it provides an alternative cheap and reliable means to other modes of transport and decrease the cost of transportation in the movement of oil, sugar, cement, fertilizers or heavy equipment thereby allowing transport flow from land to sea (Abubakar, 2002).

ii). Revenue and Availability of Finance

Inland waterways transport is of significant importance to Nigerian economy because it generates a lot of revenue which comes from fees for the registration of ships and their mortgagee, customs duties, port charges and tariffs realized by the Nigerian Ports Authority for the use of its facilities by the vessels that berth at river ports, corporate taxes paid by shipping companies, fees for licensing, clearing and forwarding agents or freight forwarders and the registration of shipping companies.

iii). Promotion of Tourism

Inland waterways transport promotes tourism in Nigeria in the sense that tourists are able to cavies in boats on the lagoon, creeks and other inland waters and to visit various natural beaches on the Nigerian coastline for purposes of sight-seeing and relaxation. During Christian and Muslim festivals and public holidays, many residents in Nigeria takes a visit to beaches for picnics, musical shows, entertainments and relaxations. Tourism which inland waterways transport enhances and facilitates, is an avenue through which the state and federal government realizes revenue which is channeled to developmental projects.

(iv). Creation of Employment and Jobs Opportunities

Inland waterways transport is also of significant importance to the Nigerian economy because it creates employment opportunities for Nigerians thereby ensuring engagement of workers and reduction of social problems induced by employment. The ship/boat building and repairs industry employs workers to meet its various needs, captains, engineers, stewards etc. are employed to meet the demand from the sector. Igbokwe(2013) concluded that maintaining the industry in both the private and public sectors provides 10% of jobs opportunities in Nigeria.

v)Industrial Growth and Development

Industrialists prefer to build factories, industries and ware-houses near river ports in order to reduce transportation costs especially in the case of those industries that depend heavily on imported raw materials and equipment in order to manufacture finished goods for the domestic and foreign markets. This reduction in transport costs also reduces the costs of their finished goods which in turn increases the sales of their products, leads to high annual turnovers and enhances their growth. Adam (2014) concluded that the Calabar free Trade zone was set up to benefit from inland water transportation.

VIII. METHODS OF STUDY

The study adopted the survey research design. Stratified sampling technique was used in selecting the sampled population. Data for the study were sourced through questionnaires, oral interview and personal observation. Primary and secondary data were the types of data used for this study. A total number of four hundred (400) questionnaires were administered to respondents in the study area and 350 were retrieved. Pearson Product Moment Correlation Coefficient was adopted in testing the hypothesis which states that ‘there is no significant relationship between the provision of inland water transportation infrastructure and the socio-economic development of the area’. This was to determine the extent of the linear relationship between the provision of inland water transportation infrastructure and the socio-economic development of the area bounding the Calabar River and its environs.

IX. DATA PRESENTATION AND ANALYSIS

i). Contributions of Inland Water Transportation

Table 1 shows the opinion of respondents on the contribution of inland water transportation in the area. From the total number of respondents, 52 representing 14.86% saw inland water transportation as a job creation sector, 32 (9.14%) of the respondents were of the opinion that it promotes tourism, 58 (16.57%) were of the view that it leads to import and export, 64 respondents representing 18.29% said it guarantees food security while 48 (13.71%) and 96 (27.43%) were of the opinion that it contributes to the standard of living and reduction in transportation cost of the people respectively. Respondents who were of the view that it results to reduction in transportation cost were the highest.

Table 1: Contributions of Inland Water Transportation

Contribution of Inland Water Transportation	No. of Respondents	Percentage (%)
Creation of Job	52	14.86
Promote tourism	32	9.14
Import & Export	58	16.57

Food security	64	18.29
Improves standards of living	48	13.71
Reduction in transportation cost	96	27.43
Total	350	100

Source: Field survey, 2017.

ii). Inland Water Transportation Facilities

The information presented in Table 2 was based on the available inland water transportation facilities in the area. It showed that facilities such as ships, submarine and speed boats are mostly found in the area. This was affirmed by 103 (29.50%), 72 (20.50%) and 62 (17.75%) of the sample population respectively. However, this was closely followed by 52 (14.75%) for canoes, 41 (11.75%) for sea ports and 20 (5.75%) for ferry boats.

Table 2: Inland Water Transportation Facilities

Facilities	Number of Respondents	Percentage (%)
Sea port	41	11.75
Speed Boats	62	17.75
Ships	103	29.50
Ferry	20	5.75
Sub-marine	72	20.50
Canoes	52	14.75
Total	350	100

Source: Field Survey, 2017.

iii). Analysis of the level of Government and Non-Government Organizations Involvement

Table 3 showed the level of government and non-governmental organizations' involvement in the development of the Calabar River waterway. Respondents were asked to assess the level of involvement by government or her agency and NGOs in the development of the waterway. Their views as shown in the table revealed that 123 respondents representing (35.25%) graded the level of performance to be poor, 82 (23.50%) very low, 72 (20.75%) low, while very high accounted for 31 (8.75%). This was an indication that government have been insensitive to the development of the waterway.

Table 3: The level of Government and NGO Involvement

Level	No. of respondents	Percentage (%)
Very high	31	8.75
High	42	12.00
Low	72	20.50
Very low	82	23.50
Poor	123	35.25
Total	350	100

Source: Field Survey, 2017.

vi). Challenges of Inland Water Transportation

The information in Table 4 showed respondents' views on the challenges of inland water transportation system in the area. Lack of funding accounted for 36.75% (129) of the total number of respondents. Inadequate infrastructural facilities accounted for 26.25% (92), poor maintenance accounted for 21.25% (74), while poor dredging of the river accounted for 15.75% (55). From the respondents' views, it shows therefore that inadequate funding and inadequate infrastructural facilities were the major challenges in the proper development of inland water transportation in the Calabar River..

Table 4: Challenges of Inland Water Transportation System

Challenges	No. of Respondent	Percentage (%)
Poor dredging of the river	55	15.75
Inadequate infrastructural facilities	92	26.25
Lack of funding from the Government/NGO Involvement	129	36.75
Poor maintenance	74	21.25
Total	350	100

Source: Field survey, 2017.

v). The Prospects of Inland Water Transportation

From the information in Table 5, majority of the respondents believed that the prospect of inland water transportation in the area would be mostly on trade and commerce. The responses as represented in the table shows that 101 respondents representing (28.75%) favoured trade and commerce, 83 (23.75%) revenue generation, 62 (17.75%) improvement of lifestyle and 58 (16.50%) industrial growth..

Table 5: The Prospect of Inland Water Transportation

Prospect	No. of respondent	Percentage (%)
Trade & commerce	101	28.75
Industrial growth	58	16.50
Revenue generation	83	23.75
Improve lifestyle	62	17.75
Public exposure	46	13.25
Total	350	100

Source: Field survey, 2017.

vi). Measures to Address Water Transportation Problems in the Study Area

The presentation in Table 6 shows that 108 (30.75%) of the respondents which formed the majority believed that providing inland water transportation infrastructural facilities in the area would go a long way in the improvement of services in the Calabar River. This was followed by those who agitated for proper funding by the government (state and federal) with 81 respondents representing 23%. Respondents for proper maintenance were 67 representing 19.25% and so on.

Table 6: Measures to address Water Transportation Problems in the Study Area

Measures	No. of Respondent	Percentages (%)
Provision of Transportation Infrastructural Facilities	108	30.75
Proper Maintenance	67	19.25
Private Sector Involvement	54	15.50
Adequate Funding by Government	81	23.00
Public Enlightenment	40	11.50
Total	350	100

Source: Field survey, 2017.

vii. Result of the Hypothesis

Information in Table 7 showed that the correlation coefficient was -1.15 indicating a negative relationship. The coefficient of determination obtained was -132% and the outcome of the validation using the student t-test gave a calculated t_c of -1.51. As a two tail test with a significant level of 0.05 and a degree of freedom of four, the tabulated t_t was 2.78.

The outcome of the tests showed that there was no significant relationship between the provision of inland water transportation facilities and the level of socio-economic development of the area. This was because the t calculated (-1.51) was less than t tabulated (2.78) at 0.05 significant level. The result of the hypothesis was in line with the information in Table 6 where most of the respondents' views were that the provision of inland water transportation infrastructural facilities would go a long way in the development of the area. Presently, these facilities are grossly inadequate.

Table 7: Correlation Coefficient Table

r	Degree of freedom	t-cal.	t-tab	Significant level
-1.15	4	-1.51	2.78	0.05

Source: Field survey, 2017.

X. DISCUSSION OF FINDINGS

i). The state of inland water transportation in the area has been faced with many challenges such as; inadequate infrastructural facilities, lack of dredging of Calabar River, poor maintenance of available facilities and lack of funding etc.

ii). The study also revealed that there as a result of item i above, the level of socio-economic development of the area is poor. Communities that rely on the resources from the river as their means of livelihood are living in abject poverty due to inattention by government in upgrading and aiding in the provision of facilities.

- iii). Most of the respondents were of the opinion that putting in place more facilities by government and non-governmental organizations would go a long way in ameliorating the plight of the inhabitants of the area.
- vi). With particular reference to the result of the hypothesis, the provision of facilities have not matched with the level of socio-economic development of the area, showing some elements of setbacks in the development of the region and the people in particular.
- vii). Some prospects of inland water transportation such as; trade and commerce, industrial growth, revenue generation, public exposure etc.were identified if adequate attention could be paid by government and other stakeholders in the development of the area.

XI. RECOMMENDATIONS AND CONCLUSION

This study focused on the problems and prospect of inland water transportation system development using Calabar River as a case study. The study formulated and tested one hypothesis using the Pearson Product Moment Correlation Coefficient. A further analysis on the problems militating against the rapid development of inland water transportation system in the region showed that the area has inadequate infrastructure, due to lack proper or poor funding by the government or her agencies. The study also revealed proper development of the transportation system in the region would encourage import and exports, promote tourism, create job opportunities, and bring about industrial growth within its sphere of influence. For the transportation system to fully impact on the socio-economic development of communities within and around the Cross River, there would be need for government, stakeholders and non-governmental organizations to be actively involved in funding, upgrading and management of the available infrastructure in the study area.

In view of the above, the study specifically recommends the following:

- i). Government proposals on schemes should be made to address the challenges of inland water transportation in Calabar River; this would go a long way in achieving the socio-economic desire of the people and the region in general.
- ii). There was need for water transport infrastructural development advocacy in order to revive inland water transportation in the study area.
- iii). Government should collaborate with stake holders in the communities along the Calabar River; this would enable the government to take advantage of their resources, thereby investing in the transportation sub sector.
- iv). Indigenes and non-indigenes residing within the Calabar River should form themselves into small scale cooperative ventures in order to attract government interest, as this will expose their community potentials/resources to government, thereby bringing investors to invest in the area.
- v). An effective and sustainable transportation planning model should be adopted by the government or the private sector for the region; this will ensure the sustainability and viability of the inland water transportation system in the Calabar River and even beyond.

XII. CONCLUSION

It is quite obvious that transportation is a factor in the development of any region. However, adequate inland water transportation planning should be given priority and implemented so as to reduce the spatial friction and challenges faced by communities within and around the Calabar river. It is also imperative that the identified problems be fully addressed so as to make the prospect of inland transportation a complete reality in the study area.

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