

Development of the Water Infrastructure in the Estuarine Part of Niger Delta to Ameliorate the Prevailing Transportation Problems

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Abstract

The problems facing the river transportation in estuarine region of Niger Delta were studied. The study revealed the problems, the effect of river transportation on the social-economic life of the communities, and the state of the terminals and jetties in those communities. The study also made some useful observation and recommendations were made. It is hoped that this study will assist in understanding, planning, operations and management of river transportation in estuarine region of Niger Delta. For researchers, the study will provide a useful insight into this aspect of transport systems which is relatively neglected in the past research efforts.

Index terms— water transportation, niger delta estuarine.

1 I. Introduction

Transport is the cornerstone of civilization (Oni & Okanlawon, 2004). As the society and economic organizations become complex, the relevance of transport grows. Transportation is a requirement for every nation, regardless of its industrial capacity, population size, or technological development. Moving goods and people from one place to another is critical to fostering economic growth. A country's transportation system is comparable to the blood circulatory system in humans (NDES, 1997). An efficient transportation system facilitates the movement of goods and people cheaply and quickly which is vital in producing a vibrant economy. The more efficient the transport system is, the lower the cost of transport, and invariably the lower the cost of goods and services (NDDC, 2006).

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The most common and effective transportation mode in the rural Niger Delta areas is by water in canoes, ferries and small boats (NDRDMP, 2000). River transport is a very significant means of transport in Niger Delta region of Nigeria, which are now usually used in movement over short distances and for fishing activities across several nautical miles (Daramola, 2003).

In recent times, emphasis has been placed on urban road transport; with less regard to rural transportation development, especially river transport for example, modern jetties hardly exist -which is essential for the movement of the majority of the rural population (Fig. ??). As a result, there is immense difficulty of movement of people and goods in the estuarine part of the Niger Delta. Apart from a few State-owned transport companies, transport services are provided by private operators. Since 1960 several attempts have been made by the Nigerian government to pay special developmental attention to the river transportation in the estuarine Niger Delta region because of its uniqueness; by establishing development agencies to plan, organize and implement necessary phases of the service delivery process (CASS, 2002). This region of the Niger Delta suffers a major lack of basic physical infrastructure, badly maintained road and water networks, along with unemployment the region is virtually cut off from the entire country by virtue of living in a water surrounded environment (Abam, 2001).

2 II. Materials and Methods

A desktop research approach has been adopted for this study with extensive literature and archived programme information extracted and used as a basis for inference.

The Niger Delta Region is divided into nine States; this report is limited to only three communities in each of the three States (Delta, Edo and Bayelsa State) of N/Delta as representative of the whole region.

3 a) Design

The research questionnaires were administered to mostly people between the ages of 18 and 60 years and those who have lived in the area or community for over 15 years. Most of the respondents are also well educated with at least the West African School certificate.

The questionnaire technique was used to supplement other sources of information and data. The method was useful in tapping respondents' knowledge on river transportation through their experience on when The Niger Delta region is situated in the Nigeria's total surface area and it is estimated that by

Figure 1

travelling. More so, it is the most convenient means of appreciating or gauging respondents' perception of the pertinent socio-economic variables as they relate to the study.

4 b) Settings

The study data were collected across the three states (i.e. Delta State, Bayelsa State and Edo State) that make up the Niger Delta region. Some identified communities namely: Ekeremor zion, Ijasan and Azama towns of Delta State; Aghoro, Toru-Ndoro and Odeama towns of Bayelsa State and; Ovia, Erenegbe and Gegele communities in Edo State.

In each of these communities as shown in Fig. 2, where river was major means of transportation were approached for data collection. In all, a total of three communities were selected, thereby making up a total of nine communities across the three selected states of the Niger Delta Region. A total of 100 different people participated in the study per State.

5 c) Procedure

The study is an attempt to assess the problem of water transport in the estuarine of Niger Delta region in Nigeria. In all, three river line communities where river is the major means of transportation was selected in each state, thereby making up a total of nine communities for the three states in the Niger Delta region. A total of 300 copies of the questionnaire were produced and distributed across the selected communities in the three states, with 100 copies of the questionnaire meant for each state. These copies were distributed as follows: 33 copies for each community, across the three communities. In order to encourage the study participants to respond to the questionnaire items freely, they were asked not to include their names. Essentially, the participants were asked to respond to the questionnaire items as sincerely as possibly, and they were assured that their responses would be treated with utmost confidentiality.

In all, out of the 300 copies of the questionnaire, only 250 copies could be retrieved with the assistance of some residents in the community. While the remaining 50 copies could not be retrieved. Out of the 250 copies, only 225 were deemed fit and usable for data entry and analysis. The remaining 25 copies could not be used because some of the participants failed to indicate their gender or age or some other personal characteristics, while some other participants filled the questionnaire poorly in general.

6 d) Statistical analysis

The study utilized both the charts and descriptive statistics. The descriptive statistics were meant to obtain some summary information on some data such as percentages (%) and frequency. Specifically, the statistical package (SPSS) version 16.0 was utilized for data entry and data analysis.

7 III. Results

The results are presented in charts and descriptive statistical form for easy understanding of the existing situations of the area. The organisation of river transportation in the Niger Delta was high with cumulative percentage of 65.7, 64 and 67.3% for Delta, Bayelsa and Edo State respectively are shown in Fig. 3.2. This level of organisation could be attributed to the seemly private ownership of the passengers vessel and there desire to maximize profit.

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The major militating river transportation in the estuarine region of the Niger Delta as shown in Fig. 3.3. Majorly, River pirate has a cumulative percentage of 46.7, 48 and 60.7% for Delta, Bayelsa and Edo State respectively. This however revealed that the percentage of River pirate was highest in Edo communities followed by Bayelsa communities. This was followed by Fog as indicated in the Fig. 3.3.

The frequency of clearing and dredging of the river channels was shown in Fig. 3.4. The result indicated a cumulative percentage between 46.7 to 60.7% few and far between in clearing and dredging of the river. As a result of failure to dredge or clear the river, it is reported that the least average depth for River Niger between Warri and Jebba is one metre whereas the least average depth for commercial navigational operation should not be less than 1.5 metres (Ogah and Odita, 2009).

In Fig. 3.5, it was inferred that the government was solely responsible for the dredging and clearing of the rivers in the Niger Delta region. The organ responsible for the operation of the Jetties is presented in Fig. 3.6. The result revealed that the communities have the responsibility of Jetty operation with cumulative percentage of 42.7, 46.7 and 44% Delta, Bayelsa and Edo respectively. Fig. 3.7 shows the government is responsible for the development and maintenance of Jetties. (NDDC, 2005). Fig. 3.8 show the occurrence of accident in river transportation. The result indicated that river transport does not have high incident of water mishap. Fig. 3.9 shows how incident of water accident is managed. The result indicated that the river transportation in the Niger Delta region does not have any special arrangement to rescue accident victims rather the system depend on any available means to rescue survivals. Water transport safety is felt to still be lacking, because some of the passengers rely only on their ability to swim and thus rely on themselves (GRSL, 1995). Fig. 3.10 show the major goods transported by the communities using river transport. The result indicated a cumulative percentage of 56-60% for Agricultural products. This was followed by others. Type of goods which are transported by water is bulk material such as rice, wheat, oil and woods which produced from the forest along the river (Jansen et al., 1985). 12 shows communities' development through river transportation. This indicated a cumulative percentage of 34.7, 36 and 40% in Commercial activities for Delta, Bayelsa and Edo State respectively. This was also followed by employment across the three State and their communities. Fig. 3.13 shows the effect of river transportation on intercommunity relationship. The result indicated a cumulative percentage of 80, 77.3 and 81.3% in favour of better intercommunity relationship through river transportation.

Fig. 3.14 shows the effect of river transport on the economy of the communities. The result indicated a positive effect on the economy of the communities. Indication of an improvement on the communities through river transportation and there were no loss by the community as a result of river transport as there were increase in commercial activities and employment for the people in the localities. Fig. 3.15 shows the loss incurred by the community through river transport. From the response of participate, there were no lost by the communities as a result of river transportation.

9 V. Conclusion and Recommendation

Some of these problems are inability of the authorities to upgrade and maintain the available Terminals and Jetties in these river line communities, lack of adequate security for the passengers on board the boats travelling in the Niger delta communities, lack of modern river transportation vessel for the navigable river channels in the Niger Delta communities and the inability of the authorities to clear/dredge the river channels.

Generally speaking, years of government's insensitivity and unresponsiveness to the plight of the people of the Niger Delta has led to a deterioration of the water infrastructures whereby the cost of living in these areas was highly unbearable. From all indication the water channels in the area are navigable and there is urgent need for the government to pay attention to the Global Journal of Researches in Engineering () Volume XVI Issue V Version I development of the water infrastructure in the estuarine part of Niger Delta to ameliorate the prevailing transportation problems as indicated in this study.

In other to alleviate the identified problems in the river transportation estuarine region of Niger Delta the following solutions are recommended: 1. The government should encourage private investment in the river transportation system by giving soft loans to the people as a means of empowerment and Job creation. 2. Modern boats for river transportation should be introduced to these estuarine communities for rapid movement of cargo and passengers to their destinations.

The dredging and clearing of river channels should be done at least once in a year; this is to allow easy movement and travel using the river ways without obstruction and accident due to collision. The communities should be encouraged to invest in river transportation by forming cooperative in order to raise fund and purchase a modern vessel that is capable to river transport. The upgrading and maintenance of the Jetties should be made priority by the government, so as to encourage the participation of private organization in river transportation. 6. The local and State Government should take up the responsibility of providing safety of passengers by arranging on alert rescue term in case of emergency. This should also involve the use of modern communication gadgets to give signal and information to the authorities in case the need arises. 7. Night navigation facilities should be provided to the estuarine Niger Delta navigable rivers, so that passengers travelling in the night may find it comfortable and safe; and thus improve the average turnaround time of the boats. ^{1 2}

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Fig. 1: Existing and recommended transport Network for the Niger Delta

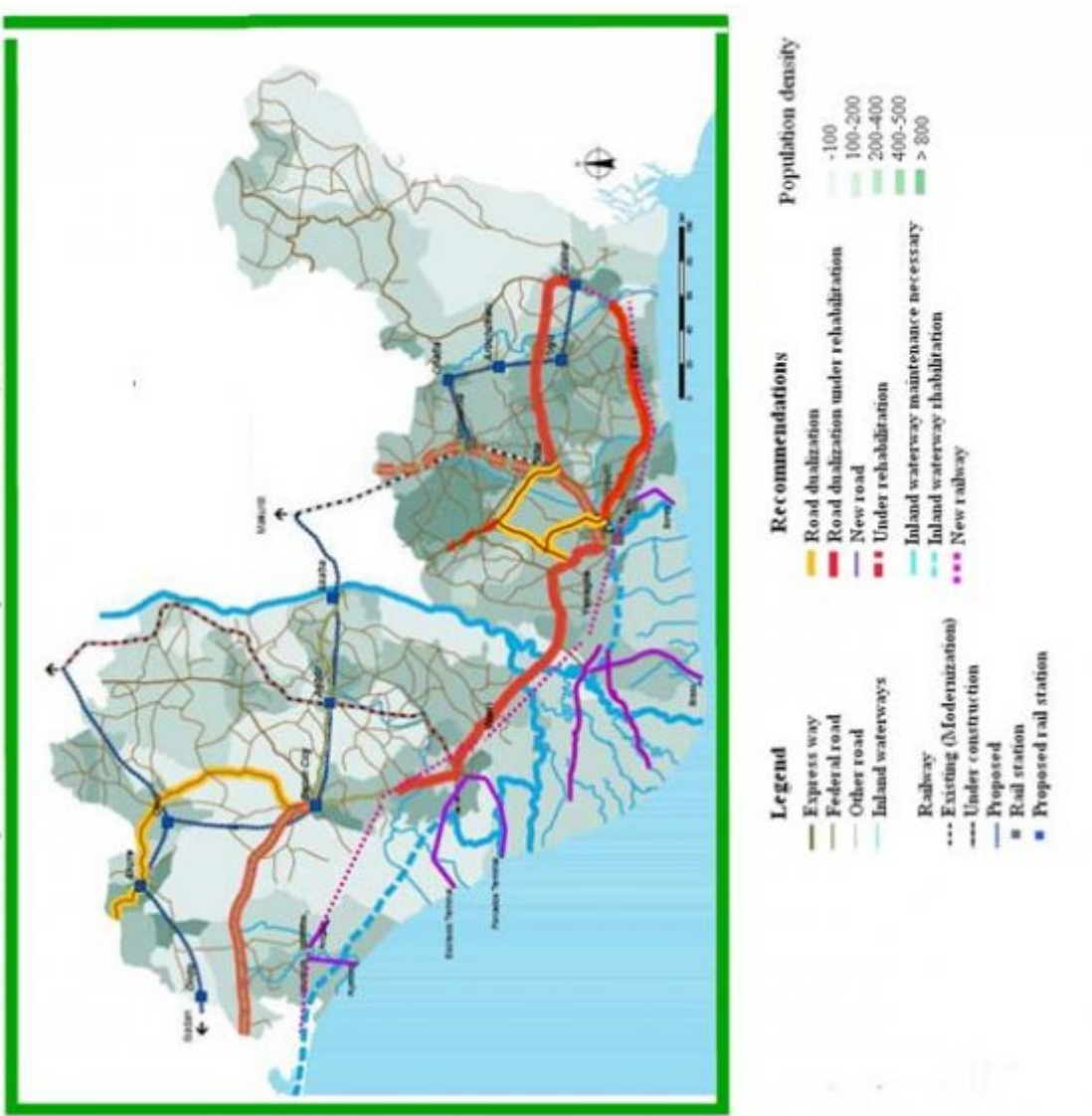


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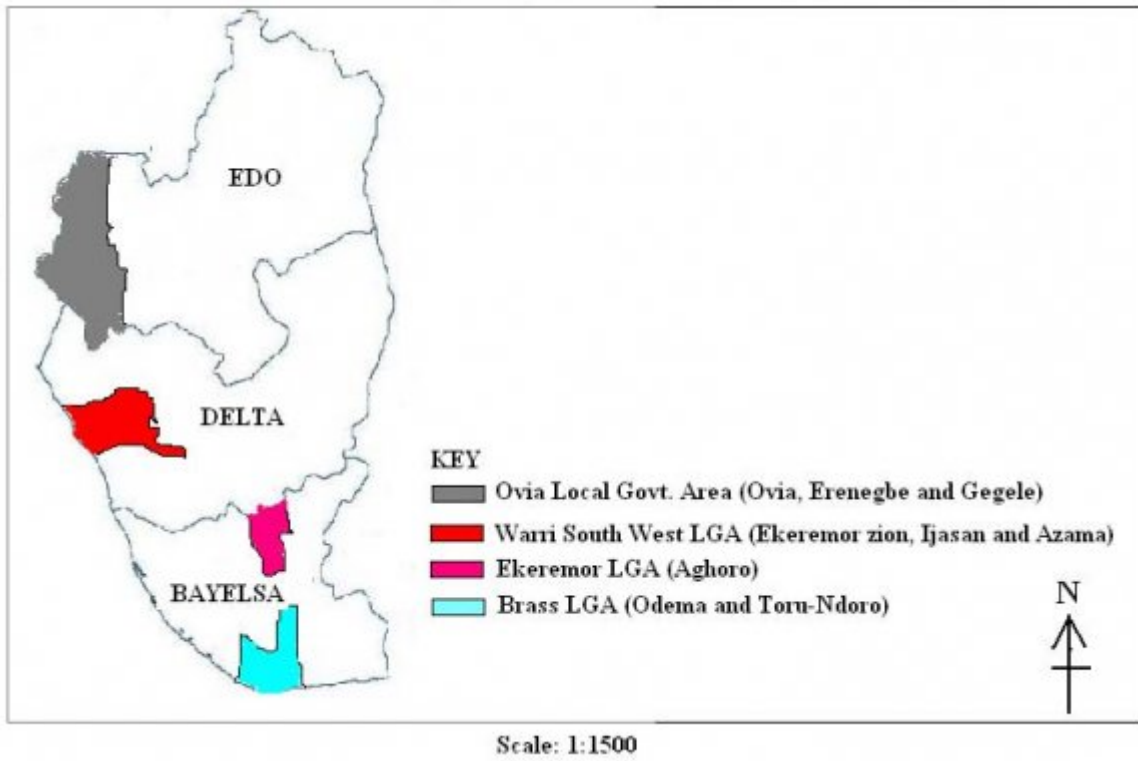


Figure 2:

Figure 3: Table

1

State	Land Area (square kilometres)	Population	Capital City
Abia	4,877	3,230,000	Umuahia
Akwa ibom	6,806	3,343,000	Uyo
Bayelsa	11,007	1,710,000	Yenagoa
Cross River	21,930	2,736,000	Calabar
Delta	17,163	3,594,000	Asaba
Edo	19,698	3,018,000	Benin
Imo	5,165	3,342,000	Owerri
Ondo	15,086	3,025,000	Akure
Rivers	10,378	4,858,000	Port Harcourt
Total	112,110	28,856,00	

[Note: Source: GTZ population projection (2004) based on National Population Commission Data]

Figure 4: Table 1 :

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