

# Infrastructural Challenges Hindering Passengers Patronage along the Calabar-Oron Inland Waterways Corridor, Nigeria

Ibok, Akarawak Nduonyikoyo (Ph.D)<sup>1</sup>, Otop, Oquah Otop (Ph.D)<sup>2</sup>, Chiane Beng Japhet Kuma (Ph.D)<sup>3</sup>

<sup>1</sup>Department of Geography and Environmental Science, University of Calabar *akarawakibok@gmail.com*, +2348020886236

<sup>2</sup>Department of Geography and Environmental Science, University of Calabar, *otopi69@gmail.com*, +23408037208345

<sup>3</sup>Department of Geography and Planning, The University of Bamenda, *chiane beng@yahoo.com*, +237678181676

**Abstract:** *This study examined infrastructural challenges hindering passengers patronage along the Calabar-Oron corridor, Nigeria. Data were collected at the terminal using about 590 copies of questionnaire at 98% success rate of using simple random sampling techniques. The hypothesis was formulated and tested using one way analysis of variance. The result showed that there was a significant difference in infrastructural challenges on passengers patronage of inland waterways transportation along the Calabar-Oron corridor, ( $N = 590$ ,  $F = 8.175$ ,  $p = 0029$ ). The findings of this study concluded that infrastructural challenges affect patronage through impacting negatively on some key service parameters, especially safety and security, passengers comfort and convenience, which promote patronage. The summary concluded that waterway transportation was found to impact negatively on the traffic. Some of the challenges promoted water phobia.*

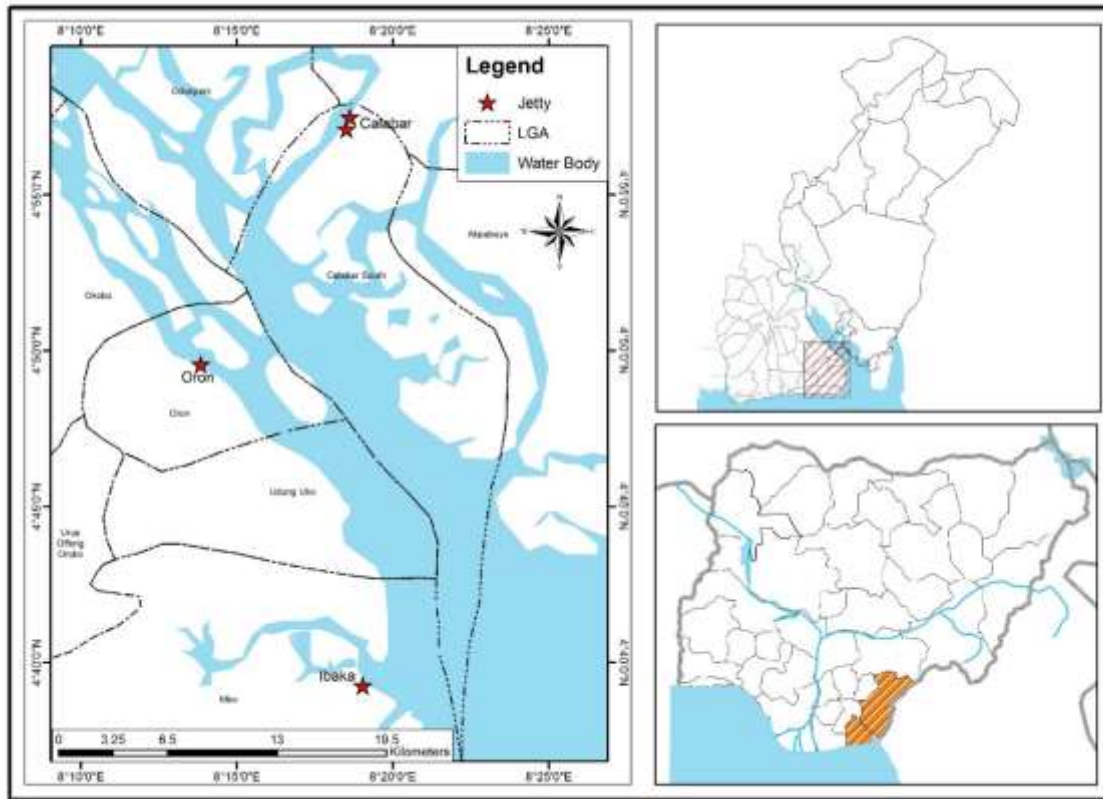
**Keywords:** Corridor, Patronage and Infrastructure

## Introduction

Infrastructures are panacea to development. These are the major reasons why Africa are tagged developing countries because of them lacks adequate infrastructure. These infrastructures cut across different sectors of the economy and the transportation sector is adversely affected. These effects are felt on the roads, railways, airlines and waterways. Nigeria is adversely affected and it's been severe because of her population of about 200 million people. Transport infrastructure is worse in coastal creek areas of Nigeria because are no bridges linking riverine settlement and everybody relies on the inland waterways transportation. This transportation system lacks adequate infrastructure for efficient operations. Although, the government have made efforts over the years by establishment of National Inland Waterways Authority (NIWA) in 1997, which duty was to oversee the affairs of operators of inland waterways transport. Also the cabottage act (2003); which was meant to increase local content and participation in the maritime industry. Unfortunately, the effect is not felt by the end users who patronize this mode of transport.

## Study Area

Calabar and Oron lie between longitudes  $8^{\circ}7'$  and  $8^{\circ}19'$  East of the Greenwich Meridian and latitudes of  $4^{\circ}30'$  and  $5^{\circ}15'$  North of the Equator. They are located in Cross River and Akwa Ibom State respectively. Calabar has three (3) major kingdoms namely; Ejagham, Efut and Efik, why the Oron has a kingdom and commonly called the Oron Nation. Both cities are historical cities in Nigeria.



Map of Study Area

### Statement of the Problem

Inland waterways transportation is the most predominant mode of transportation in creeks. Despite its importance especially in Calabar-Oron inland waterways transportation corridor, the terminal is deficient of infrastructure. As a result of the over stretching of infrastructure, this study intend to investigate how these challenges have affect optimum performance along the Calabar-Oron inland waterways transportation corridor. They include; overcrowding, shallow depth of navigable channel, dilapidated jetties, aquatic weeds and wrecks, old boats and engines, dirty terminals, presence of Calabar-Itu bridge and unfriendly weather condition. These setbacks have denied the public of an efficient.



Oron Terminal

### Literature Review

Akinbanijo, Ipingbem & Bayode (2016) identified the obstacles hindering the use of inland waterways transport in Lagos to include; shallow river, water hyacinth, a poor protected measure, poor quality boat and poor maintenance of waterways corridor. The research adopted survey research design, both secondary and primary data were used for the work. In addition, Sihn, Pascher, Ott, Sten, Schumacher & Mascolo (2015) studied the Central European inland waterways transportation. The study concluded that the waterways transportation was utilized below capacity because of inadequate infrastructure. The European Union strategy for the Danube inland waterways corridor was to elevate the cargo movement by twenty percent (20%) by the year 2020 compared to the year 2010. The study projected that subsequent age group European inland waterways ships and logistics would facilitate the innovative inland container vessel transportation in the Danube inland waterways corridor.

Palmer (2003) noted that the natural setting of a river network in Madagascar was mostly insufficient to allow for shallow boats but that silting could sometimes occur in slow moving rivers causing impediments to navigation. Besides, the United Nations Economic and Social Council (2009) identified the major constraints hindering the development of Africa's inland waterways corridors, to include; poor safety and security, inadequate infrastructure at the jetties, water hyacinth that blocked waterways channel and lack of modern boats for comfortable transport system.

Stawicka-Walkowska, Felski & Ptaszynski (2005) researched on sustainable development for shaping the infrastructure of inland waterways transport in Torun, Poland. They observed that the corridor lacked appropriate vessels that could meet the necessary technical requirements. Moreover, Lawal (2012) identified the causes of marine accidents in northern Nigeria. The study

blamed dilapidated jetties, poorly prepared marine police, non-operational vessels and wrecks on the water corridors as the major contributing factors. Moreover, the equipment employed to monitor the activities of inland waterways corridor were outdated and staff were ill-equipped with the required knowledge to control the apparatus.

**Research Methodology**

This publication depended largely on data from primary and secondary sources. Primary sources were questionnaire that was administered to passengers using simple random probability sampling. Also, image capturing of scenes at terminals using a digital camera and geographical coordinates using global positioning system (GPS) to capture the study locations. The secondary sources were published and unpublished items journals, maps, books and other completed project that were relevant to the study and constituted the background information to this research. The targeted population for this study was the passengers

**Result**

The hypothesis was tested using one-way ANOVA and the results are below. The summary of the ANOVA model for infrastructural challenges includes; overcrowding, shallow depth of navigable channel, dilapidated jetties, aquatic weeds and wrecks, old boats and engines, dirty terminals, presence of Calabar-Itu bridge and unfriendly weather condition. The  $N = 590, F = 8.175, p = .0029$ . Thus the null hypothesis was rejected and the alternate upheld, which stated that there was significant difference in infrastructural challenges on patronage of inland waterways transport along the Calabar-Oron corridor.

**ANOVA Result**

		Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	(Combined)	41.000	29	1.414	2.121	.176
	Linear Term	5.450	1	5.450	8.175	.029
	Weighted Deviation	35.550	28	1.270	1.904	.216
Within Groups		4.000	6	.667		
Total		45.000	35			

**Discussion of findings**

It was also found that these infrastructural challenges had negative effect on the operational performance of the inland water transport along the corridor, in terms of patronage. These challenges affect patronage through impacting negatively on some key service parameters, especially safety and security, passengers comfort and convenience, which promote patronage. Thus, depending on the gravity of these service parameters, the passengers could adopt a more convenient alternative mode, such as road, even if it would take a higher fare and longer travel time. The poor infrastructural facilities with attendant lack comfort, at these terminals have greater tendency to discourage high profile passengers.

**Summary**

The infrastructural challenges were confirmed. Generally, efficiency of any operation is enhanced by provision of essential infrastructural facilities. Thus the infrastructural challenges on the waterway transportation were found to impact negatively on the traffic. Some of the challenges promoted water phobia. Yet some others adversely affected the vital comfort/convenience indices of the passengers, especially the high profile class. These impacted adversely on traffic.

**Recommendations**

It is recommended that modern terminals complete with the necessary support facilities, be constructed at the terminals. The related access roads to the terminals, with adequate parking area, should also be put in place. These projects could be sponsored under appropriate public-private partnership (PPP) arrangement in view of the prevailing lean purse of the government portfolio. A Design-Build-Finance-Operate (DBFO) option would seem attractive to the private investors for financing the necessary infrastructures. Also, this programme could be sold to the finance houses so that they could provide appropriate financing facilities to the operators for acquiring boats and related items.

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