

Key Informants' Perceptions of the Challenges to Port Harcourt's Inland Water Transportation

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Abstract: Key informants are essential sources of unique insights into complex subjects since they possess specialized knowledge and competence in a variety of sectors. Insights from these informants are compiled and analyzed in this article to highlight the obstacles preventing the growth of inland water transportation in Port Harcourt. Their knowledge offers a thorough comprehension of the complex barriers preventing this vital method of transportation from operating more effectively and moving forward. The key informants, who represented a range of industries and sectors, including infrastructure, security, safety, navigation, governance, and industry-specific domains like timber transportation, together highlighted key challenges impeding inland water transportation. These issues include outdated infrastructure, security vulnerabilities, inadequate safety measures, navigational impediments, governance limitations, economic dependence on oil and gas operations, and industry-specific impediments. The informants all agreed that one major obstacle was the widespread presence of outdated infrastructure. The water transportation infrastructure in Port Harcourt lags behind international standards due to a reluctance to accept current designs in the construction of boats and ferries, which hinders efficiency. Inadequate resources for route protecting exacerbate security vulnerabilities including piracy and illegal oil bunkering, which pose a threat to passenger safety and cause environmental degradation. The problems facing the sector are further exacerbated by operator safety shortcomings, shallow and narrow waterways that present navigational difficulties, government limitations that impede regional development, and economic interdependencies. The recommendations center on industry diversification, policy advocacy for reforms, infrastructure revitalization, strengthened security measures, safety protocol prioritization and operator training, strategic dredging initiatives, and focused solutions for sector-specific issues like timber transportation. The community, legislators, and stakeholders must work together to fully realize the potential of this sector, promote economic expansion, and guarantee the long-term viability of Port Harcourt's inland water transportation network.

Keywords: Key informants, Port Harcourt, inland water transportation, infrastructure challenges, security vulnerabilities, governance limitations

1.0 Introduction

Nigeria's dynamic city, Port Harcourt, is tucked away inside a maze-like system of shimmering rivers. Promising trade, economic growth, and a thriving maritime environment are whispered by the tranquil Bonny River and the powerful Niger Delta creeks. However, despite this vast network of waterways, Port Harcourt's inland water transportation system is still sadly underdeveloped, impeding both the potential prosperity of the city's riverine settlements and regional economic growth (National Inland Waterways Authority, 2023).

This study explores the challenges that obstruct the efficient movement of people and things through these porous arteries. We seek to identify the underlying factors causing this stagnation by obtaining insights from key informants, or people who have direct experience navigating the complex currents inside the industry. Their voices will reveal the barriers that are hidden.

High stakes are involved. According to Esenwaka (2018), a thriving inland water transportation industry has the potential to completely change Port Harcourt's economic environment by opening up new trade channels, promoting job growth, and giving disenfranchised riverine communities more influence. It can revitalize the hinterlands by giving frequently isolated villages by the land essential access to markets and services (Onyema, 2021). Furthermore, it can serve as a link between the thriving rural villages that border Port Harcourt's waterways and the city's busy downtown.

But first, we need to be aware of the difficulties. We can pinpoint the precise obstacles preventing advancement by paying attention to the opinions of people who have the most knowledge about the waterways. Policymakers, investors, and community leaders will be able to use this report as a navigational chart to help them find solutions that will fully realize the potential of Port Harcourt's inland water transportation industry.

This paper provides an in-depth understanding of the barriers preventing the advancement of inland water transportation in Port Harcourt by synthesizing the priceless insights offered by key informants. Their knowledge sheds light on the significant difficulties this mode of transportation faces.

2.0 A Review of the Literature on Inland Water Transportation

An essential component of international trade and economic growth is inland water transportation, or IWT. By linking rural areas with urban centers and fostering regional integration, navigable rivers, lakes, and canals provide an economical and environmentally friendly means of transportation for both people and products. Nevertheless, IWT's potential is still untapped in many areas due to a number of obstacles that prevent it from expanding and becoming more effective. The main ideas of IWT are examined in this literature review, along with its advantages, drawbacks, and prospective remedies. The African setting is given special attention.

2.1 Advantages of Transportation by Inland Water

Economic Efficiency: When compared to land-based transportation, IWT has considerable cost advantages. Waterways can move bulk cargo for less money per unit and require less maintenance and infrastructure investment. As a result, firms and consumers will pay less, which will increase trade and economic activity (World Bank, 2016).

Sustainability: IWT has less of an environmental impact and a smaller carbon footprint than other forms of transportation. Compared to air or road transportation, the natural quietness of waterways reduces noise pollution, and fuel consumption is frequently lower (UNCTAD, 2019).

Accessibility: IWT can reach far-flung locations that are frequently unreachable by land, giving riverbank communities essential access to commerce, medical care, and educational opportunities. This promotes rural development and raises the standard of living in the area (IWPC, 2019).

Relief from Traffic Jams: By moving freight to waterways, IWT can reduce traffic jams on roadways. Urban regions gain from this since it lowers pollution, accidents, and deterioration of infrastructure (PIANC, 2018).

2.2 Difficulties with Inland Water Transport

Deficits in Infrastructure: Many IWT networks are beset by antiquated locks and dams, inadequate port facilities, and shallow rivers. This makes it more difficult to navigate, takes longer to get there, and can carry less cargo (Akintoye & Adebayo, 2018).

Safety Concerns: Outdated boats, badly maintained rivers, and insufficient safety laws put passengers and crew members at serious risk. Accidents and deaths can deter people from using IWT and harm the industry's reputation (UNECE, 2017).

Environmental Degradation: Dredging and other unsustainable activities can degrade the water quality and aquatic habitats. This may have an effect on tourism, fisheries, and the means of subsistence for populations reliant on waterways (UN-Habitat, 2020).

Policy and Regulatory Gaps: The operating environment for IWT enterprises is unpredictable due to fragmented policies, poor regulatory frameworks, and limited stakeholder cooperation. This deters investment and impedes the growth of the industry (ICPDR, 2017).

2.3 The Background in Africa

With significant rivers like the Nile, Niger, and Congo offering enormous potential for IWT development, the African continent is endowed with an abundance of inland water resources. However, the industry suffers the same difficulties as mentioned above, which are made worse by extraneous elements including political

unpredictability, corruption, and scarce funding. Notwithstanding these obstacles, a number of programs, such as the UNESCAP Transport in Landlocked Developing Countries Program and the NEPAD African Waterway Transport Development Project, are in place to support IWT in Africa. These programs seek to create legislative frameworks, strengthen infrastructure, and increase the ability for IWT development that is sustainable (UNECA, 2014; UNESCAP, 2019).

2.4 Possible Remedies for the Development of IWT

According to literatures, the following are possible remedies for the development of IWT:

Public-private partnerships: Concessions and joint ventures that promote private sector participation in infrastructure can draw capital and quicken the construction of infrastructure (World Bank, 2016).

Adoption of technology: E-cargo tracking, intelligent transport systems, and automated navigation systems can all increase productivity and safety (ITF, 2019).

Community engagement: Sustainable IWT development can be promoted by collaborating with riverbank communities to address environmental issues, build skills, and generate job opportunities (IWPC, 2020).

Policy and regulation harmonization: Creating regional and global frameworks for IWT governance can enhance cooperation, cut down on red tape, and draw in funding (UNECE, 2017).

3.0 Methodology

3.1 Research Design

In order to better understand the obstacles preventing inland water transportation in Port Harcourt, this study used a qualitative research design.

3.2 Data Collection

Key informants were interviewed in a semi-structured manner as the main technique of gathering data. Based on their knowledge and experience in Port Harcourt's inland water transportation industry, key informants were selected.

3.3 Data Analysis

The recorded interviews were transcribed verbatim and analyzed using thematic analysis techniques. This involves identifying recurring themes, patterns, and meanings within the data.

3.4 Why Do Key Informants Matter?

Qualitative research benefits greatly from the distinct views and perspectives that key informants—people with in-depth knowledge and specialized competence in a specific topic or setting—offer (Patton, 2002; Lincoln & Guba, 1985). Their first-hand accounts, which are frequently concealed from official records or data, offer a rich tapestry for comprehending intricate social realities.

Key informants are important in this kind of qualitative study for the following reasons:

1. Accessing Hidden Information

Key informants provide perspectives on power relations, cultural quirks, and informal practices that may be overlooked by official statistics (Bourdieu & Wacquant, 1999). Their knowledge can reveal previously undiscovered aspects of a problem, giving study findings more nuance and complexity.

2. Verifying and Expanding on Results

Emerging themes from other qualitative data sources, such as interviews or observations, might be confirmed or refuted by key informants (Creswell & Miller, 2000). By adding more context and subtlety, their involvement can improve the validity and credibility of research findings.

3. Directing the direction of research

Early in a study, key informants might assist researchers in focusing their attention and identifying important research topics (Merriam & Tisdale, 2016). Their observations can drive the path of data gathering and guarantee that the study tackles the most urgent problems.

4. Developing Cooperation and Trust

Establishing rapport and trust with communities or organizations that are part of the research can be achieved through engaging with key informants (Flick, 2014). Richer data, increased stakeholder participation, and a deeper comprehension of the study setting are all potential outcomes of this partnership.

5. Encouraging Permissions and Access

According to Bryman (2016), key informants may serve as gatekeepers for research, granting access to particular groups or organizations. Their assistance may be essential in obtaining approval to carry out research and guaranteeing the acquisition of morally sound data.

3.5 The Procedure for Choosing the Key Informants

Bias in key informant selection: Care was taken to select key informants who would reflect a variety of viewpoints and not distort study findings (Lincoln & Guba, 1985).

Power dynamics: We made sure that crucial informants' voices are heard without our undue influence because we were conscious of any power imbalances between us, the researchers, and them (Bourdieu & Wacquant, 1999).

Triangulation and verification: To confirm the validity and dependability of the findings, the Key Informant data were cross-checked with information from other sources (publications) and subjected to further qualitative methods of triangulation (Denzin & Lincoln, 2011).

4.0 Results of the Research

First Informant: Infrastructure Specialist

Outdated infrastructure is the main source of the problem with inland water transportation in Port Harcourt. The unwillingness to adopt modern ferry and boat designs has grown to be a major barrier. Our efficiency and advancement are hampered by local builders' reluctance to adopt contemporary designs that are common in both developed and developing countries. Our progress is further impeded by the financial barriers to introducing more sophisticated boats, such as the passport boats that are utilized abroad and are safer and more stable.

Security analyst informant number two

Security is still the top priority along our waterways. Inadequate security measures allow menaces like illegal oil bunkering and sea piracy to pose serious risks. The scarcity of staff and resources to protect these essential rivers has resulted in frequent oil spills that have devastated the environment and damaged the attractiveness of our waterways.

Another significant issue facing inland water transportation is illegal oil bunkering. The aquatic life in the waterway is devastated by oil spills from damaged pipelines or oil facilities that flow into the waterways. Additionally, it has ruined the shoreline's and the waterways' aesthetics.

Figure 2: Illegal Oil Bunkery destroys the shoreline's aesthetics in Abutoru Creek.

Officer of Safety and Training, Informant No. 3

The safety of passengers is clearly and immediately at risk due to a lack of safety equipment and insufficient training for ferry drivers and operators. The risks are increased when careless operations result from a lack of thorough training. To reduce these risks and put the safety of passengers first, strict safety regulations and extensive training initiatives are essential.

Informant 4: Expert in Navigation

Navigational obstacles impede the smooth passage of vessels, especially when they take the shape of short, shallow pathways. To make these channels deeper and wider and to allow vessels and ferries to navigate our waterways more safely and effectively, extensive dredging is necessary.

Informant 5: Advisor on Governance and Policy

Regional development is seriously hampered by the federal government's centralized control over inland waterways. Because of their conflicting priorities, the central authority's technical assistance and resources are insufficient to advance the situation. Lack of regional autonomy stunts growth and innovation, making the area reliant on insufficient resources.

Informant 6: A Representative of the Industry

The growth of inland water transportation is maintained by its reliance on oil and gas activities. But the decline in these activities has a big effect on the industry, which lessens the demand for our transportation network's general growth and infrastructure development.

Seventh Informant: Timber Merchant

The canals have been our main route for moving millions of cubic feet of log timber from the interior to the city for many years. At the moment, oil deposits from bunkering operations, floating garbage, and insecurity are major obstacles. Transportation is further complicated by the fact that canals are becoming unnavigable due to encroachment of water hyacinths and mangrove swamps, as well as the narrowing and shallowing of routes caused by a lack of dredging.

Extra Information from the Interview with Key Informants

- i. Maintenance and Dredging: The inability to provide proper maintenance and the expensive nature of dredging continue to be issues.
- ii. Blockages in Waterways: Floating trash, solid waste, and the invasive water hyacinth make it difficult to get clear of these obstacles and allow transportation to go smoothly.
- iii. Preference for Alternative Modes: The development of inland water transportation is hampered by the building of roads and bridges rather than promoting water-based connectivity and the authorities' preference for air travel over waterways.
- iv. Safety precautions and Facilities: The decreasing feasibility of water transportation is a result of insufficient safety precautions and facilities.

Summary of Key Informants Perspectives

Key Challenges	Insights
Infrastructure	- Outdated Infrastructure: Reluctance to adopt modern designs
	- Financial Limitations: Inability to invest in safer vessels
	- Policy Hurdles: Unfavorable government policies stifling innovation and progress
Security	- Piracy and Bunkering: Threats of sea piracy and illegal oil bunkering
	- Lack of Resources: Inadequate measures for securing water channels, leading to oil spills and damage
Safety Concerns	- Insufficient Safety Gear: Endangering passenger safety due to a scarcity of equipment
	- Inadequate Training: Reckless operations due to insufficiently trained operators
Navigation Issues	- Narrow and Shallow Routes: Hindering smooth vessel movement
	- Necessity for Dredging: Required to widen and deepen channels for safer navigation
Governance & Policy	- Centralized Control: Federal government control hindering regional development

Key Challenges	Insights
	- Lack of Autonomy: Insufficient funding and support impacting innovation and growth
Economic Dependency	- Reliance on Oil and Gas: Sustains transportation, but downturns impact sector growth
Industry Specific	- Insecurity: Poses challenges to transportation activities
Challenges (Timber)	- Environmental Issues: Routes becoming unnavigable due to lack of dredging and natural obstacles

Source: Authors, 2023

Analysis of the Key Informant Results

The following is a discussion of the conclusions drawn from the key informants' observations regarding the difficulties facing inland water transportation in Port Harcourt:

1. Obsolescence of Infrastructure

The informants all agreed that inland water transportation frequently uses outdated infrastructure. One major obstacle still standing in the way of modern boat and ferry construction is resistance to implementing new designs and technologies. Because of this antiquated infrastructure, Port Harcourt's water transportation system performs significantly less efficiently than that of other countries.

It is necessary to clear and open conventional waterways in order to investigate alternatives such as sea bikes, which may draw attention and be used as a recreational tool. Although these projects are doable, the negative government policies have caused stakeholder companies and boat builders to close their doors and move their money elsewhere. These issues are reflected in the slowdown of fiberglass development and the fall of boat building in Niger Dock. The only organization that rise to this challenge is John Hoyts Almarine.



Figure 1: Boats used for inland water transportation in Abutoru Creek.

Source: Authors, 2023

2. Vulnerabilities in Security

Sea piracy and illicit oil bunkering along water corridors are problems brought up by security experts. They highlighted the severe shortage of personnel and resources for securing these pathways, which leads to oil leaks that endanger aquatic life and degrade the aesthetic appeal of waterways.

Illegal oil bunkering is a major challenge faced by the Inland Water Transportation. Oil Spills from the destroyed pipes or oil facilities that runs into the water channels destroy the aquatic life found in the water way. It has also destroyed the aesthetic found in the water ways as well as the shoreline.



Figure 2: Aesthetics at Abutoru Creek shoreline destroyed by Illegal Oil Bunkery.

Source: Authors, 2023

3. Deficiencies in Training and Safety

The lack of appropriate safety equipment and insufficient training provided to ferry operators and drivers was highlighted by key informants involved in safety and training. Because of this shortfall, there are significant dangers to passenger safety, making the rapid adoption of thorough safety procedures and training initiatives necessary.

4. Navigational Challenges

Experts in navigation emphasized the challenges posed by short and shallow courses. They emphasized how urgently large-scale dredging was required to deepen and expand these waterways so that ships could transit through them more safely and effectively.

5. Finance and Governance Restrictions

Industry representatives and policy consultants bemoaned the federal government's centralized management of inland waterways. The sector's advancement is hampered by a lack of regional autonomy, technical assistance, and limited finance, which all inhibit innovation and development. Monopoly over inland water transportation: The federal government of the nation controls all aspects of water transportation, with no other level of government having any influence. The National Inland Waterways Authority is in charge of this kind of transportation (NIWA). The federal government has refused the River State Government the right to control a portion of the state's inland region, despite the state's repeated attempts to do so. Due to inadequate federal funding and community support for the construction of jetties and the supply of basic amenities like life jackets, NIWA lacks the resources, personnel, and technical know-how to promote inland water transportation throughout the nation. The federal government is the main obstacle preventing the state government from developing the inland waterways.

6. Dependence on Oil and Gas Activities

Representatives from the industry emphasized how heavily the sector depends on operations involving oil and gas. This kind of transportation is used for the transportation of oil and gas products. The inland waterways are used for the transportation of laborers, supplies, pipes, and other equipment needed in the oil and gas sectors. The decline in these sectors' operations will have an impact on the development of inland waterways since there won't be a need for it as the main driver of development in this sector has ceased to exist.

7. Additional Challenges

- i. There are still problems with maintenance and the need for expensive dredging.
- ii. Navigable waters are obstructed by floating trash, solid waste, and water hyacinth.
- iii. Roads and bridges are used to create infrastructure, not water to improve connectivity.

- iv. Inland water traffic is further discouraged by authorities' preference for aviation and road transportation over waterways. Communities encircled by water are being connected by the construction of roads and bridges.



Figure 3: Floating solid waste on Nembe water waterside

Source: Authors, 2023



Figure 4: Floating Solid Waste on Iwofe Waterside

Source: Authors, 2023

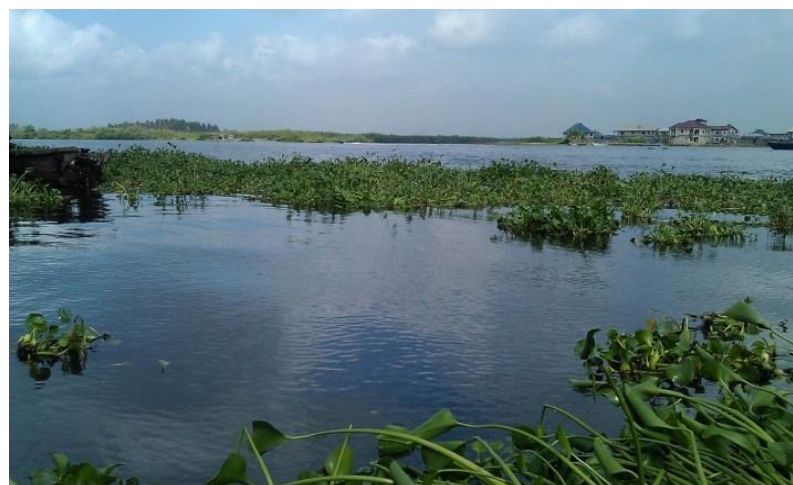


Figure 5: Floating Solid Waste and Water Hyacinth on Waterway

Source: Authors, 2023

Additionally, during the investigation, it was discovered that Victory Creek is the only one of the four inland waterways that carries people, products, and services within the study region. Others move people, products, and services to and from other local government regions within the research area. They only function in the study area when used for basic talk. Together, these observations paint a complicated picture of the difficulties that Port Harcourt's inland water transportation sector faces.

5.0 Overcoming Major Obstacles to Unlock the Potential of Inland Water Transportation in Port Harcourt

Blessed with an abundance of waterways, Port Harcourt has long looked to capitalize on its inland water transportation potential. Unfortunately, a number of obstacles have made this essential means of transportation less successful. A strategy to overcome these obstacles and usher in a new age for the region's water transportation is developed with information obtained from experts and stakeholders.

5.1 Evolution of Infrastructure for Increased Efficiency

The outdated infrastructure of Port Harcourt's water transportation system is one of the main problems it faces. Reluctance to adopt modern designs impedes development. In order to counter this, partnerships and financial incentives should be used to encourage local builders to embrace contemporary boat and ferry designs, thereby revitalizing the industry.

5.2 Protecting the Waterways: A Top Priority

Along the waterways, security is still a major concern. The serious risks posed by piracy and illegal oil bunkering demand more money for marine security. The implementation of cutting-edge surveillance technologies and cooperation with international bodies are essential in countering these threats and protecting the waterways.

5.3 Passenger safety and operator training should come first.

Operators with the necessary training and strict practices are essential to passenger safety. It is essential to have safety standards that are mandatory and to provide sufficient safety equipment. By providing thorough training, ferry operators may operate in a responsible and safe manner, reducing the risks that come with careless behavior.

5.4 Enhanced Navigability via Strategic Dredging

Narrow and shallow channels are examples of navigational challenges that make it difficult for ships to navigate smoothly. Wide-ranging dredging initiatives to deepen and expand these canals show promise as a remedy. Additionally, navigability will be maintained without compromising the ecology using sustainable management techniques for natural barriers including water hyacinths and mangrove swamps.

5.5 Overcoming Barriers in Governance and Policy

Regional growth is hampered by the federal government's centralized management of inland waterways. It is imperative to advocate for decentralization and policy changes that meet the demands of the sector. It's time for policies to stop impeding advancement and to promote innovation and growth.

5.6 Sustainable Practices and Industry Diversification

Transportation by water inland is impacted by an over-reliance on the oil and gas industry. This reliance can be lessened by investing in sustainable techniques and diversifying the industry. Encouraging eco-friendly projects draws capital and guarantees sustainability over time.

5.7 Industry-Specific Difficulties: Preservation and Safety

Environmental preservation and security protocols are critical in sectors such as the transportation of timber. To guarantee the ongoing and safe movement of commodities, partnerships with security authorities and sustainable management techniques for waterways are essential.

6.0 Conclusion

This paper captures the precise opinions and in-depth observations from each key informant, offering a thorough picture of the issues faced by inland water transportation in Port Harcourt. These perspectives jointly underline the compelling need for modernization, increased security measures, and more inclusive governance frameworks within inland water transportation. The issues mentioned by these experts underscore the deep network of hurdles facing this sector. Overcoming these problems takes a concerted effort by stakeholders, government, and the community at large. It needs a dedication to innovation, sustainability, and regional sovereignty. By implementing these steps and fostering collaborative projects, Port Harcourt can unlock the full potential of its inland water transportation, fostering economic growth and sustainability for years to come.

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