Development of Inland Waterways Transportation in Lagos

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[Logos of LASWA, AFD, European Investment Bank]
I – BACKGROUND

Water is a crucial feature of Lagos

Water bodies cover 22% of the total surface areas of Lagos State, whilst 15 out of the 20 Local Government Areas are reachable by water. The State is highly vulnerable to the impacts of climate change such as rapid coastal erosion as 60% of the State's landmass is less than 5 meters above sea level.

IWT as a great potential. Inland Waterways Transport (IWT) is expected to play an increasing role in Lagos' urban mobility. It can become a pivotal component in adapting the State's multimodal public transport system to the impacts of climate change.

Africa's largest city under high urban constraints

Lagos is Nigeria's largest city and its leading economic and financial center, with an estimated population of 22 million, which is expected to grow to 40 million by 2040. Over the last decades, road congestion has undermined productivity and economic growth and deteriorated air quality. Lagosians spend an average of 5 hours a day stuck in traffic and 30 to 40% of their monthly household incomes on transport.

Current ferry services are mostly informal

Today the ferry system is mainly run by informal operators with unsafe low-capacity boats. The lack of organization in the sector, the water phobia of Lagosians, and the dilapidated state of infrastructure are obstacles to developing this innovative means of transport. Current ferry services are unaffordable and not accessible to everybody, while they generate greenhouse gas emissions, water contamination through oil spillage, and boat accidents.
II – PROJECT PRESENTATION

Lagos State has engaged in the OMI ÈKÓ project to develop mass public inland waterways transportation on the Lagos Lagoon. Implemented by the Lagos State Waterways Authority (LASWA), this project will run from 2024 to 2030.

The new IWT «OMI ÈKÓ» system will be safe, sustainable, affordable, environmentally friendly, and socially inclusive. OMI ÈKÓ, when translated from Yoruba, combines «OMI», meaning «Water», with «ÈKÓ», signifying «Lagos». Collectively, it refers to Lagos through its waterways, highlighting the significance of water in the context of the city’s identity.

The total project investment cost is EUR 410 M. The French Development Agency (AFD), the European Union (EU), and the European Investment Bank (EIB) have joined their efforts to support Lagos State’s initiative by investing a total of EUR 360 M in the project. The financial package includes a EUR 60 M grant contribution from the European Union, a EUR 130 M subsidized loan from AFD, and a EUR 170 M subsidized loan from EIB.

The project encompasses two main components:

Component 1 – Construction of inland waterways transport and associated facilities:

This component aims to develop 15 priority ferry routes, including constructing high-quality infrastructure and facilities. It covers the channelization, marking, and dredging of 140 km of ferry routes, the IWT infrastructure comprising 25 ferry terminals and jetties, the electric charging infrastructure to power e-vessels, depots for vessel routine maintenance, the provision of land connections including road surfacing, and small transport facilities for other transports services connecting to ferry terminals.

Component 2 – Establishment of sustainable inland waterways transport operations:

This component aims to establish sustainable IWT operations on the ferry network. It covers the acquisition of 75+ electric-powered vessels, the procurement of an Intelligent Transport System (ITS) (ticketing, passenger information system, control room center, vessel tracking system, CCTV), and the institutional strengthening and capacity-building of LASWA, the project implementing agency and future system’s manager. The project will also include a vessel industry transition program to deal with the existing ferry operators and improve the IWT sector governance and operations.

III – A LONG-TERM VISION

The Lagos State Development Plan (2022-2052) makes IWT a vital component of the multi-modal transport system, further detailed in the Lagos State Transport Mobility Master Plan implemented by the Lagos Metropolitan Area Transport Authority (LAMATA).

IWT long-term vision

- High patronage of Lagosians in the IWT system
- IWT operations reach financial sustainability
- IWT addresses the needs of all segments of Lagos’ population
- Lagos State becomes an international benchmark for IWT
- IWT contributes to climate change mitigation, adaptation, and improved air quality
V – INNOVATION FOCUS

E-Mobility
E-ferries will cut Greenhouse Gas Emissions (GHG) by 50% versus diesel-powered vessels, while other pollutants will be dramatically reduced. Charging stations at pontoons will be powered by a Battery Energy Storage System (BESS) supplied by solar PV panels, while the grid and a CNG backup generator will support the system. The water contamination resulting from oil spillages during vessel fuel supply and maintenance operations will be eradicated. The higher upfront cost of acquiring e-vessels will be compensated by significantly reducing operation and maintenance costs, making the system financially sustainable.

Climate Change Adaptation
Coastal erosion and land subsidence are significant threats to the long-term development of Lagos. Moving people by water is a flexible and sustainable way of adapting the transport system to the impacts of climate change. Land-based infrastructure will be designed to cater for a 80 cm sea level rise scenario, which is the worst-case scenario in Lagos by 2100. Adequate drainage facilities will be provided at ferry terminals and jetties to prevent flooding. Marine-based infrastructure will favor floating pontoons over concrete ones.

Gender-Based Violence (GBV)
The project will have significant positive impacts on gender equality. Outdoor ferry terminals and jetties will be designed with public lighting to prevent sexual harassment, dedicated seats will be provisioned for pregnant women at terminals and in the vessels, and women’s employment will be encouraged during the construction and operation phases of the future ferry system.

Safety
OMI ÈKÓ will offer safe and reliable passenger services through scheduled trips, large and comfortable boats, and well-identified ferry routes marked, dredged and cleared of any obstructions (shipwrecks, water hyacinth, logs, fish nets, etc.). Ferry terminals and jetties will be fully fenced and equipped with signage to prevent hazards. Vessels will be registered, while ferry operators will be monitored from LASWA’s control room through vessel tracking and real-time communication systems. Water phobia will be fought through awareness campaigns, including developing a swimming culture in Lagos.

LAGOS WATERWAYS AUTHORITY (LASWA)
Five Cowries Terminal
Falomo, Ikoyi, Lagos, Nigeria
info@lagoswaterways.com

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