

STRATEGIC DIAGNOSIS · INLAND WATERWAYS

Nigeria already built the master plan for its inland waters

Why a 530–page Royal Haskoning bankable feasibility, FEC-approved with construction commenced and a ₦34.8 billion dredging contract signed, sits shelved since the 2015 transition while Nigeria moves 0.08% of national cargo by water against Bangladesh’s 32 percent, and what MOFI changes

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THE NUMBERS BEHIND THE GAP

~3k km

Federal navigable waterways under the NIWA Act 1997

0.08%

IWT modal share today. Vision 2045 target: 25%

\$1.5B

Estimated total programme cost (2008–30, 2007 USD)

39-47%

Cost saving IWT vs road. Port Harcourt to Onitsha to Kaduna

Nigeria commissioned its inland waterways Master Plan in 2006, approved it at FEC in January 2007, signed a ₦34.8 billion dredging contract in 2008, received the bankable feasibility on 6 August 2010, and shelved it at the 2015 transition. Sixteen years on, the corridor is unchanged.

EXECUTIVE SUMMARY

The Master Plan was on point but shelved

Royal Haskoning delivered a 530–page bankable feasibility on 6 August 2010 to NIWA under full federal sponsorship. The Federal Executive Council had approved the programme in January 2007.

Construction commenced at Lokoja. The economic IRR is 10.44 percent. The terminal payback is 6 to 8 years. The Lokoja return on equity is 20 percent. The plan was shelved in 2015 when the administration changed. The single open question the plan could not answer was who provides the 20–year government guarantee on maintenance dredging. The answer to that question is tackled in the Report.

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ASSET PROFILE

NIWA, the institutional history

From the colonial-era Inland Waterways Department (1956) to NIWA under Decree No. 13 of 1997. The inland waterways as a primary national asset remained in a “to be activated” state across two republics until 2006 when a Presidential directive launched the most rigorous infrastructure study ever commissioned for the country’s river system.

NETWORK · SCALE

~3,000 km federal navigable waterways

16 designated categories under Section 10 of the NIWA Act 1997. 50+ rivers organised around three primary arteries: Niger, Benue, Cross rivers. 20 of 36 states traversed. 852 km coastline adjacent. Year-round large-vessel navigation downstream of Onitsha.

OPERATIONAL FOOTPRINT

10 area offices · 35 registered vessels

Area offices at Warri, Port Harcourt, Lokoja, Makurdi, Yauri and others. 35 registered vessels at time of 2010 Plan, of which only 3 were functional. NIWA generates approximately 20 percent of its required operating funding internally.

ENABLING INFRASTRUCTURE

Kainji and Jebba dam locks

Both dams carry navigation locks 200m long and 12.2m wide, suitable for vessels up to 11.7m beam. All road and rail bridges built with 11m minimum air clearance, sufficient for four-layer-high empty container barges. The engineering baseline is intact.

REGULATORY AUTHORITY

Statutory powers under the Decree

Development of navigable waterways, licensing of inland navigation, pier and dockyard management, hydrographic survey, and design approval for inland craft. The Cabotage Act 2003 further embeds NIWA’s commercial oversight over Nigerian-flagged vessels on inland waters.

The 2010 Plan was a 530–page full bankable feasibility. Its Project Implementation Committee named the Director of Maritime Services at the Federal Ministry of Transportation and the full NIWA executive. **Dangote (Obajana Cement, 50 km from Lokoja), Olam Nigeria, Ajaokuta Steel Plant, Julius Berger, the Nigerian Navy, the NPA, the NRC, and the NNPC** all engaged with the consultants during field work. These are not consultation stakeholders. They are cargo owners whose demand assumptions underpin the financial model.

01. THE INVESTIGATION

The utilisation gap is clear and documented

By way of direct comparison, Nigeria operates at one-four-hundredth of Bangladesh’s inland waterway despite having the second-longest navigable network in Africa. The gap is not structural but one of a governmental will to knit together the parameters to close the gap. The gap is thus within reach if the will is there.

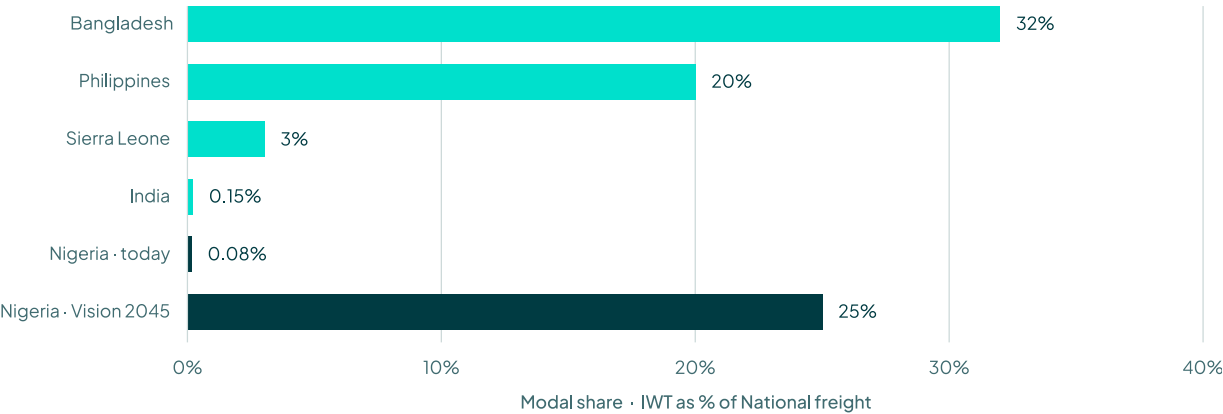


Figure 1 · Modal share of inland waterway transport, selected economies. Reaching Sierra Leone’s modal share alone would multiply Nigerian IWT throughput by nearly 40%. Source: Ezenwaji 2013; LWOC 2015; vision 2045 target.

A single 15-tonne-barge tow is equivalent to approximately 225 rail cars or 870 tractor-trailer trucks. On the Port Harcourt to Onitsha route, a 20-foot container will move by inland waterway at 39 percent less cost than road (US\$235 versus US\$385). On the Port Harcourt to Lokoja to Kaduna route, the saving is 47 percent. These are the 2010 Plan’s own logistics-chain comparisons (Chapter 12). The structural advantage has not disappeared.

The commercial returns work. The 2010 Plan found a 12 percent FIRR target achievable against internationally benchmarked tariffs. Terminal and vessel payback is 6 to 8 years. The Lokoja terminal alone projects a 20 percent return on equity. The whole-programme economic IRR is 10.44 percent and the economic NPV is positive US\$45.7 million at a 10 percent real discount rate.

The gap is not structural. The plan states directly: maintenance dredging must be guaranteed by the Federal Government for a minimum of 20 years. Without that guarantee, private-sector capital cannot price the siltation risk and the concession cannot close. The government can achieve this through the mechanism of a PPP under which a private sector operator takes on the mantle of ensuring year-round dredging maintenance.

02. THE MASTER PLAN

The 2010 Master Plan and the 2015 shelving

One bankable feasibility. One administrative transition. The same institutional pattern documented in Norhaven Intelligence report Vol. IV relating to NIPOST, repeated in the case of the federal inland waterway system.

TIMELINE · THE FEDERAL SPONSORSHIP ARC

1997	NIWA was created by Decree No. 13. The predecessor organisation, Inland Waterways Department had operated under the Ministry of Transport since 1956.
31 JAN 2006	Presidential directive by Obasanjo authorising the IWT Master Plan and Bankable Feasibility Studies. Federal sponsorship at the highest level.
9 JAN 2007	FEC Meeting EC(2007) formally approves the programme. The Federal Government simultaneously awards the construction contract for the new Lokoja river terminal.
2008	A ₦34.8 billion dredging contract for the lower Niger (572 km, Warri to Baro) is signed. The August 2008 Draft Report notes dredging on five Niger sections and Lokoja construction have commenced.
6 AUG 2010	Royal Haskoning delivers the final plan. 530 pages. Bankable. FEC-approved. Economic IRR 10.44 percent. Lokoja RoE at 20 percent. President Goodluck Jonathan is now at the helm.
2015	Jonathan to Buhari administrative transition. The plan is shelved. No operational reason. No analytical failure. No capital constraint; just Administrative discontinuity.
2017	Baro Port commissioned. A residual of construction already underway before 2015.
2026	Marine and Blue Economy records 160 percent revenue surge under H.E. Gboyega Oyetola. MOFI National Assets Register active under Dr. Armstrong Takang.

Why revisiting the 2010 Plan will succeed today

	2010 · ROYAL HASKONING PLAN	2026 · A PROPOSED NEW PLAN FOR THE MOMENT
Custodian	NIWA and Federal Ministry of Transportation	MOFI as cross-administration anchor + Marine and Blue Economy as policy supervisor
Mechanism	Full bankable feasibility + federal dredging contract	Follow on from the Master plan under a Long-lease PPP for the operation of the federal waterway and inland infrastructure
Capital	₦34.8 billion federal; commercial PPP planned	GCC strategic anchor + DFI consortium + domestic coinvestment
Guarantee	3 years confirmed; 20-year period uncertain at delivery	45 year concession agreement for the maintenance-dredging commitment in collaboration with MOFI as strategic govt anchor in the project
Outcome	Shelved at 2015 administrative transition	Inland waters and ancillary infrastructure decisively contributes to the Country's inland logistics architecture and ultimately uplift in the country's commercial activities

Two structural differences underpin the case. **Custodian:** every prior attempt sat with a Ministry of Transportation or with NIWA itself, neither of which has the cross-administration standing or the asset-holder mandate. This proposal sits with MOFI, whose statutory origin dates to the Finance (Control and Management) Act 1958. **Guarantee:** the 2010 Plan identified the 20-year maintenance-dredging commitment as the single biggest open bankability question. This proposal places that commitment inside MOFI's portfolio mandate via a PPP under which a private sector operator takes on the mantle of ensuring year round dredging maintenance.

The 2010 Plan was not impractical. It simply lacked a sponsor with a clear mandate and a definitive commercial delivery structure.

03. INTERNATIONAL PRECEDENT

Every major waterway operates this architecture

The 2010 Plan benchmarked Nigerian IWT tariffs against Sudan, Kenya, Ethiopia, Egypt, India, and Eastern Europe. The tariff structure that achieves a 12 percent FIRR sits at the lower end of the international range for containers. The system to generate those returns was not built.

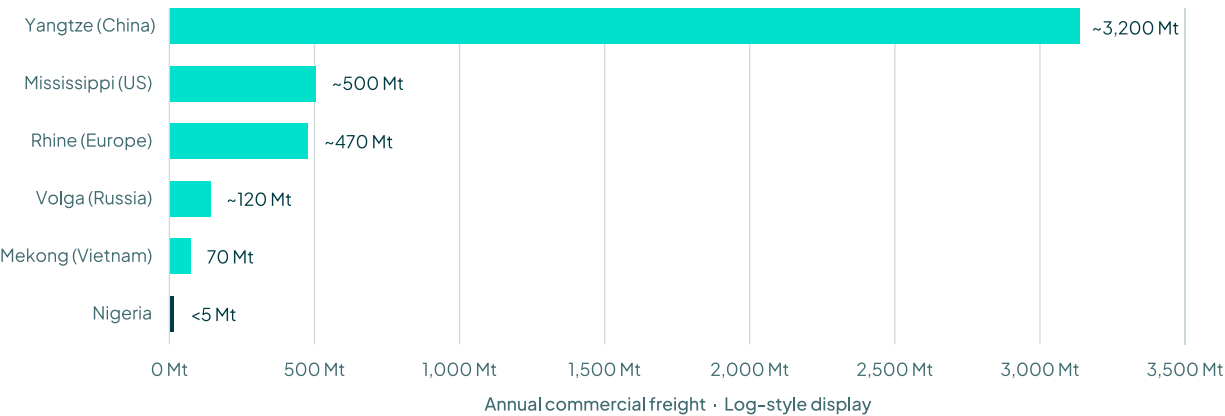


Figure 2 · Commercial freight by inland waterway system, most recent year. Nigeria moves less than 5 million tonnes across roughly 3,000 km of federal navigable waterway. Source: Yangtze River Administration; USACE Waterborne Commerce Statistics; CCNR Rhine market observation; Volga River Authority; Mekong River Commission; LWOC 2015

Every successfully activated system follows the same architecture. Federal navigation authority preserved under the existing regulatory body. Concession-based commercial operating layer through long-lease PPP. Capital for dredging from a combination of government, DFI, and strategic sources. Government commitment to long-term maintenance dredging as the bankability anchor. Integration with rail and road at defined intermodal nodes.

Reaching Sierra Leone’s modal share alone would multiply Nigerian IWT throughput by nearly 40 percent. Reaching the Vision 2045 target of 25 percent would put Nigeria in the Bangladesh range. The 2010 Plan projected total IWT cargo at 1 million tonnes in 2010 rising to 6 million tonnes by 2030 on the conservative base case. It is noteworthy that Nigeria’s population has since grown from 140 million to over 200 million.

04. THE INTEGRATED INLAND LOGISTICS BACKBONE WATERWAY ROLE

The Move layer, bulk cargo where NRC cannot reach

Norhaven Intelligence Report Vol. IV emphasised the development of an integrated inland logistics backbone anchored across six federal institutions. The waterways is the fourth layer of that proposed backbone: the “Move layer” that carries bulk cargo from the interior to the coastal ports and back.



Diagram showing the move layer of the integrated inland logistics backbone in context

Figure 3 · The integrated Inland Logistics infrastructure in full operational mode will see each Federal institution performing the function it was originally designed for. The waterways sits between NIPOST’s storage and last-mile layer and the Ports at the export interface with global trade

Where NRC is best suited for premium cargo on north-south corridors (Kafanchan to Lagos, Lagos to Kano), the waterway is best suited for bulk cargo on east-west and diagonal flows. Grain south from the middle belt. Fertiliser north from coastal terminals. Cement from Dangote’s Obajana complex (50 km from the new Lokoja terminal). Steel materials for Ajaokuta. Mineral ore from the plateau states. Refined petroleum products as the secure alternative to the vandalism-exposed pipeline network.

CARGO DEMAND AT PRIORITY TERMINALS (2010 PLAN)

TERMINAL	2010 MT	2030 MT
Port Harcourt	6.0	17.0
Lokoja	4.0	11.0
Onitsha, Warri, Ajaokuta, Makurdi, Baro	1.5 to 3.0 each	Growing across period

Four inland ports the corridor brings back into use

Baro, Lokoja, Makurdi and Onitsha sit on the Niger-Benue corridor the 2010 Plan was built around. Opening the waterway changes the commercial position of each. The Move layer is not abstract; it lands at four specific terminals.

BARO

Upstream terminus of the Phase 1 corridor

The 2008 dredging contract ran Warri to Baro, 572 km, and Baro Port was commissioned in 2017. It has since stood substantially idle for want of a navigable channel. Opening the waterway gives the port a working hinterland and connects it to the rail network at Baro for onward evacuation. **Projected demand: 1.5 to 3.0 MT, growing across the period.**

LOKOJA

The confluence terminal and the corridor's commercial anchor

Construction of the new Lokoja river terminal commenced under the 2007 FEC approval, 50 km from Dangote's Obajana cement complex. Opening the waterway lets Lokoja move cement, steel and grain at scale. The 2010 Plan projects demand rising from 4.0 MT to 11.0 MT by 2030, with a **20% return on equity, the strongest terminal economics in the programme.**

MAKURDI

The Benue arm of the network

A NIWA area office already operates at Makurdi; what it has lacked is a navigable channel. Opening the Benue gives the central food belt a bulk route for grain moving south and fertiliser moving north, at a fraction of road cost. **Projected demand: 1.5 to 3.0 MT, growing across the period.**

ONITSHA

The year-round commercial gateway

Large-vessel navigation is possible downstream of Onitsha all year, and the Port Harcourt to Onitsha route already shows a 39 percent cost saving against road. Opening the corridor turns that proven saving into routine throughput, with Onitsha as the deltaic anchor where conversion from plan to delivery is fastest.

05. SPOTLIGHT ON MOFI

130 asset classifications, one integrating mandate

The 2010 Plan identified the 20-year maintenance-dredging guarantee as the single biggest open bankability question. Section 13.14.6 even created a continuity mechanism to keep the document alive across administrations. The mechanism was never activated. We proffer that MOFI is the institutional missing link.

THREE CHARACTERISTICS MAKE MOFI THE NATURAL ANCHOR

01. **Cross-administration continuity.** MOFI's statutory mandate dates to the Finance (Control and Management) Act 1958 and has survived every political transition since independence. A MOFI-anchored long-lease concession creates private-sector rights that cannot be administratively dissolved without triggering compensation obligations. The 2015 pattern cannot be repeated under this structure.
02. **Federal investment standing on federal infrastructure.** The navigable waterways are constitutionally federal assets. MOFI's published mandate is asset optimisation across 130 federal classifications. The waterways as an asset class sits squarely inside that mandate. MOFI's portfolio of 52 active companies and circa ₦18 trillion in holdings provides the institutional bedrock for a private sector player to domicile a PPP concession structure.
03. **The NIWA NPV gap is bridgeable through MOFI's portfolio framing.** The negative US\$1.3 billion standalone NPV reflects government infrastructure expenditure that generates national economic benefit — avoided road CAPEX, reduced accident costs, employment, agricultural logistics, rather than direct cash returns. MOFI's portfolio framing captures those benefits as portfolio value.

MOFI is not political cover layered on top of a commercial proposition. MOFI together commercial framework form the structurally basis for the Project economics to work.

The coordination architecture. MOFI as cross-administration government-support anchor and federal investment partner. The Ministry of Marine and Blue Economy as policy supervisor. NIWA as operational regulator. An external commercial operator as PPP counterparty.

06. THE POLITICAL MOMENT

Five things aligned, briefly

01 · VISION 2045

The federal target

The federal government's long-term plan names 25 percent waterway-borne freight as a national target. At 0.08 percent current modal share, bridging the gap is a priority of the government and there is no time like the present.

02 · MOFI MANDATE

2023 to 2027 posture

MOFI is now more actively engaged in asset-utilisation work than at any point in its existence. The National Assets Register, the valuation roadmap, and the Minister of State's direction to optimise all FGN assets all point to an Institution actively seeking opportunities at this scale.

03 · MARINE & BLUE ECONOMY

The Ministry executes

Under H.E. Gboyega Oyetola, the Ministry recorded a 160 percent revenue increase: ₦700.79 billion to ₦1.83 trillion since 2023 when he took office. The ministry supervises NIWA and holds policy authority over the inland waterway system. When conditions align, the ministry delivers.

04 · NITLP & Vol. IV

The architecture is in place

The Integrated Logistics Backbone highlighted in our previous report shows that the architecture, assets, institutions, mandates and the commercial framework, is already in place. The will to implement is all that remains.

05 · THE CAPITAL CYCLE

18 to 24 months

We have also highlighted that Gulf strategic capital is mapping Nigerian platform propositions with 18 to 24 month deployment horizons. Abu Dhabi-based Investment Groups has signalled serious interest. A federal-asset waterways concession fits into their investment parameters. The cycle will not align indefinitely. Time is of the essence.

07. A WORD ON THE RISKS

Ten risks, each with a defined response

01 · ADMINISTRATIVE DISCONTINUITY

The 2010 Plan created a continuity mechanism (\$13.14.6) that was never activated for lack of a crossadministration institutional anchor.

Mitigation: The long-lease PPP contract creates private-sector rights that cannot be administratively dissolved without compensation. MOFI is the anchor that activates the mechanism. The 2015 pattern cannot repeat.

02 · MAINTENANCE DREDGING

Annual siltation 30 to 60 percent of capital volumes. NIWA OPEX US\$71M/year reflects this.

Mitigation: 20-year government support commitment via MOFI is the bankability gate. DFI long-tenor financing funds the maintenance reserve. Concession internalises the maintenance obligation from day 1.

03 · VESSEL FLEET CAPACITY

Of NIWA's 35 vessels in 2010, only 3 functional. The Plan recommended open-market fleet development with three operator profiles: industrial captives, inland shipping companies, owner-operators to prevent monopoly.

Mitigation: Phase 1 capital funds Class 2 and Class 3 barge fleet renewal.

04 · SEASONALITY & DREDGING DISCIPLINE

Wet/dry variation up to 10m. Year-round commercial navigation limited to Delta, coastal, Lagos Metropolitan.

Mitigation: Phase 1 prioritises Port Harcourt to Onitsha year-round as the commercial foundation. Upper corridors are Phase 2. Dredging discipline expands the year-round window.

05 · FUEL-PRICE VOLATILITY

Nigerian fuel price US\$0.72/litre, among the highest globally. Vessels highly sensitive to OPEX shocks (Table 11.7).

Mitigation: Partial natural hedge: road competitor faces the same exposure. Fuel-pass-through clauses in long-term cargo contracts. Diesel-electric vessel selection for Phase 2.

06 · CURRENCY AND INFLATION

Naira inflation has run above 10 percent per annum for the prior decade. Currency mismatch risk in dollar-denominated loans against Naira revenue.

Mitigation: 2010 Plan models in real terms; Lokoja case finances in Naira at 8 percent real after stripping inflation; revenue currency aligned with loan currency.

07 · MONOPOLY AND SINGLE-CARGO DEPENDENCE

Terminal operators on a single cargo class create pricing power and exposure.

Mitigation: NIWA's regulatory function; group-level concession across multiple terminals and cargo classes; anti-monopoly safeguards in the concession agreement; multi-cargo terminal design.

08 · SECURITY ON INLAND WATERS

Nigerian Police Force Marine Branch under-equipped; Niger Delta unrest requires Navy escort in oil zones.

Mitigation: Modernised Force Marine fleet; clarification of NAMASA's IW remit pending Coast Guard creation; programme contributions to security infrastructure as part of the concession envelope.

09 · CONSTRUCTION DEFECTS AND QUALITY CONTROL

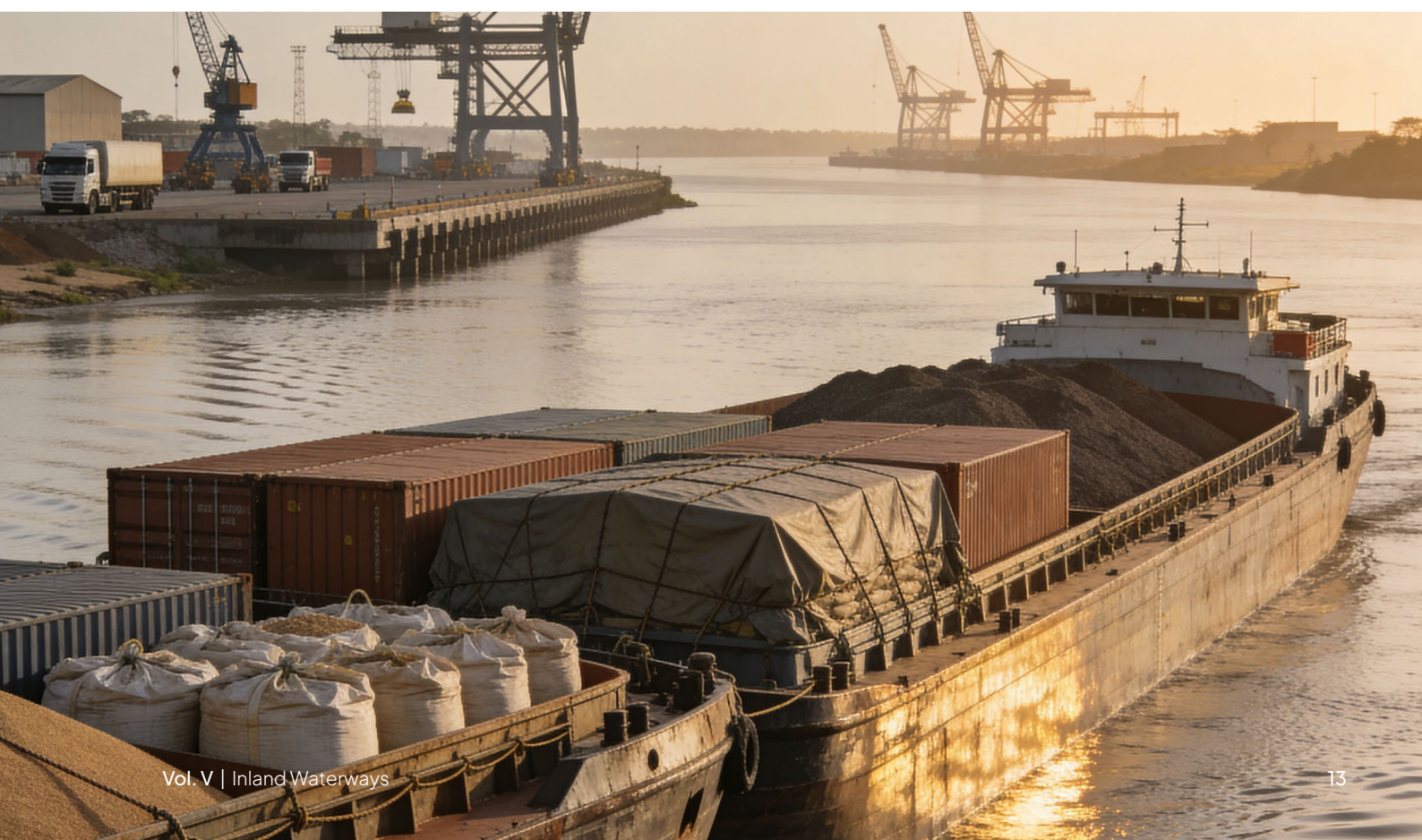
The 2010 Plan flagged "unacceptable defects" at the Ajaokuta existing quay.

Mitigation: Pre-concession technical inspection; performance bonds; design-build with international engineering oversight, the 2010 Plan itself was Royal Haskoning, the standard.

10 · CAPITAL STACK AND BANK CREDIT

US\$700M to 1.1B has not been raised.

Mitigation: six-archetype counterparty design preserves optionality; Lokoja case template: 50% gearing, 8% real, Naira, US\$75M senior debt for terminal-level finance; SPV with non-recourse structure; step-in rights.



08. CONCLUSIONS

Three conclusions for 2026 and beyond

The evidence is clear: this is not a new proposal, but an existing national infrastructure plan waiting for activation. The economics are tested, the corridor is viable, and the missing institutional anchor is now identifiable.

01. Activation today is execution of work already done

Royal Haskoning delivered the most rigorous inland-waterway feasibility study ever commissioned for Nigeria. FEC-approved. Operator-grade. Bankable. 10.44 percent economic IRR. 12 percent FIRR target achievable. 20 percent Lokoja RoE. Construction commenced. The single missing element in 2010 was a cross-administration government guarantee for 20-year maintenance dredging. MOFI closes that gap. The plan is not a new proposition. It is a complete proposition.

02. The Niger-Benue corridor is the federation's missing move layer

The deltaic zone is already partially active. The hinterland corridor carries less than 5 percent of observed IWT traffic. The 2010 Plan projected 4 million tonnes at Lokoja in 2010, rising to 11 million tonnes by 2030. A single Class 3 barge replaces 870 tractor-trailers. The 47 percent cost saving on the Port Harcourt to Kaduna container route requires no projection to be understood.

03. MOFI is the institutional response to the risk the 2010 Plan named

The NIWA standalone NPV is negative US\$1.3 billion. Government support is not optional. The whole-programme eNPV is positive US\$45.7 million with government support; the siltation cycle repeats and the concession collapses without it. MOFI's cross-administration mandate is the architectural answer the 2010 Plan was looking for and could not name.

The plan was bankable in 2010. The corridor is navigable today. The capital is available. The only thing that failed before was the institutional anchor. That anchor is now named.