AIC2030 / GEOECONOMICS REVIEW SERIES

REVIEW 03

The Gulf of Guinea and Atlantic West Africa

Maritime access, productive capability and the governance of interdependence

EIGHT-COUNTRY STUDY



GUINEA · SIERRA LEONE · LIBERIA · CÔTE D'IVOIRE
GHANA · TOGO · BENIN · NIGERIA

NOVEMBER 2026

Africa Intelligent Corridors 2030

LOGI-CONSULT

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Executive assessment

Africa rising by itself

Africa's Atlantic economies can strengthen their bargaining position by making regional trade work in practice. Start with the services African institutions can operate together: clearance, settlement, essential supply and transit continuity. Those services reveal demand and the terms on which investment can widen economic choice.

Rank	Regional priority	First decision
1	Clear and pay for trade on existing corridors	Pilot two crossings and two settlement pairs
2	Secure essential supplies and power	Baseline seasonal supply and test delivery-backed electricity exchange
3	Protect coastal–Sahel continuity	Agree a transit and contingency protocol with named contacts
4	Open supplier markets and tighten capital terms	Launch two buyer cohorts and a joint risk-review process

What should happen first

In the first 90 days, governments, corridor authorities and firms should agree the pilot baselines, publish service measures, assign decision owners and review results quarterly. AfCFTA preferences should be tested on real orders and paid invoices. Separate the Eco's institutional timetable from practical payment choices already available to participating banks.

The conclusion sets the proposed financial scale, the tests of success and the interests that can accelerate or block each priority. The central judgement is to improve existing services first and scale capital commitments against observed demand, access and public obligations.

Reader’s guide

Evidence, comparisons and confidence

Read claims at their observed stage

The Review distinguishes announcements, legal agreements, financing, construction, commissioning, operating service and verified outcomes. Reported traffic or company results use the source’s period, units and scope. Cross-country comparison requires compatible observations. Missing data stay missing. Descriptive changes are separate from causal effects. Firm and national output measures are not interchangeable.

Read strategic judgement alongside confidence

High confidence describes a well-documented fact or distinction. Moderate confidence describes a supported interpretation with material execution uncertainty. Low confidence indicates an incomplete basis for inference or costing. Judgement boxes identify conclusions, confidence, implications for the eight principal economies and a first action.

Observations and prices retain their source dates. The analytical baseline uses 2024 where comparable. The edition date is November 2026. Supplementary sources, including policy and project statements, are identified in the references. Regional pilot costs and scenario thresholds are planning assumptions rather than observed data or approved allocations.

Locate the evidence once

Use the eight-country decision matrix in Chapter 1 and the profiles in Annex A. Chapter 6 owns the Four Fs. Annex B contains methods, definitions and reproducible calculations. The references retain source identifiers for auditability.

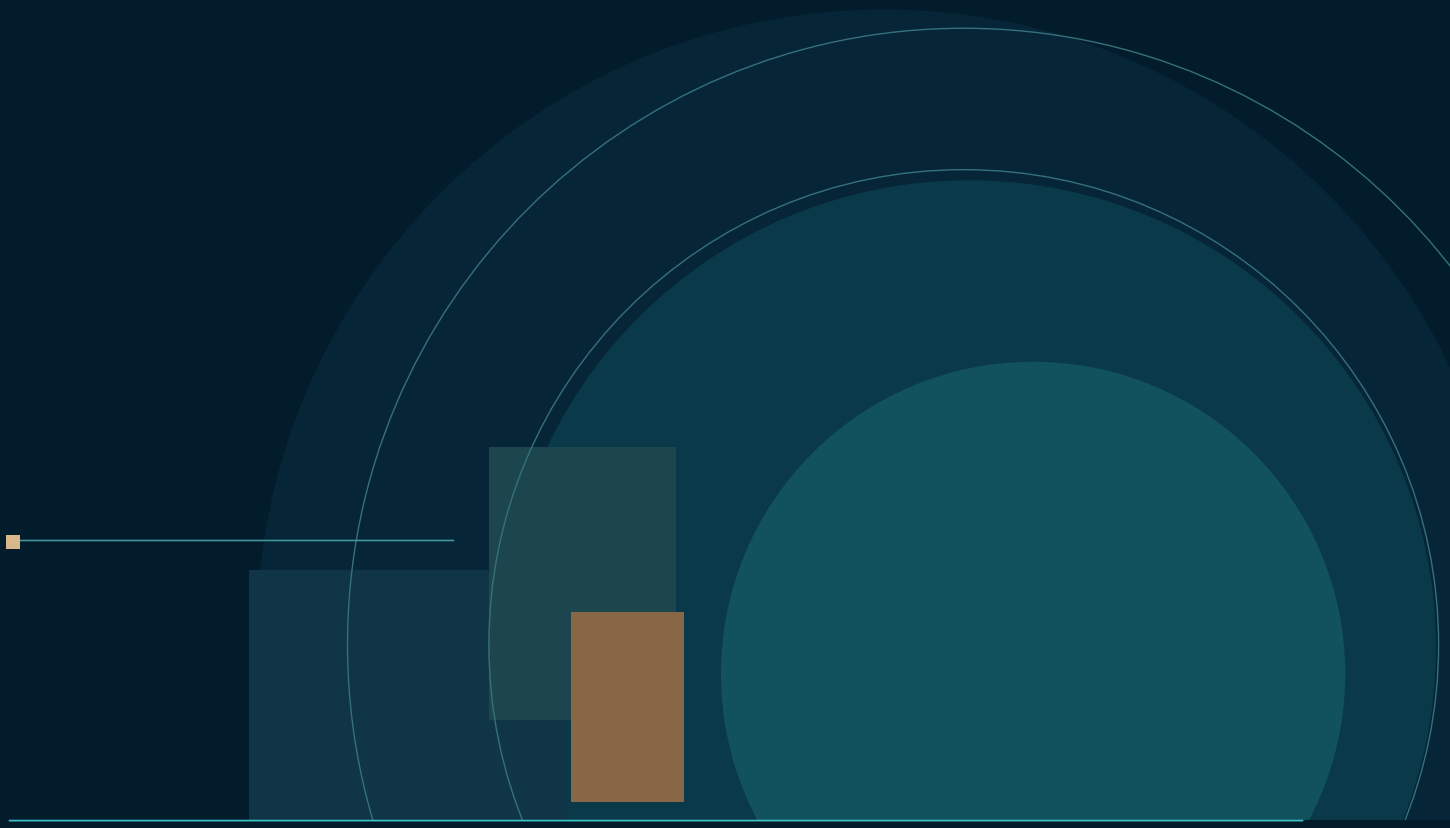
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CHAPTER

01

Scope and stance

Why African agency is the organising principle



Scope and stance

Why this review centres African agency

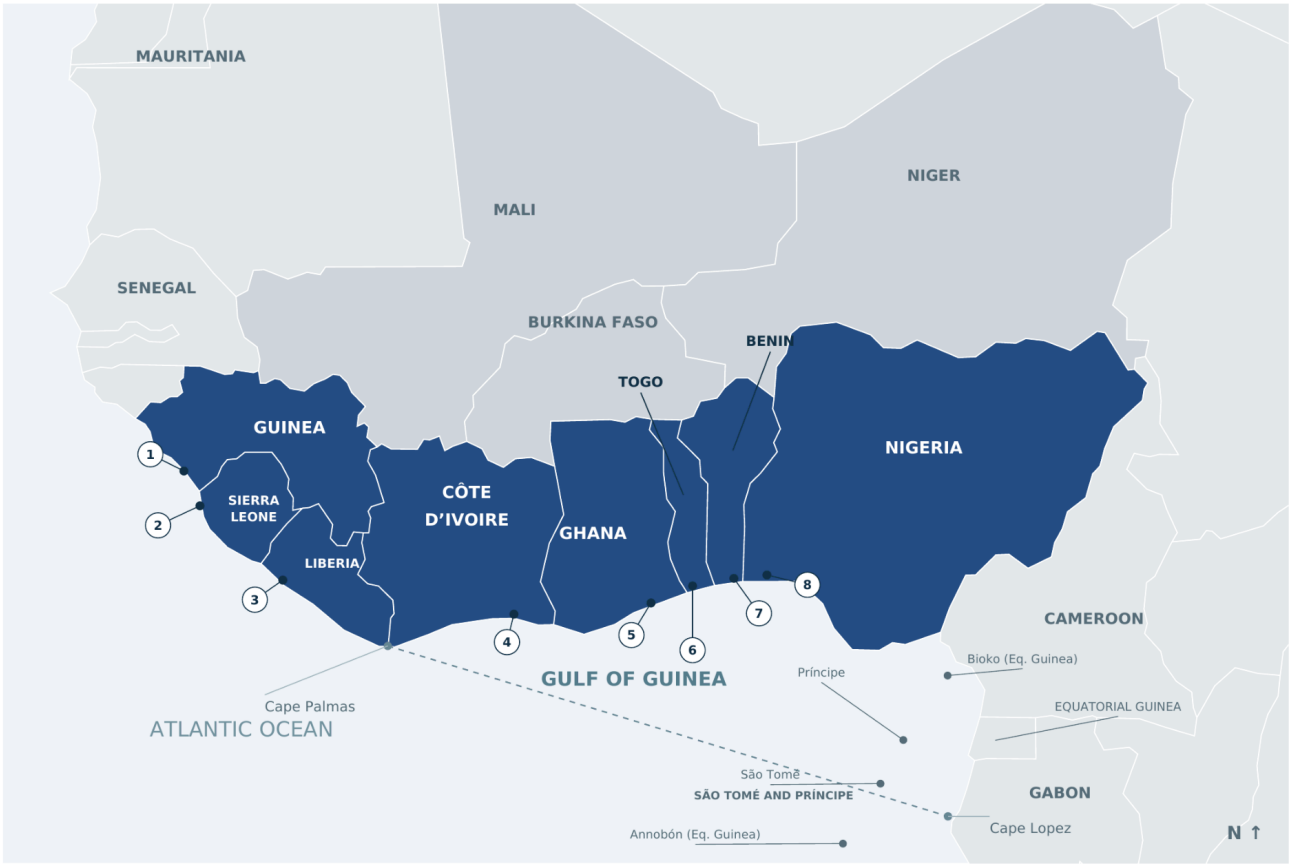
Africa rising by itself is this Review's organising position. African governments, firms, financiers, workers and communities define the objectives, organise investment and trade, and judge whether the resulting gains endure. The question throughout is what African actors can organise together, what terms they can negotiate, and where they can change an outcome through their own choices.

External markets, capital and technology matter because their terms shape domestic options. The test is whether African institutions retain practical choice over access, risk, ownership, skills, revenue and reinvestment. Agency has limits. African governments have differing interests and capacities. African ownership can coexist with monopoly rents, weak services or uneven benefits. A credible African-centred strategy must show who can act, who pays, who gains, and what evidence would change the decision.

Eight countries, three geographic layers

The eight principal economies are Guinea, Sierra Leone, Liberia, Côte d'Ivoire, Ghana, Togo, Benin and Nigeria. The first three extend the inquiry along the Atlantic west of the Abidjan–Lagos axis. The maritime Gulf of Guinea and this economic study perimeter are different units. Cape Palmas and Cape Lopez are conventional maritime reference points. Wider Atlantic and island economies are comparators. Sahelian and Central African connections enter where freight, energy, markets or security transmit consequences.

Use the matrix below to locate each country's first decision. The country profiles consolidate the underlying evidence. Sector chapters refer back to the matrix and add country-specific implications only where those implications change a decision.



Map 1. Regional geography and study scope. Gateway markers are approximate orientation points. Source: Natural Earth and manuscript hydrographic references.

Economy	Strategic choice	First move and proposed lead
Guinea	Convert mineral logistics into access and supplier demand	Mine and rail authorities publish third-party access and procurement conditions
Sierra Leone	Turn gateway availability into lower costs for input users	Port authority and shippers track delivered cost on two supply chains
Liberia	Connect concessions and maritime access to domestic firms	Concession authority and ports test a supplier and gateway service compact
Côte d'Ivoire	Translate processing and gateway scale into repeat regional sales	Industry authorities and buyers verify orders and processor utilisation
Ghana	Protect fiscal repair while improving power and gateway reliability	Finance and utility authorities reconcile arrears and service obligations
Togo	Convert transit and distribution into reliable inland services	Customs and operators test sealed transit and named handover points
Benin	Protect northern continuity and convert gateway traffic into local demand	Customs, local authorities and traders establish a route contingency protocol
Nigeria	Convert scale and macro reforms into lower enterprise operating risk	Finance, customs and energy authorities track real prices, release times and working capital

Strategic judgement	Decision implications
What we conclude	The region should be organised around African decisions, with eight differentiated country strategies and selected external comparisons.
Confidence	High on study perimeter and institutional choice. Moderate on proposed sequencing because implementation capacity varies.
Country implications	Guinea, Sierra Leone and Liberia need wider access to dominant gateways. Côte d'Ivoire, Ghana, Togo, Benin and Nigeria can test common operating rules at higher traffic density. See the first moves in the matrix.
What to do first	Adopt the eight-country matrix as the common decision register before adding sector programmes.

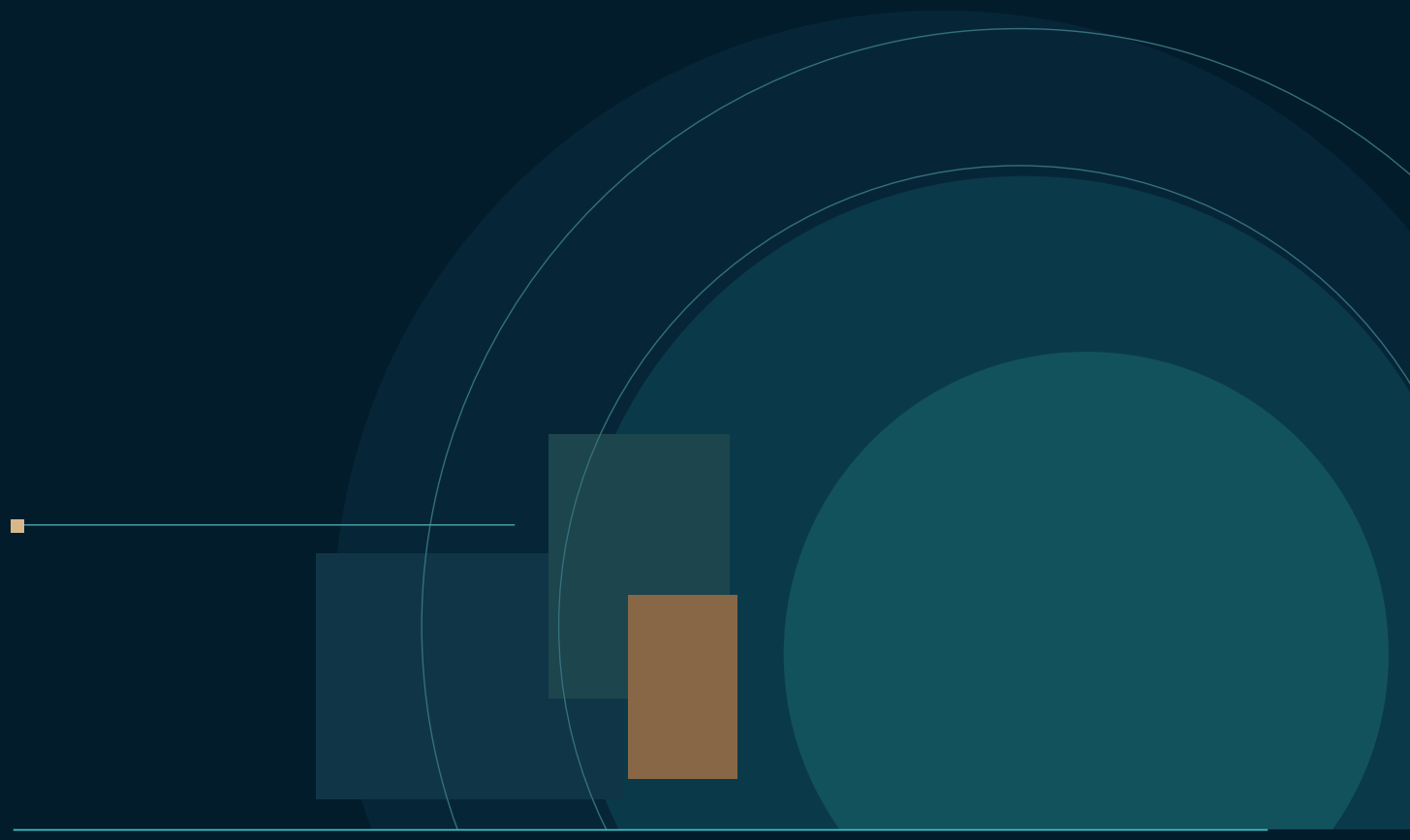
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CHAPTER

02

Foundations: history, people and institutions

From inherited connectivity to practical economic choice



Foundations: history, people and institutions

Inherited networks create options and constraints

Atlantic trade geography grew from African commercial systems, ocean exchange, colonial extraction and post-independence investment. The economic question is who can use inherited railways, ports and commercial relationships today. A mineral railway can provide excellent export service and little access for a farmer or a local manufacturer. Ownership, operating control, contractual access and the ability to change a decision are distinct.

Institutions can widen choice through rules that are applied consistently. The relevant test is whether a trader can predict the documents, price and remedy for an actual shipment. Formal jurisdiction matters, but exercised authority is demonstrated through budgets, inspections, maintenance and dispute decisions.

People and firms connect scale to demand

Population is an addressable-market input. Purchasing power, mobility, care responsibilities, skills, power and distribution determine whether households can supply labour or buy goods. At firm level, track accepted orders, real wages and employment persistence, and access to operating finance. A factory opening is an investment milestone. Repeat sales and learning show capability.

Nigeria and Ghana: domestic choices shape bargaining room

Nigeria's petrol subsidy and exchange-rate reforms changed domestic prices and the terms on which firms obtain foreign exchange. The IMF's June 2026 assessment records reform progress and continuing policy and social priorities [S10]. The Review's judgement is to protect price transparency and cushion vulnerable households while tracking how FX access, freight and input costs affect smaller firms. A better headline balance is insufficient if cash arrives late or working capital becomes prohibitive.

Ghana's fiscal reset and debt restructuring have a distinct sequence. The IMF completed the sixth and final ECF review in July 2026 [S11]. The first test of durability is whether the authorities can prevent new arrears, publish energy obligations and protect maintenance and social expenditure. Improved access to finance should finance services with measurable returns and disclosed contingent liabilities.

Historical mechanisms

Hausmann and Rodrik's work on development as self-discovery provides an intellectual antecedent for the productive-capability argument. It examines learning which activities can be produced competitively in an economy and the difference between the social gains from discovery and the private gains captured by pioneers. [R42]

Applied here, the question extends beyond possession of resources or markets: can firms discover, organise and sustain viable production under local conditions? Ports, power and standards can reduce discovery costs. Reliable information about failure can also prevent scarce capital being committed to

unsuitable activities.

This application does not justify a particular subsidy. Discovery support differs from permanent protection of uncompetitive activity. Its practical test is whether support produces information, capability and repeat commercial performance, with conditions for revision or withdrawal.

Which users did the inherited network include, and which does it include now? What costs prevent adaptation? Who exercises decision rights? Which institutional change could make a different productive relationship feasible?

The geoeconomic test connects usable access, productive capability, exercised decision rights and retained value. A changed route or owner becomes consequential when it changes who can produce, transact, earn and reinvest. Historical explanation identifies constraints and possibilities; present operating evidence establishes whether adaptation expands those choices.

Demand and addressable markets

Population and urban growth can expand labour supply and potential markets, and spread infrastructure costs. They also increase demands on jobs, housing and public services. Demographic scale alone establishes neither purchasing power nor the revenues available to service debt. Effective demand depends on income distribution, product needs, distribution channels and actual payment performance. 420.2 million 55.4%

These WDI-based analyst calculations describe the stated comparison sample, not the eight-country principal total or an official regional grouping. An unweighted country average can obscure scale. The figures establish neither purchasing power nor the share accessible to a particular supplier. [R32]

A large potential market may offer only a small accessible market when distribution agreements, standards, cash requirements or delivery uncertainty restrict sales. Conversely, a specialised service can be viable in a smaller market supported by dependable contracts. Formal employment and population scale remain separate measures.

The practical assessment connects household capacity to buy with firms' capacity to supply. National indicators provide context; local prices, household budgets, wages, vacancies and actual service access establish a firmer basis for estimating addressable demand.

Household participation

Migration and daily mobility connect households with employment, markets and care. Border restrictions, unsafe travel and costly commuting influence who benefits from industrial development. A factory may create jobs while placing heavy travel burdens on lower-paid workers. Food traders may depend on small consignments and quick border passage rather than container-scale systems.

Housing, health, care, transport and secure access to land or premises also affect participation. A useful skill may remain unused when commuting absorbs the wage or care responsibilities make working hours impossible. A trader with customers may lose income through unsafe travel or uncertain storage. These conditions connect social policy with productive performance.

A COUNTRY-SPECIFIC PARTICIPATION MECHANISM The Gambia's June 2026 update identifies care responsibilities and access to land and finance as barriers to women's labour participation. This

illustrates a mechanism in a comparison country, not a regional participation rate or an additional principal-country case. [R13]

Recognising these dependencies does not assign every social service to a corridor programme. Where recruitment, retention or supplier participation depends on a specific service, appraisal identifies the responsible institution and cost of provision. Distributional analysis compares benefits and burdens for workers, customers, land users and public authorities; their results can differ.

The standard is sustained improvement in livelihoods and productive opportunity. Aggregate demographic growth cannot certify that result. Travel burdens, wages, safety and progression require direct evidence. National panels and selected cases provide context; plant-level employment conditions and household welfare effects need their own observations.

Reading the demographic evidence

the supporting analysis in this Review provides comparative demographic and labour indicators for the eight principal countries. It supplements selected operating cases; it is not a harmonised survey of households, employers or routes. Actual observation years remain visible, including education records outside 2024. [R127]

Age dependency is demographic: it does not count actual earners or measure household fiscal dependency. Education, care and the pace of productive employment remain central alongside population growth. [R127]

A comparable current migration-stock and occupational-skills panel remains unavailable. Product appraisal combines the national baseline with local wages, household budgets, vacancies, training completion and service access. Population, participation and skills create possibilities; organisation and accessible services shape who can realise them.

Indicator	Interpretation boundary
Labour participation and modelled unemployment / age 15+	Low unemployment does not establish good work, adequate earnings or labour scarcity. Informality, underemployment and inability to remain without work affect interpretation.
Gross secondary enrolment	Not attained skills; may include pupils outside the official age range.
Life expectancy and under-five mortality	Different aspects of health; neither establishes occupation-specific labour availability or treatment costs.
Nominal GDP per person and PPP output	Average output, not disposable household income or distribution. PPP production does not establish foreign currency available to import equipment.
Constant-price household consumption per person	A limited demand indicator, rather than a complete measure of purchasing power or accessible demand.
Remittances	A cross-border financing flow; not migrant numbers or proof of household welfare.

Authority and effective control

A ministry sets policy, a regulator grants licences, customs administers cargo release and a concessionaire operates a terminal. Their mandates interact without becoming interchangeable. Commercial counterparties also influence which services are available. A public equity stake does not establish day-to-day operating capability; foreign operation alone does not establish lost sovereignty.

Public revenue supports infrastructure and services when it is collected, allocated and spent effectively. Entitlements and assessed tax do not guarantee treasury cash. Debt service, earmarking, arrears and contingent liabilities constrain discretion. Nigeria's October 2026 Development Update examines how states can translate increased resources into better outcomes through effective, accountable spending. This is a governance question as well as a revenue question. [R18]

Creating a regional body does not automatically transfer customs powers, settle compensation, secure maintenance budgets or resolve disputes. Clear interfaces connect corridor authorities with national and local institutions. Each power needs an identifiable legal source and an accountable party when performance fails.

Decision layer	What the assessment records
Public authority	The legal source and scope of policy, regulation, licensing and customs powers.
Rights and claims	Ownership, jurisdiction, contract rights, financial restrictions and accountability, recorded separately.
Operating control	Who actually makes service and operating decisions, and on what terms.
Effective choice	Information, personnel, infrastructure, contracts, finance and legitimacy supporting exercised powers; credible alternatives.

Institutional delivery

An implementable programme connects legal authority with an operating decision. Where responsibilities cross borders, the arrangement also specifies what happens when one party performs and another does not. Cooperation partly depends on managing those asymmetries.

Mandate and authority Who can change the rule, under which legal power? Budget and contracts Which resources and enforceable commitments support delivery? Delivery organisation Who provides the service and manages its operating interfaces? Performance information Which evidence establishes whether obligations were met?

A corridor authority can coordinate planning without controlling every customs, land, utility or procurement decision. Coordination becomes ineffective when advertised responsibilities exceed available powers and resources, or unresolved interfaces have no accountable institution. Legal creation and institutional effectiveness remain separate findings.

Legitimacy strengthens when relationships deliver usable services and opportunities on terms people can understand and contest. National benefits can coexist with concentrated local burdens. Compensation and consultation address actual uses and livelihoods as well as formal title. Public

revenue is traced through spending quality to maintained assets.

The public-service test asks whether an arrangement sustains essential functions, creates liabilities that crowd them out, and gives affected people accessible information and remedy. Neither financier nationality nor the public equity percentage answers those questions; obligations and operating results do.

A practical sequence clarifies mandates and measurable obligations before expanding promises. Weak data favour a limited, observable service commitment; an established constraint may justify a larger response.

Chapter judgement: Economic sovereignty is assessed through exercised choices, sustained essential services, manageable public obligations and accessible remedy. Institutional form and ownership matter through the rights, resources and operating results they enable.

Strategic judgement	Decision implications
What we conclude	Institutional capacity and demand conditions determine whether inherited assets and macro reforms widen economic choice.
Confidence	High on the reform chronology and institutional distinctions. Moderate on firm transmission. Monitor arrears, real costs and order fulfilment.
Country implications	Guinea: access rights. Sierra Leone: buyer affordability. Liberia: supplier entry. Côte d'Ivoire: processor orders. Ghana: arrears and electricity. Togo: trader time and fees. Benin: continuity for small firms. Nigeria: FX access and real input costs.
What to do first	Have finance and economic ministries publish a quarterly dashboard linking fiscal decisions to prices, maintenance and firm operating conditions.

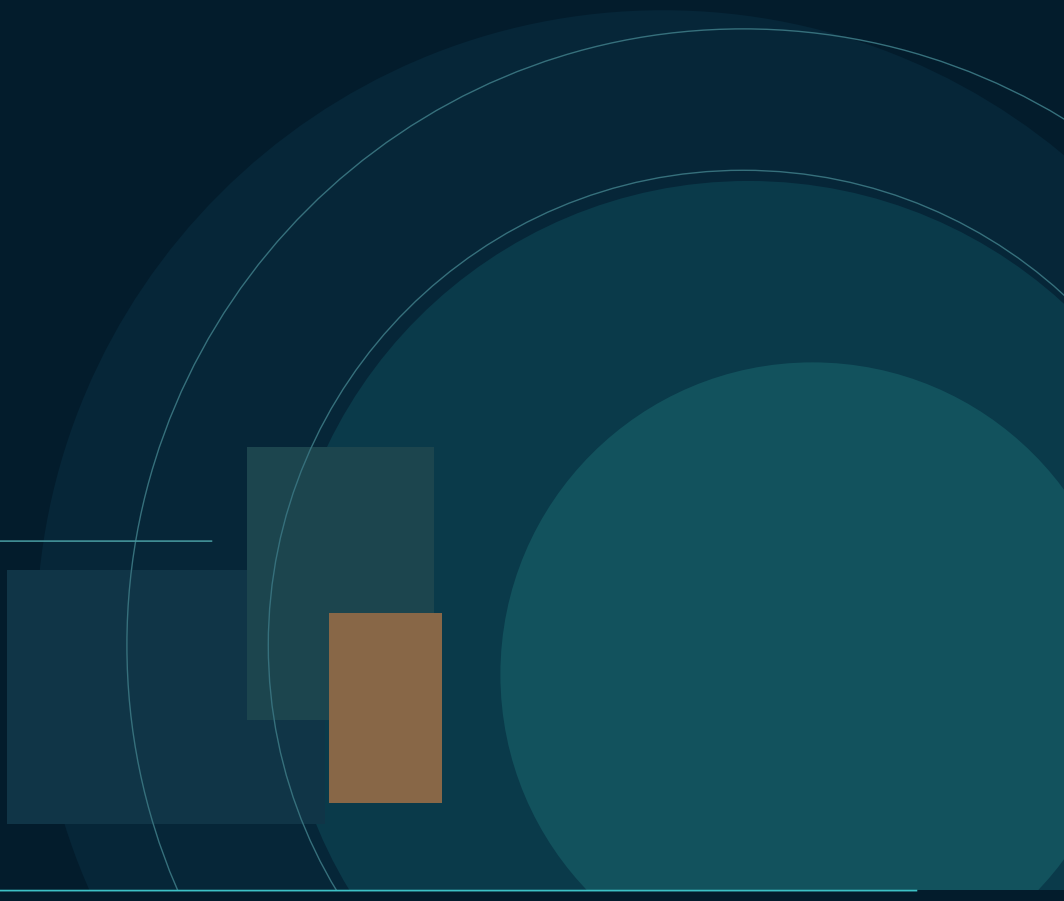
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CHAPTER

03

Resources, energy and water

Convert resource access into domestic functions that last



Resources, energy and water

Make concessions serve productive demand

Simandou provides a concrete distinction between asset commissioning and access by other users. The operator documented the start of operations and subsequent shipment milestones [R80–R81]. The public-interest decision concerns open-access conditions, tariffs, train paths, grievance procedures, fiscal receipts, procurement and maintenance. Use these tests in Liberia's concession discussions and in Sierra Leone's bulk logistics. Report ore, contained metal and manufactured materials in their own units.

Electricity trade and energy development

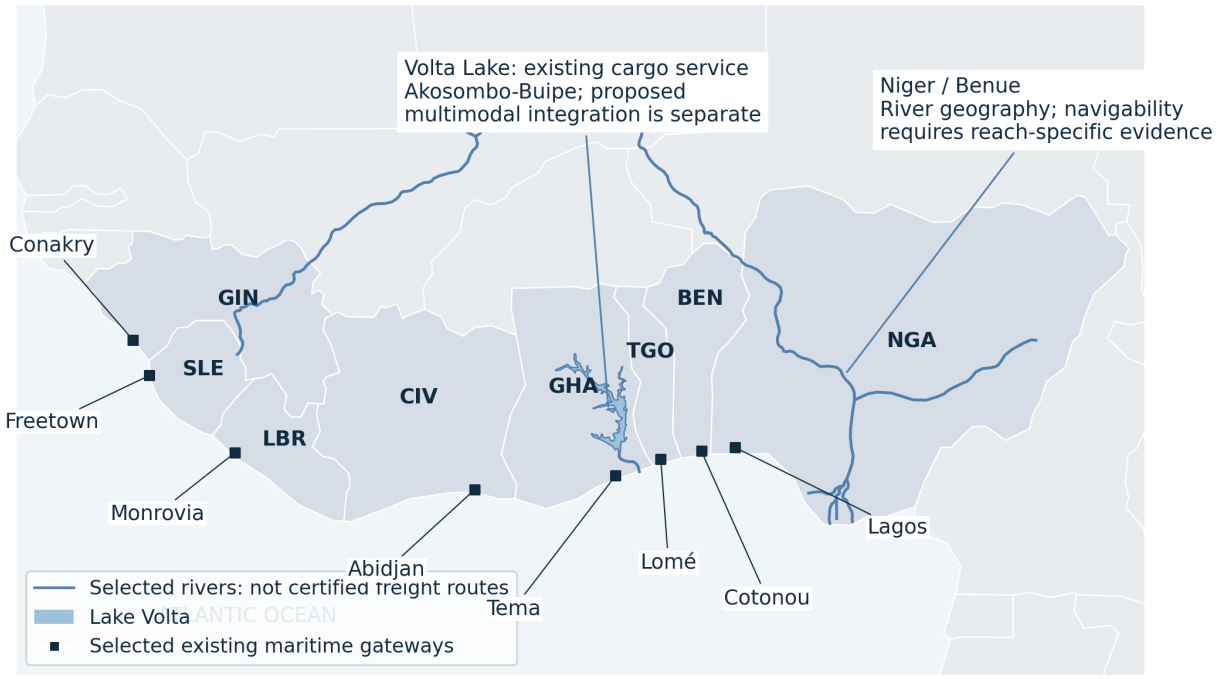
The West African Power Pool offers an African institutional route to electricity exchange. Interconnectors, dispatch, creditworthiness, metering and settlement govern realised supply [S20]. The regional BEST project's US$465 million approval is a dated benchmark covering broader grid access and storage [S7]. A coastal industrial buyer needs evidence of outage hours, dispatch and bill payment. Make a pilot publish those outcomes at the delivery point.

Morocco and Nigeria's African Atlantic Gas Pipeline advanced through an intergovernmental agreement reported by ONHYM [S8]. Classify it as a project in development. The decision gates are bankable offtake, tariff and foreign-exchange risk, environmental consent, financing and staged construction. Countries should appraise local delivery and substitution benefits, and protect themselves against take-or-pay or guarantee terms that exceed realistic demand.

Water as a service and shared resource

Volta Lake has documented operator-described transport [R100]. Other routes require reach-specific depths, terminal access, seasonal operating days, insurance and cargo demand. Energy, flood protection, fisheries and water access should enter the same basin appraisal. Maintain river and lake monitoring and publish the days on which a commercial service can actually operate.

Maritime gateways and inland-water relationships



Proposed Ogun/Gateway and Badagry ports: see project register.
Generalised geography; selected features only. No continuous river-to-sea service is implied.

Map 2. Maritime gateways and inland water relationships. River lines indicate geography. Source: AIC2030 analysis and dated operator records [R100–R107].

Resource rights and claims

The Niger-Benin relationship connects resource production, pipeline operation, coastal loading, shipping, sales and financing claims. General road transit and the dedicated oil-export chain are different services. A change in the status of one cannot establish the status of the other. The IMF's August 2026 review explicitly reports continuing disruption from the Benin border closure despite the reopening of a key Benin-Nigeria-Niger corridor [R35]. This is a dated institutional observation about access channels, not a declaration that every transit or loading permission has the same status.

Strengthening one right can improve bargaining while leaving dependence elsewhere in the chain. Equity changes, shipments and diplomatic agreements address different parts of that chain.

No current oil-backed loan balance or deduction rate is asserted here. The preceding Sahel material contains historical financing and loading episodes; extending those terms to October 2026 would require contracts and payment records not established by this research. The present finding is nonetheless substantive: access, commodity ownership, gross sales and disposable public cash are different objects, and the operating interfaces can change at different speeds.

The government account of ARSE's 2025 report states that national electricity production reached 1.65 billion kWh, up 17.13% from 2024 [R37]. These are reported national-generation quantities. They do not establish uninterrupted supply, a particular plant's contribution or the generation cost faced by a factory. The thermal composition and regional relationships must be examined alongside output.

FMO disclosed a 38 MWp Kodeni solar facility, EUR40.5 million project cost and EUR32.4 million syndicated debt [R36]. The 80% ratio describes disclosed financing against project cost. Current debt, output, payment performance and net fiscal gain require separate evidence.

An independent producer can expand supply while adding long-term offtaker obligations. Appraisal should examine reliability, tariff terms, collection and contingent public support. Classifying a private project loan as sovereign debt requires evidence of a public obligation.

A diversified energy or materials strategy should compare the complete cost and risk of alternatives: domestic production, regional purchase, storage, demand management and combinations of services. Include water, maintenance, spare parts and environmental performance where material. Resource endowments matter through their technically and commercially usable contribution. Self-sufficiency can reduce one exposure while introducing another, such as expensive domestic generation, concentrated equipment supply or long-term fiscal commitments.

Right or claim	Object of control
Resource jurisdiction	Deposit access and fiscal regime
Operating rights	Production and transport
Coastal permissions	Terminal access and maritime departure
Commercial rights	Sales and receipt of proceeds
Financing rights	Priority repayments and restrictions on cash

River service and project stages

Rivers are part of the productive geography, not simply lines crossed by roads. A viable inland-waterway service can connect production, settlements, storage and maritime gateways, including journeys for which road access is weak. Potential must nevertheless be assessed by specific reach, cargo and season. River length, basin membership and annual discharge do not establish continuous commercial navigability. A river basin is a water-governance unit; a freight service is an operating system with its own route and institutions.

The Volta basin's shared-water governance covers Benin, Burkina Faso, Côte d'Ivoire, Ghana, Mali and Togo [R105]. Participation in that basin does not mean that each country has a direct navigable connection to Lake Volta or the sea. The Senegal River navigation programme provides an external Atlantic comparison under OMVS, with implications for Review 12 and Guinea's upstream relationships [R106]. Its programme status is distinct from an established end-to-end freight service. Smaller rivers, lagoons and estuaries elsewhere in the eight-country geography warrant reach-specific assessment where local demand and access needs justify it; no comparable commercial service is assumed without hydrographic and operator evidence.

Resource rights and seasonal access

Physical and seasonal The first test is physical: seasonal depth and width, current, sediment, bends, shoals, bridges, dams and other obstructions, safe passage and access to landings. Vessel draft must fit the shallowest operational reach under the service's intended seasonal conditions. A dam can provide energy or regulated water while interrupting through navigation. Any proposed lock, transshipment or alternative connection needs its own engineering and economic case. Dredging creates a continuing sediment-management and maintenance obligation rather than a permanent guarantee. Commercial and comparative The second test is commercial: identifiable cargo, origin and destination, shipment size, handling needs, return loads, frequency and acceptable delivery time. Compare total delivered cost and variability, including first and last road legs, double handling, storage, losses, fuel, insurance and waiting. Bulk food, fertilizer, fuel and construction inputs can provide candidate demand, but suitability depends on actual volumes and service conditions. Water transport should not be described as automatically cheaper or lower-carbon: vessel utilisation, propulsion, empty returns, terminal energy and maintenance affect the result. Institutional, social and ecological The third test is institutional and social: navigation rights, operating licences, customs for cross-border cargo, safety certification, emergency response, weather and depth information, terminal access and predictable charges. Basin authorities and transport regulators have related but different responsibilities. Public investment should also account for fishing access, floodplain farming, settlement safety, pollution, wetlands and ecological flows. Fuel transport demands particular spill-prevention and response capability. Landings serving local communities and passenger safety can have public value even where a large freight corridor is not viable.

A practical investment sequence is to establish the reach and users, obtain current hydrographic and environmental evidence, test a suitable service with confirmed cargo, and expand against demonstrated performance. Track annual days of safe operation, delivered tonnes by cargo, cost and reliability against feasible alternatives, accidents, maintenance funding and the distribution of benefits. River development then becomes part of the intelligent corridor: soil and subsoil production connect through water, land transport, markets and finance under explicit operating and ecological conditions.

Strategic judgement	Decision implications
What we conclude	Prioritise verifiable access, electricity settlement and basin operations before committing to resource-linked expansion.
Confidence	High on project stages and mechanisms. Moderate on demand and local spillovers. Low on corridor-wide returns until terms and service logs are available.
Country implications	Guinea and Liberia: rail access terms. Sierra Leone: bulk supply users. Côte d'Ivoire and Ghana: grid delivery. Togo and Benin: import and dispatch exposure. Nigeria: gas offtake and industrial reliability.
What to do first	Publish one access agreement and one power-delivery performance record before using either as the basis for new commitments.

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CHAPTER

04

Production, cities and markets

Start with repeat buyers and the firms that can supply them



Production, cities and markets

Build value chains around operating relationships

A regional value chain exists where repeated purchases, processing, service and learning connect firms across jurisdictions. An investment announcement, regional subsidiary and customs flow each show different things. Trace supplier qualification, invoices, acceptance, payment and repeat orders. Use city demand to assemble viable markets, with wholesale logistics and access to electricity, cold storage, testing and working capital.

African actor	Demonstrated role or analytical use	Next evidence
Dangote	Cement accounts document cross-border operating entities. Fertilizer and refining have different input and distribution economics [S12; R96]	Local procurement, delivered prices, regional sales and concentration
BUA Foods	Nigerian processing and audited accounts provide a case of domestic production and working-capital requirements [R23]	Cross-border orders and retained supplier value
Ecobank	Regional banking infrastructure and listed financial disclosure [S13]	Payment cost, order finance and access for smaller firms
MTN	Group disclosures cover cross-market telecommunications and mobile money [S14]	Merchant settlement, interoperability and effective cost
Regional processors and distributors	Ivorian cashew is a useful test of supply contracts and plant throughput [R51–R52]	Accepted grades, processor utilisation and grower income



Source: original Review 03, Annex G2a (p. 123), WDI 2024 [R32]. NA means no valid 2024 entry. Do not impute Guinea or Liberia manufacturing shares or combine these measures into a country ranking.

Figure. Manufacturing share and electricity access are different measures. Source: WDI 2024 [R32].

Give cities an economic brief

Abidjan, Accra–Tema, Lomé, Cotonou and Lagos connect production to consumption. Prioritise freight interfaces that reduce stockouts and handling loss. Conakry, Freetown and Monrovia can start with smaller buyer-led supplier cohorts and test if they merit shared infrastructure. Public support should be conditional on demonstrated sales, fair entry and measurable service improvement. Require competition review where an anchor also controls distribution.

Supplier qualification

Procurement targets alone do not establish supplier capability. Firms need to meet specifications, quantity, timing, safety and payment requirements. Buyers also need to offer workable terms and a realistic qualification route. Exclusion may reflect a technical gap, but also lot size, delayed payment or unnecessary documentation. Each mechanism calls for a different remedy.

01 Identify genuine demand A buyer and a commercially credible requirement. 02 Specify requirements Technical standards and workable commercial terms.

03 Assess and close gaps Firm-level assessment and justified capability support. 04 Measure repeat performance Repeat delivery and payment on sustainable terms.

A zone concentrates serviced land and can reduce coordination costs. Viability still depends on tenants, utilities, transport, management and market access. Speculative demand, signed commitments and actual operating use are distinct. Incentives can attract tenants while reducing public revenue; their case rests on additional activity and wider benefits, not occupancy alone.

Cashew-platform findings show why timing matters. Land services and management may arrive too late for equipment installation within a results window. The shortfall remains real even if later uptake is plausible. Capacity in tenant business plans is not installed output: assessment records the stage reached and the next condition required, without counting prospective benefits twice.

Selective coordination links physical investment with working capital, standards and buyers. A credible production system justifies a platform it can use; a larger inventory of serviced plots is not itself evidence of a renewable productive system.

Industrial location

The study distinguishes metropolitan consumer supply, inland agro-processing, mineral evacuation, cross-border intermediate goods and island tourism supply. A strategy suited to one may fail in another. For Cabo Verde, the World Bank's July 2026 update identifies inter-island connectivity and continued tourism dependence as constraints on broader growth [R12]. A road-corridor prescription cannot simply be transferred to that setting.

Guinea-Bissau supplies another counterexample. The June 2026 update reports a small formal private sector and a divergence between investment, employment and productivity [R11]. The study uses the qualitative finding without treating survey samples from different years as a simple controlled panel. Infrastructure improvements can shift which constraints bind; finance and institutional uncertainty may become more important once power conditions improve.

A firm enters a market through buyers' acceptance, distribution, product compliance and reliable service. UNIDO's Standards Compliance Analytics platform provides an analytical instrument for examining trade-compliance problems [R22]. Its existence does not establish a regional rejection rate. Counts require denominators and information on trade volumes, inspection intensity and products.

Location factor	Implication for firms
POTENTIAL GAIN	Cities bring buyers, workers, suppliers and services closer together.
COUNTERVAILING COST	Congestion, land cost, pollution, unreliable access and housing pressure can offset proximity. Urbanisation alone does not establish manufacturing competitiveness.
REMOTE SITE	Cheaper land can lose its advantage through transport and service costs.
ESTABLISHED URBAN SITE	Congestion can coexist with valuable supplier/buyer networks. Compare inputs, energy, water, worker access, maintenance, waste, finance and sales.

Standards, quality and logistics

The strategic implication is to integrate testing, quality management and market intelligence with logistics and finance. Export readiness is demonstrated by repeat accepted orders and viable margins. Domestic and regional demand also deserve attention: a sustainable manufacturing path may serve nearby consumers before pursuing more distant markets. The sequence should follow capability and commercial evidence, rather than prestige attached to a destination.

Urban logistics connects factories and gateways to shops, service firms, institutions and households. Delivery restrictions, congestion, loading space, storage and vehicle utilisation can determine the cost of serving a city. Smaller consignments and frequent replenishment may favour different arrangements from bulk export logistics. A successful regional trunk link can therefore coexist with expensive local distribution.

The productive location decision must include the worker's journey and the product's last mile. Affordable premises far from buyers and labour can impose costs greater than the saving in rent. Central locations may offer dense supplier relationships but suffer congestion and land pressure. Public planning should compare the full service package, including drainage, waste, safety and maintenance. The analysis does not prescribe one spatial form for every city.

Intermediate towns can provide collection, processing, repair and wholesale services connecting dispersed production to larger markets. Their role is conditional on demand, service quality and access. A map showing a town on a corridor does not establish that firms there can obtain transport or finance. Feeder links and local institutions can be decisive.

An inclusive spatial strategy asks who can enter the network and at what cost. It may need aggregation services, market information, testing or shared storage. Such facilities require users, governance and maintenance just as large infrastructure does. Subsidising a facility without an operating model can create an idle asset; ignoring a modest shared-service constraint can prevent producers from using expensive trunk infrastructure. These are alternative risks to be assessed, not universal outcomes.

Industrial and logistics development changes land demand and exposure. Formal ownership records may omit actual livelihood use, seasonal access or informal tenancy. Compensation should be evaluated alongside restoration of income and access to services. A project's national economic case does not remove those obligations or demonstrate that they have been met. No social clearance is inferred from construction progress.

Climate resilience also requires ongoing service. A road, terminal or industrial site may survive a flood while its access link, substation or worker settlements fail. The relevant system boundary therefore extends beyond the financed asset. Appraisal needs the location-specific hazard, the consequences of interruption, feasible protective measures, maintenance and residual risk. Announced resilience funding is an input; observed continuity or reduced loss is an outcome.

The urban-industrial question is ultimately whether proximity produces a functioning system of work, supply and exchange. It requires coordination among spatial planning, utilities, transport, firms and communities. The opportunities differ across metropolitan corridors, secondary towns and islands, but the economic standard remains usable services and maintained capability.

Industrial pathways

The industrial account needs several pathways because the productive requirements of cocoa, garments, medicines, construction materials and industrial services differ. Cashew remains a useful sector/platform comparison, but it cannot represent all regional manufacturing. The following cases extend the argument while preserving the distinction between an observed instrument or shipment and sustained industrial transformation.

The Côte d'Ivoire-Ghana Cocoa Initiative's August 2024 publication explains and publishes indicative origin differentials alongside the Living Income Differential and a futures reference price [R71]. This is an intergovernmental bargaining and transparency instrument. Its stated income objective is not an independently measured farmer-income effect. Commercial price realisation, producer payment, domestic grinding and fiscal cash are separate outcomes. Harvests, exchange rates, quality, buyer responses and forward obligations can affect the result. The mechanism should be tested through contracts and payments, alongside the capability to sustain yields and quality.

GDIZ's operator reports an inaugural shipment of 80,000 garments to KIABI on 14 June 2024 [R72]. The same release's much larger intended annual orders remain forward-looking statements. This is a dated, company-attributed production-and-buyer connection, not a verified annual output series. Its significance is the relationship between a production location, enterprise, buyer and delivery system. Repeated accepted orders, margins, supplier learning and employment conditions would support a stronger capability finding. Zone location alone settles neither origin eligibility nor net domestic value.

The pharmaceutical pathway requires regulated inputs, dependable utilities, competent production, testing, procurement and distribution. The WAHO/UNIDO roadmap demonstrates an institutional approach to upgrading rather than measured industry-wide compliance [R69]. Construction and mineral materials similarly require stage-specific analysis: clinker production and grinding, extraction and refining, or feedstock and fertilizer formulation have different energy and logistics needs. Industrial services such as repair, laboratories, packaging, design and software can connect these activities where contracts and usable skills exist.

This broadening changes appraisal rather than prescribing a plant in every country. Complementary specialisation can be more viable than duplicating identical stages across small markets. Local procurement should be assessed through the activity actually performed and value retained, not a headline percentage that may include pass-through imports. Capability develops through production, problem-solving and repeat commercial relationships; installed equipment is only one part of that process.

Production pathway	Connection to the regional system	Evidence of stronger productive capability
Cocoa	Commercial terms, farm supply, processing and export access	Realised prices and payment, maintained yields, quality and reinvestment
Cotton and garments	Input conversion, machinery, utilities, sourcing and dispatch	Repeated accepted orders, competitive margins, skills and work quality
Pharmaceuticals	Regulated inputs, manufacturing, testing and procurement	Applied GMP, authorised products, reliable supply and affordability

Production pathway	Connection to the regional system	Evidence of stronger productive capability
Construction and mineral materials	Bulk transport, energy and complementary processing stages	Competitive delivered cost, usable shared services and maintained capability
Industrial services	Repair, technical testing, engineering, packaging and digital coordination	Applied competence and sustained contracts across production activities

Strategic judgement	Decision implications
What we conclude	Back repeat demand and contestable supplier access as the organising principle for industrial zones and city logistics.
Confidence	High on the documented corporate roles. Moderate on additional supplier gains. Cross-border value retention needs contract and firm evidence.
Country implications	Guinea: mine procurement. Sierra Leone: construction inputs. Liberia: concession suppliers. Côte d'Ivoire: cashew and urban demand. Ghana: regional orders. Togo: distribution services. Benin: food logistics. Nigeria: processing and buyer scale.
What to do first	Select two buyer-led supplier cohorts and publish accepted orders, payment time and supplier retention after two trading cycles.

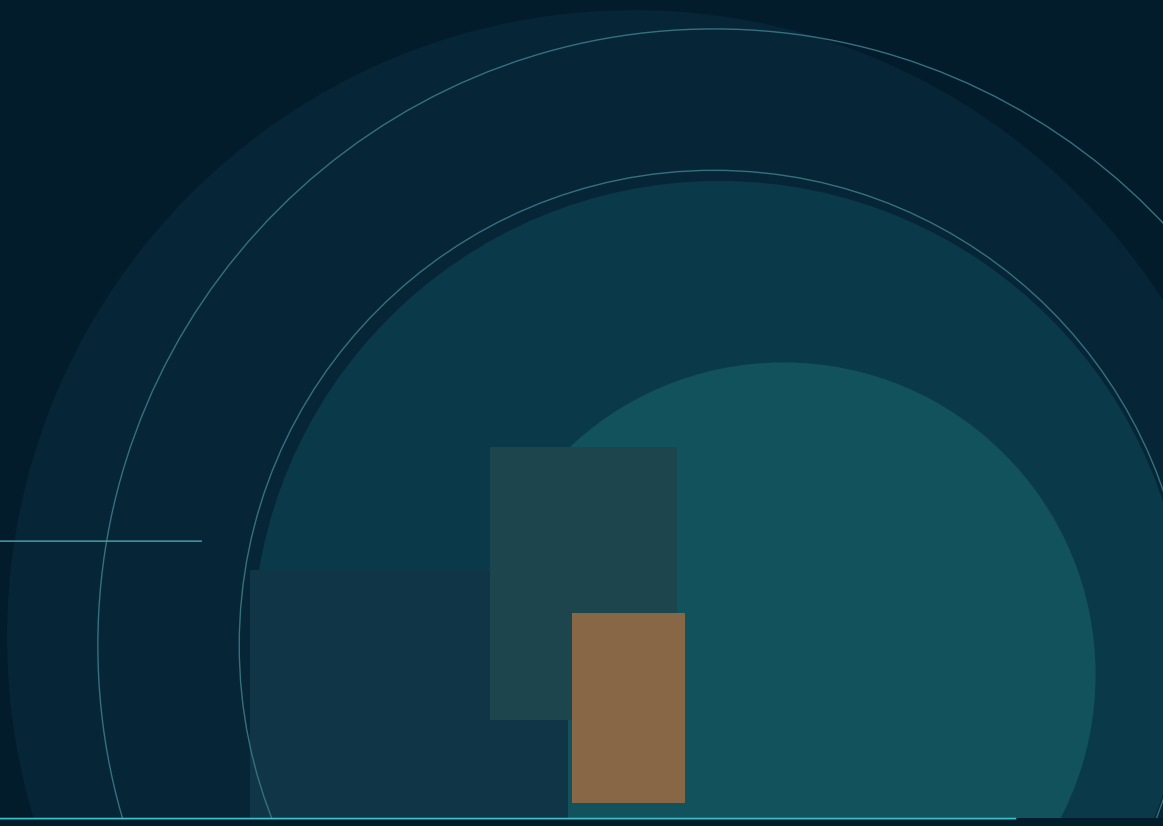
THE GULF OF GUINEA AND ATLANTIC WEST AFRICA

CHAPTER

05

Food, fisheries and agro-industry

Turn supply chains into affordable food and repeat processor demand



Food, fisheries and agro-industry

Reduce loss and improve buying terms

Food and fisheries policy should begin with household prices, producer earnings, seasonal availability and loss. Cold-chain or storage investments make sense when procurement and stock rotation cover operating costs. For fisheries, reliable landing, traceability, cold handling and stock stewardship belong in the same decision. Public support should preserve small operator access and avoid rewarding the diversion of food from local consumers without an affordability assessment.

Separate sector growth from programme outcomes

Côte d'Ivoire's cashew evidence distinguishes processing growth from delivery against dedicated programme targets [R51–R52]. Conflicting recent totals should not support a definitive latest share. Use a single procurement season to reconcile delivered volumes, quality, contracts, processor intake and stock. In Togo, fertilizer import and distribution volumes are different measures [R53]. The operational test is whether the right nutrient reaches the farm within its planting window at a price the farmer can recover.

The first investment package is aggregation, storage and purchase contracts where seasonality and evidence of loss justify them. Link the resilience diagnostics to Chapter 6 and fund additional capacity after demand is demonstrated.

Processing and fisheries

Agro-industrial opportunity depends on consistent quality and volume, working capital, water, energy, packaging, waste management and buyers. Processing can increase demand for local produce, but the effect depends on purchasing practices, seasonal availability and farmer returns. Higher export receipts do not identify how much income producers retain.

Fisheries require the same commercial discipline alongside stock sustainability and access rights. Cold chains, landing facilities and certification can support value, but they need sufficient throughput and maintenance. Ecological depletion can undermine future livelihoods even when current sales rise. The strategic choice is to develop viable, sustainable production systems with traceable distribution of gains, rather than treating all local processing as equally beneficial.

The OECD/SWAC analysis distinguishes approximately USD2.5 billion in compiled recorded and unrecorded regional food flows from an adjusted estimate closer to USD10 billion annually. Its adjustment uses survey relationships from Nigeria, Benin and Togo to approximate unrecorded flows elsewhere. The observation window is 2014-2022; the adjusted estimate is model-assisted, not a 2026 customs total [R39].

The denominator also matters. The report's estimate that 38% of food trade is regional differs from the higher regional share calculated when cocoa and cashew are excluded. Neither percentage is the share of household food consumption supplied by neighbours. These distinctions prevent a useful finding about underestimated exchange from becoming an unsupported claim about caloric self-sufficiency. The policy inference is to take regional food networks seriously while examining the uncertainty and product coverage of the estimate.

An agricultural production system has several financial clocks. Inputs may be bought before revenue is earned; harvest creates concentrated supply; processing can require stock over several months; customers may pay later. Storage and working capital affect whether a farmer or processor must sell immediately at an unfavourable price. Transport improvements may help, but cannot remove every seasonal or bargaining constraint.

Aggregation can lower logistics costs and improve quality control, while also concentrating bargaining power. A fair assessment should examine grades, rejection rules, payment timing, competing buyers and the costs of cooperative or private organisation. The study does not infer improved producer income from a processor's purchase volume alone. Nor does a higher raw-material price automatically establish a sustainable outcome if yields, input costs or ecological conditions deteriorate.

Livestock and pastoral systems connect inland production, seasonal mobility, urban demand, veterinary services and transport. Restricting mobility can affect animal condition, market timing and household income. The relevant economic geography is not identical to a paved freight corridor. Water, grazing access, disease controls, security and market institutions enter the analysis. This is a system-level interpretation; no new herd or trade-volume estimate is asserted.

Trade, food and input distribution

The coastal food economy also includes imported inputs and products. Food security can improve through trade where supplies are affordable and reliable; dependence can become dangerous where an essential product has costly substitutes. The same test applies to fertilizer and fuel. The aim is to sustain viable production and household access through a workable mix of domestic supply, regional exchange and external procurement, with buffers proportionate to actual exposure.

Processing adds a productive stage, but its net contribution depends on intermediate inputs, energy, losses, finance and the saleable output. A plant can raise measured throughput while using scarce inputs inefficiently or relying on continuing support. A smaller operation can generate durable local capability if it meets demand and maintains assets. The appropriate policy assessment compares feasible stages of transformation rather than treating the maximum number of domestic processing steps as an objective in itself.

A bounded Senegalese comparison broadens the productive geography beyond large ports and industrial estates. FAO's May 2025 Casamance account describes site and processing-method selection for women fish processors within Japan-supported cooperation [R76]. It is evidence of preparation and learning at that date, not a completed income-impact estimate. Later progress should be assessed through its own dated records rather than represented by the earlier milestone.

The transferable question is which service the intended users need. Fish-processing improvements may require landing access, water, energy, safe handling, preservation, packaging and market distribution. Cold storage is not a substitute for every traditional preservation method or market. Equipment should be matched to users' working practices, operating costs and ability to maintain it. Resources for affordable upkeep can matter as much as initial installation.

Distribution also changes the meaning of employment and access. Construction jobs differ from continuing production; direct jobs differ from supply-chain estimates. Work quality involves pay, hours, safety, security and progression. Smaller firms may face minimum volumes, collateral and documentation costs that larger enterprises can absorb. Formalisation should be judged through

services, rights and viable market access rather than registration counts alone.

Land assessment must identify statutory, customary and actual-use rights, including seasonal farming, grazing, fisheries and trading uses. An aggregate commercial gain cannot settle compensation, livelihood restoration or household affordability. The territorial record should identify affected groups, baseline access, changed conditions, remedy and the distribution of costs. These are assessment requirements; no named project's social clearance is inferred from a financing announcement.

Nigeria provides an important production reference beyond the Togo distribution case. Dangote describes its Lekki facility's phase-one urea capacity as 3 million tonnes annually and identifies relationships with farms, associations and NPK blenders [R96]. Indorama describes two operating urea lines at Eleme, a combined annual capacity of about 2.8 million tonnes, a gas pipeline and a captive export terminal [R97]. These are company-reported capacity and infrastructure descriptions, not a harmonised 2026 production or sales series. No inference about current utilisation is made by adding their capacities.

The distinction between nitrogen production and a complete crop-nutrition system is central. Urea supplies nitrogen; the nutrient balance required by a particular crop and soil can also involve phosphorus, potassium and other inputs. Blending, quality assurance, agronomic advice and distribution therefore remain important even where regional urea production expands. The existence of export infrastructure does not demonstrate affordable delivery to a smallholder in another country.

Strategic judgement	Decision implications
What we conclude	Affordability and repeat buying should govern food and fisheries investment.
Confidence	High on the distinction between trade, processing and programme output. Moderate on priorities. Local price and stock records should decide site investment.
Country implications	Guinea: crop aggregation. Sierra Leone: rice distribution. Liberia: imported staples and landing access. Côte d'Ivoire: cashew buying. Ghana: fish cold-chain services. Togo: input distribution. Benin: grain and coastal–Sahel trade. Nigeria: refinery-linked fuel costs and staple processing.
What to do first	Start one seasonal product ledger per selected supply chain, tracking farm or landing price, loss, stock rotation and retail cost.

THE GULF OF GUINEA AND ATLANTIC WEST AFRICA

CHAPTER

06

The Four Fs: supply security

Food, fertilizer, fuel and finance in one operating framework



The Four Fs: supply security

Protect essential functions against disruption

Food requires accessible nutrition and distribution. Fertilizer requires the right crop nutrient before the planting window. Fuel includes petroleum products and electricity services, measured separately. Finance covers the ability to pay for stocks, imports and supplier orders on time. A shock in one can spread to all four, for example through fuel costs, transport, overdue receivables and reduced planting.

Test	What to measure	Decision
Availability	Physically accessible stock or operating service	Set a dated stock or service baseline
Affordability	Delivered price relative to income or expected sales	Test who loses access after a price shock
Concentration	Supplier, gateway or financing exposure by function	Identify single points of failure
Substitution	Days, cost and capacity required to switch	Test an actual substitute
Shock transmission	Service loss, late delivery and repayment pressure	Protect exposed households and firms
Productive capability	Ability to restore and maintain essential functions	Fund the capability with verified demand

Read exposure alongside response capacity

High exposure and weak response justify diversification, contingencies and institutional readiness. High exposure with stronger response requires preserving buffers and supplier flexibility. Lower exposure with weak response still warrants preparation. Lower exposure with strong response favours maintaining services and regional cooperation. Apply the matrix to a specific product, population and time horizon. Do not assign an economy-wide score from isolated indicators.

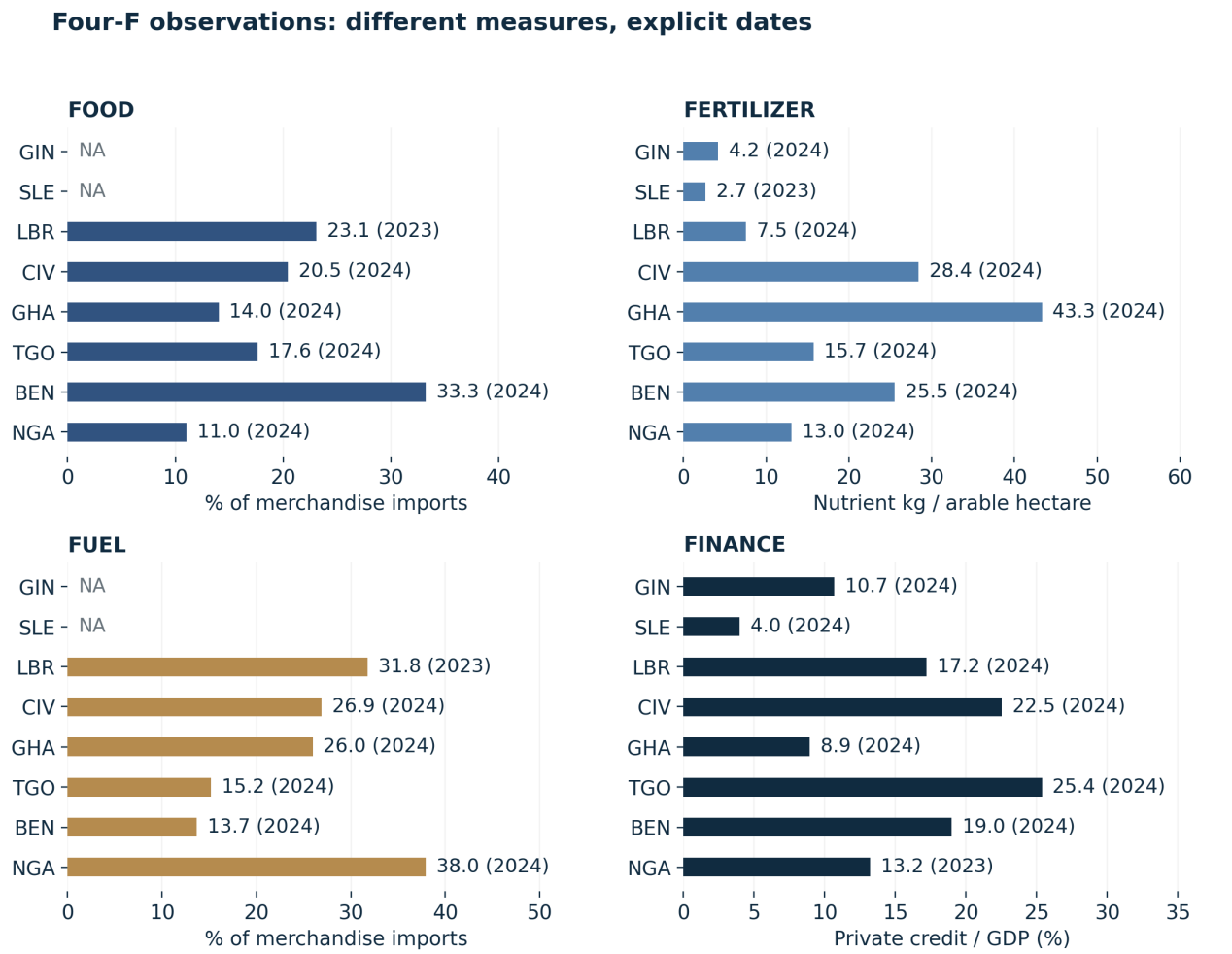


Figure 1. Four-F observations from WDI. Panels use different units and observation years [R108].

Use a seasonal decision calendar

Track stock days and fertilizer delivery before the planting season, fuel and power supply at delivery points, and the cash cycle across users. Validate reserve policies against quality, storage loss, rotation and cost. FAO/GIEWS country briefs retain their original observation dates [R109–R116]. Country observations sit in Annex A and diagnostic definitions in Annex B.

Fuel and electricity supply

the supporting analysis in this Review records arable land, forest cover, internal renewable water and basic drinking-water service [R127]. Project decisions also require local evidence on fertility, tenure, water quality, seasonal availability and permitted use. Internal renewable water excludes upstream inflows.

Assess jurisdiction, licence-holder rights, lender security, operator discretion and customary use separately. Geological and economic evidence is required to establish reserves. Commercial navigation depends on verified operating conditions for each reach and season.

Bargaining power depends on which rights can be exercised, who controls each operating interface and whether an alternative route or supplier can perform when needed.

Seasonal procurement

Regional procurement should compare product specification, bag and lot size, order timing, payment currency, credit, storage and inland delivery. Governments and producer organisations can improve demand visibility and qualification without assuming that every pooled purchase will be cheaper. Purchasing arrangements should test supplier competition, governance, prompt payment and who bears inventory risk. A cross-border order that arrives after planting can meet a procurement target while missing its productive purpose.

The eight principal countries need differentiated inquiries. Nigeria's production and export capability calls for testing regional access and domestic distribution. Togo's evidence calls for reconciling stocks, imports and distribution with seasonal farm access. Guinea, Sierra Leone and Liberia require the connection between gateways, rural distribution and viable enterprise to be examined through their respective operating cases. Côte d'Ivoire, Ghana and Benin require the same product-and-season accounting alongside their processing and gateway roles. These are research and policy priorities grounded in the cases, not unverified national fertilizer deficit estimates.

Strategic judgement	Decision implications
What we conclude	Measure resilience by essential functions maintained during disruption, with targeted reserves and tested alternatives.
Confidence	High on the diagnostic design. Moderate on observed constraints. Low on cross-country stock comparisons where data are missing.
Country implications	Guinea: access to inputs inland. Sierra Leone: rice landed cost. Liberia: staples and freight. Côte d'Ivoire: farm-to-processor flows. Ghana: electricity and receivables. Togo: crop inputs. Benin: route substitution. Nigeria: fuel and working-capital transmission.
What to do first	Baseline one chain per F and run a joint stress exercise before expanding reserves or finance facilities.

THE GULF OF GUINEA AND ATLANTIC WEST AFRICA

CHAPTER

07

Gateways and corridors

Improve existing services before committing new capacity



Gateways and corridors

Measure the chain that users experience

Berth, cargo release and gate clocks reflect different processes. The Lagos terminal data contain separately measured ship and cargo indicators [R49]. Tema's recorded container throughput rose from 1,190,695 TEU in 2023 to 1,668,688 TEU in 2024, up 40.14% [R50]. Cotonou's merchandise tonnage grew 52.27% in the 2024–2025 comparison [R29]. Different units and functions prevent a port ranking. The next test uses matched cargo samples and measures inland delivery, costs and losses.

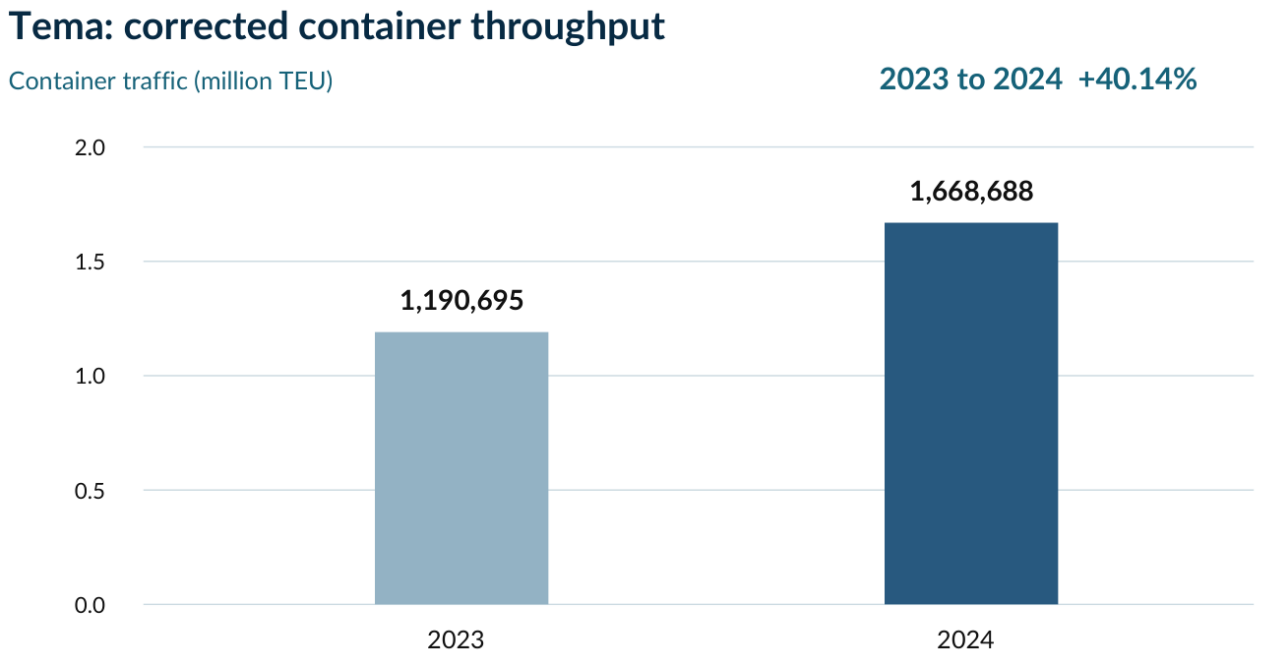


Figure 2. Tema container traffic, 2023–2024. Source: GPHA [R50].

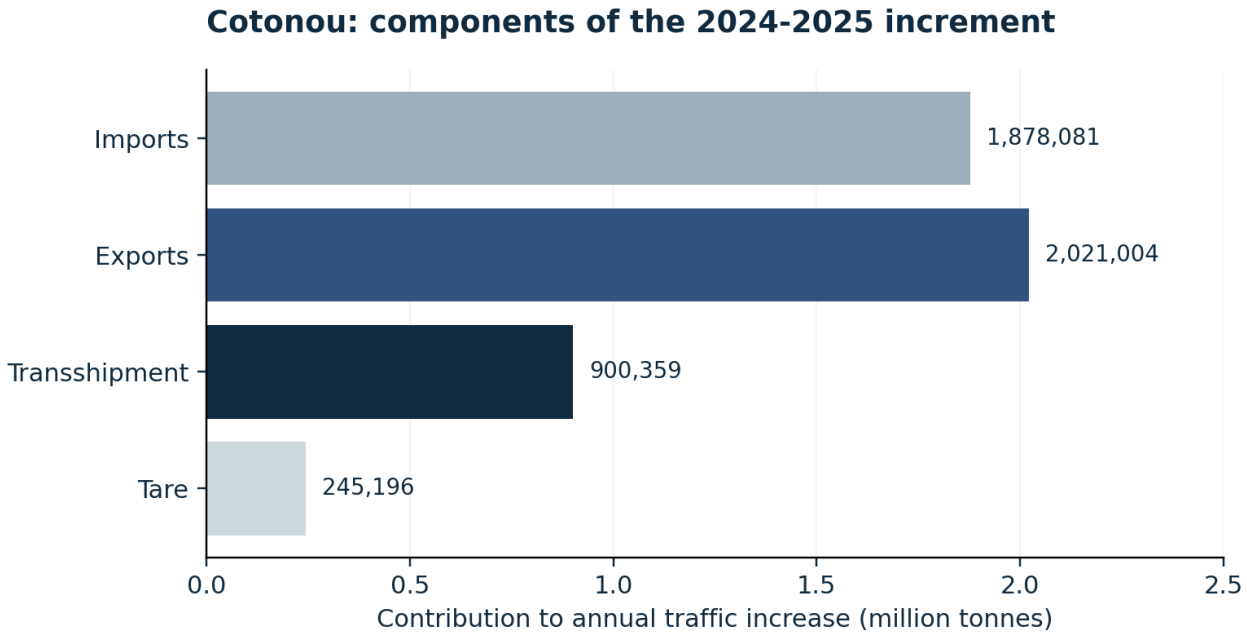


Figure 3. Cotonou traffic change by component, 2024–2025. Source: Benin budget-execution report [R29].

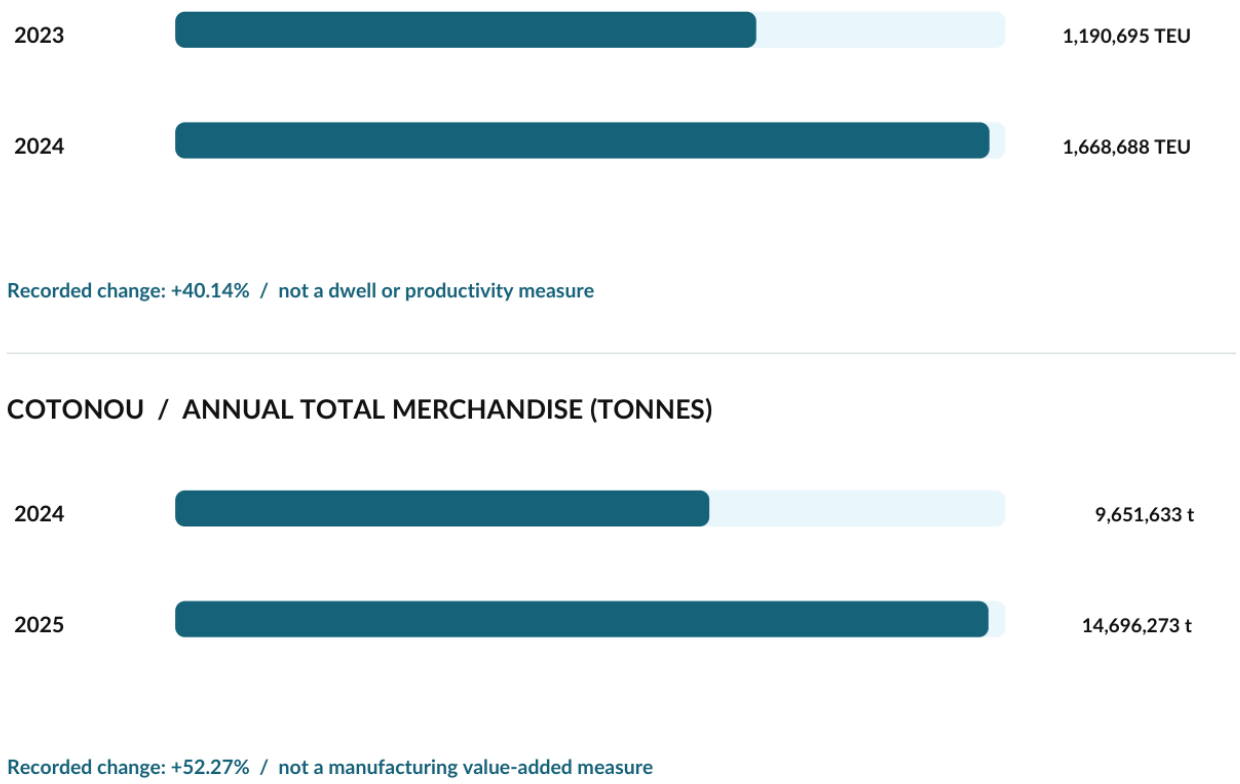


Figure. Within-port changes at Tema and Cotonou, in different units and periods [R29; R50].

Abidjan–Lagos Highway: separate service reform and capital commitment

The five countries have a shared opportunity through ALCoMA. ECOWAS identifies a 1,028 km scope, while an AfDB board announcement reports 1,081 km and roughly US$15 billion. AUDA-NEPAD's database records approximately US$14.7 billion for 1,028 km [S4–S6]. Treat these as differently reported scopes and indicative estimates. Reconcile the concession lengths, interfaces, funding and guarantees before procurement decisions.

Use a common transit data set, interoperable inspection and named response owners at two border pairs. Start with existing roads and gateways. Finance highway lots when demand, land impacts, maintenance and contingent liabilities are documented. Protect competition among logistics providers and ensure access for smaller users.

Western gateways and inland links

Freetown's operator reported handling bulk cement and bagged rice at its new quay [R82]. Liberia's system-wide statistics and the Monrovia night-navigation announcement measure different things [R83–R84]. Guinea's resource railway and maritime milestones do not establish a general-user service. Require route- and cargo-level evidence before claiming gains for manufacturers and households.

Gateway operating measures

Competition can improve service and create alternatives. Duplicated capacity can raise costs where demand is thin. Coordination can reduce friction across shipping, terminals and inland logistics. Assess contestability from access, prices, contracts and available capacity. Separate imports, exports and transshipment when interpreting volumes, and test access for smaller shippers, inland exporters and cold-chain users. Annexes B and H retain the verified series and correction record.

Clock	Measurement boundary
Vessel service	Ship turnaround at the defined terminal boundary.
Cargo dwell	Time under the stated cargo regime. Report variability where observed.
Gate processing	Truck turnaround. The NSC six-terminal 2024 table reports minutes [R49].
Inland delivery	End-to-end delivery to the user. Record its own start and stop events.

Additional operating evidence

Gateway	Observed traffic	Interpretation
Tema [R50]	1,190,695 TEU in 2023; 1,668,688 in 2024 (+40.14%).	The series measures traffic. A matched dwell series would be needed to assess service change.
Cotonou [R29]	9,651,633 tonnes in 2024; 14,696,273 in 2025.	Exports and transshipment contributed. Assess cargo composition before inferring domestic manufacturing gains.

Port performance and digital interfaces

The NSC table at physical PDF page 19, printed page 17, provides three terminal clocks [R49]. The observed values are retained. The narrative and benchmark table use inconsistent comparison standards, so benchmark-based judgments are excluded.

Match event definitions, years, coverage and samples before combining observations. Diagnose whether the constraint sits at the berth, release, gate or inland leg.

MTN/Bayobab reported on 15 March 2024 that four subsea cables had been damaged the previous day, and described rerouting and repairs [R73]. Customs, booking, banking and production can share cables, landing facilities and power even when providers differ. Test switching capacity, activation time and the transactions preserved. Check portability, interoperability, remedies, cybersecurity, backup power, affordability and actual user access.

Source	Coverage and use
CPPI [R34]	Vessel time in port. Use it for the ship call within its defined boundary.

Source	Coverage and use
LPI 2.0 [R33]	Twenty-one operational indicators across maritime, aviation and postal services. The landlocked measures distinguish port arrival dwell, corridor transit and inland clearance. The methodology does not yield an overall country ranking.

Project stages and commitments

DP World, Ogun State Government and Ogun Deep Sea Port Company Ltd signed two MoUs to explore a deep-sea port and special economic zone across a 10,000-hectare site, with a connection envisaged to the Lagos-Calabar Coastal Highway [R87]. The Nigerian government's September 2026 account projects more than US$7 billion in initial investment and more than 50,000 direct jobs at full development, with a proposed four-kilometre berth and 18-metre draft [R88]. The amounts, jobs and dimensions are projections. The reviewed evidence establishes an exploratory stage.

Before assessing the industrial proposition, verify demand, anchor tenants, land and environmental terms, power, water, inland links, fiscal obligations and workforce plans. Establish federal, state, developer and operator responsibilities, ownership, tariff provisions, investment obligations and risk allocation. Allocate the announced value to individual parties and components only when the split is disclosed.

Ports compete for calls, tenants and cargo. Common standards, customs interfaces and continuity arrangements can support essential supply while preserving that competition. Assess each proposal against service networks, credible demand, inland costs and reliable production.

Coastal market interfaces

ECOWAS' May 2026 account describes the 1,028-kilometre highway programme, financing mobilisation and the role of ALCoMA [R03]. This establishes an institutional programme and investment process. It is not evidence that the entire proposed highway is operational or that its expected effects have occurred. The page's prospective timetable is retained as a stated plan, not an independently confirmed completion schedule.

Existing road, port and border services must therefore be analysed independently of future highway capacity. Some improvements can affect current users before large construction is completed. Others depend on substantial works, land processes and complementary services. Combining them into one undifferentiated investment narrative conceals timing, costs and accountability.

The study proposes organising implementation around real value-chain transactions: identify repeated consignments; measure release and delivery; map avoidable cost; address standards and finance; and track changes in accepted sales, utilisation and supplier contracts. Public agencies would need an agreed process for resolving cross-border problems and publishing comparable results.

This is a research recommendation, not an assertion that such a programme is already operating. Its success would require credible institutions, firm participation, data protection and sustained maintenance. Failure would be visible if infrastructure use rose but firms' cost, reliability or market access did not improve. The corridor's development case should remain open to that evidence.

Corridor dimension	What makes the market usable
FIVE JURISDICTIONS	The coastal axis links major cities, production centres and their hinterlands. Continuous settlement alone does not establish commercial integration.
ACCESS CONDITIONS	Standards, border procedures, currencies, distribution networks and transport services shape the usable market.
CANDIDATE RELATIONSHIPS	Food processing, packaging, building materials, consumer goods, logistics and services offer relationships to test.
COMMERCIAL TEST	Specify product, origin, destination, buyer, input structure and delivered cost. A larger mapped market does not prove profitable sales for a particular plant.

Corridor delivery

The coastal-axis challenge is to combine national responsibilities with the benefits of a larger operating market. A firm may need several authorities to accept origin documents, inspections, permits and payment evidence across a single commercial relationship. Each additional unpredictable interface can increase stock, delay or compliance cost. Road capacity helps where movement is constrained, but does not independently resolve those administrative or commercial relationships.

The five countries also contain distinct production and consumption systems. The study does not assign each a permanent economic role. A gateway can serve domestic industry, transit and transshipment simultaneously; a producer can use several ports; a city can be a consumer market and a supplier location. Functional specialisation should be established through transactions, not frozen into a regional planning diagram.

The AfDB's June 2026 account records ALCoMA's inaugural board meeting in Lagos and the appointment of its chair [R47]. Together with the financing-mission record [R03], this establishes movement in institutional and project preparation. The phrase operational phase in an institutional announcement should not be read as completion of the highway. Authority operations, financing, construction and a road delivering measured economic effects are separate stages.

An appraisal needs to distinguish the existing coastal economic system from the proposed new highway programme. Existing firms can benefit from improved services before new capacity is delivered. New road sections can also create benefits not attainable through procedural reform alone. The alternatives must be assessed against the same demand and service baseline rather than declared substitutes in every location.

ECOWAS' December 2024 task-force account describes SIGMAT and electronic-origin progress alongside inadequate national implementation and continuing obstacles [R40]. This is documentary evidence that digital adoption and operating friction can coexist. It is not proof that every proposed system performs fully or that every crossing has the same difficulty. The finding changes the delivery question from whether a system has been launched to whether intended transactions can use it reliably.

The producer's market does not stop at the border. Distribution requires wholesalers, storage, credit, product registration where applicable, after-sales service and collection of payment. An accessible road

to a large market can leave these constraints intact. Industrial development should therefore integrate the logistics and commercial sides of market entry, including the fixed costs smaller firms face.

A practical implementation package would select repeated product flows, identify public and private decision owners, measure the full service and test changes in accepted sales and productive use. It would publish methods and performance without disclosing commercially sensitive firm data. Expansion of that package should follow demonstrated value and delivery capability.

Strategic judgement	Decision implications
What we conclude	The first corridor investment should be better clearance and delivery on existing routes. Appraise physical expansion by lot.
Confidence	High on observed volumes and case distinctions. Moderate on service sequencing. Low on fiscal returns until commitments and demand are reconciled.
Country implications	Guinea: third-party mineral links. Sierra Leone: bulk input delivery. Liberia: Monrovia service. Côte d'Ivoire and Ghana: western coastal pilot. Togo and Benin: transit handovers. Nigeria: gate and inland delivery performance.
What to do first	ALCoMA and national authorities should agree a common shipment baseline, publish performance and fix one delay source at each pilot border.

THE GULF OF GUINEA AND ATLANTIC WEST AFRICA

CHAPTER

08

Security, continuity and coastal–Sahel trade

Protect civilian access and keep commercial routes workable under stress



Security, continuity and coastal–Sahel trade

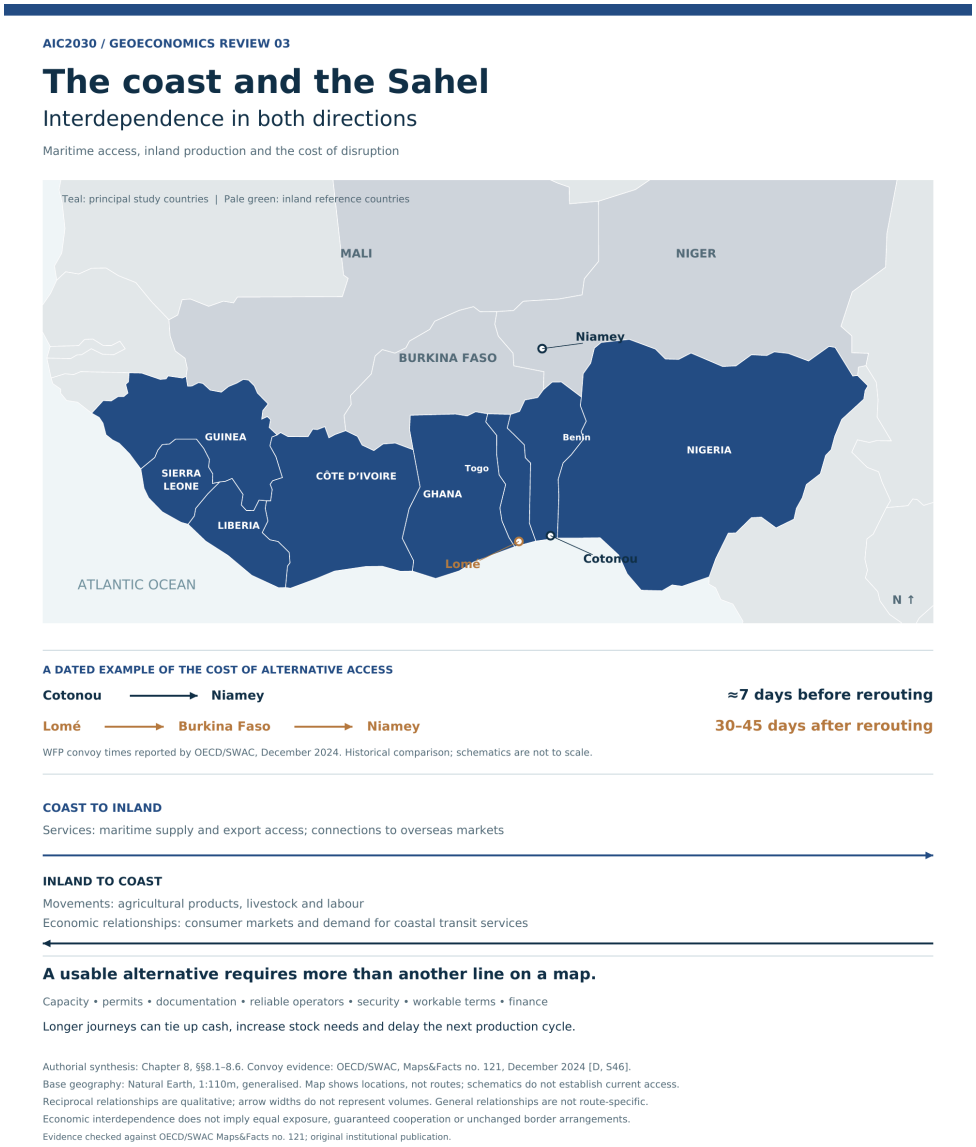
Protect the service chain across land and sea

Northern Benin and northern Togo were documented targets of Sahel-linked insecurity in the UN reporting cited here [S18–S19]. The 2026 UN monitoring report and regional incident mapping add evidence for northern Benin and the wider border zone [S21–S22]. Location and timing matter. Increased delays can arise through disruption, heightened controls, rerouting or merchant withdrawal. Do not infer national closure from local incidents. Protect civilian mobility, food access and livelihoods, with defined procedures for movement and disputes.

At sea, separate reported incidents from exposure per voyage and from the costs of prevention. Coordinated reporting and protection along Gulf of Guinea routes can reduce uncertainty. Track insurance, cancellations and response times, with precautions against disclosing operational details that could endanger users.

Give the Sahel several credible Atlantic options

Morocco's Atlantic access initiative received political support from Sahel counterparts [S15]. Treat the initiative as a diplomatic and development proposal. Compare prospective routes with existing coastal alternatives using customs arrangements, cost, time, capacity, safety and environmental consequences. ECOWAS and AES countries can preserve practical trade and civilian mobility through narrow, enforceable arrangements even where political positions differ.



Map 3. Coastal and Sahelian relationships. Source: AIC2030 analysis. The original case describes a dated humanitarian movement.

Reported maritime incidents

Reported incidents tell us what was recorded. To judge the risk to a particular voyage or livelihood, examine location, traffic, vessel practices, reporting and response capability. Piracy, armed robbery, illegal fishing and smuggling expose different users to different kinds of harm.

Protection of crews, fishing communities, terminals and offshore installations supports continuity. Authorities need funding, maintenance, coordination, prosecution and oversight to turn surveillance into protection. An incident or credible threat can alter routing, security costs, delivery schedules, insurance and labour welfare. Quantifying a freight saving requires observed commercial terms and a way to account for other influences.

Fisheries, aquaculture, marine services, repair, tourism and ecosystems sit alongside shipping and offshore hydrocarbons. Landing rights, sustainable stocks, reliable cold chains and health standards shape the income coastal communities can earn. Power, finance, logistics and markets determine whether safer operations can translate into more productive activity.

Observation period	ICC IMB reported count	How to read it
Calendar 2025	21 Gulf of Guinea incidents [R04]	Full-year observation.
January–September 2026	Two Gulf of Guinea incidents [R05]	Part-year observation. A matched period and exposure data are needed to calculate a comparable rate.

Response and fisheries

The IMO records that representatives of 25 West and Central African countries adopted the Yaoundé Code of Conduct in June 2013. Its remit covers piracy, armed robbery and other illicit maritime activity, including illegal, unreported and unregulated fishing [R41]. This security geography extends beyond the five-country coastal axis. Regional coordination helps when incidents cross jurisdictions. National authorities retain distinct legal and operational duties.

Keep compensation and real-resource losses in separate accounts. A payment that compensates an insured loss can otherwise be counted twice.

Shipping, offshore installations, protected ecosystems and artisanal fisheries can compete for space. Assess actual use, access rights, ecological conditions and feasible alternatives. Trace the chain from landing and handling through ice, energy, transport, processing, testing and buyers. Track sustainable access and income across fishers, processors, traders and service providers. A named fishery needs its own stock assessment.

Political separation and transit

A usable alternative requires capacity, permits, documentation, reliable operators, security, commercial terms and finance. Switching can add inventory, brokerage, equipment positioning and training costs. Compare these costs with the disruption avoided. A limited trial shipment can demonstrate readiness and improve negotiating options.

Public authorities should agree transit procedures and protect essential trade. Producers and shippers should test substitute services and finance the extra time in transit. Assess the effect on buyers and suppliers alongside the impact on port and transit revenue.

What insecurity costs on two Sahel corridors

Cotonou–Niger. The Malanville–Gaya crossing is a critical link between Cotonou and Niamey. During the documented closure, the OECD recorded stranded trucks and more informal trade across the Niger River. Niger's trade facilitation project fiche records diversion via Burkina Faso, through Lomé and Tema. The IMF subsequently reported a recovery in aggregate Cotonou traffic. That aggregate does not identify how much Niger-bound traffic returned. The closure and Sahel-linked attacks are distinct shocks. Neither source isolates a security-only freight premium [S23–S25].

Lomé–Ouagadougou. The corridor serves Burkina Faso and provides an onward option to Niger. It gains commercial value when shippers can divert there, but northern Togo's exposure and insecurity on onward legs can raise journey variability. The World Bank's implementation review distinguishes the Ouagadougou–Lomé section from the greater insecurity constraints facing the Ouagadougou–Niamey section. Treat each leg separately when quoting and scheduling freight [S19; S22; S26].

Impact	Cotonou–Niger	Lomé–Ouagadougou and onward
Transit time and inventory	A blocked handover can strand trucks, build storage charges and tie up inventory finance	Diverted cargo raises the value of capacity but can lengthen queues and create delays where escorts or handovers are required
Local markets and revenue	Border traders, drivers and formal service providers can lose turnover even when aggregate port traffic recovers	Larger carriers and alternative gateways can gain flows, while smaller traders may struggle to finance longer delivery cycles
First operating action	Record departures, actual crossing outcomes, cancellations and total landed cost for one essential import chain	Compare equivalent shipments on the Burkina leg and onward to Niger, recording delays, security charges and route changes separately

Compare the same cargo, season and customer location. Separate border policy, road conditions and security-related restrictions in the shipment record. Track median and 90th-percentile delivery time, spoilage, charges and order cancellations. Publish aggregate results that protect shippers and communities. The operational judgement is to maintain two tested routes for essential cargo and switch when observed delivery risk warrants it.

Inventory costs and alternatives

A delayed shipment ties up cash, can require larger buffers and may postpone deliveries or the next production cycle. Perishables, low-margin bulk products and high-value machinery respond differently to the same delay.

Additional inventory financing cost Financed value × annual financing rate × additional financed days ÷ applicable day-count basis. Use observed terms. Account separately for storage, losses, handling, demurrage, security and lost sales, and remove overlapping charges.

Compare the complete service package: maritime connection, clearance, inland transport, safety, financing and delivery. A closer port can be a weaker option if switching costs are high. Public authorities may prioritise essential supply and regional income, while shippers may prioritise predictable delivered cost. Where these objectives diverge, identify who bears the recurring cost and

who gains from the alternative.

Inland farmers, livestock traders, industrial users, utilities and consumers influence the volume, mix and seasonality of coastal flows. A disruption can reduce coastal transit revenue and restrict inland access at the same time, with losses falling on different groups at different speeds. Security priorities, domestic politics and distributional interests shape whether the parties reach accommodation.

Maintain operating procedures and contracts at key crossings, test proportionate alternatives and finance the extra time a longer journey can require.

Strategic judgement	Decision implications
What we conclude	Put civilian continuity and practical transit protocols at the centre of coastal–Sahel cooperation.
Confidence	High on the dated security and diplomatic record. Moderate on economic transmission. Low on current corridor premiums without matched shipment observations.
Country implications	Guinea: western alternative access. Sierra Leone and Liberia: coastal resilience. Côte d'Ivoire and Ghana: transit alternatives. Togo and Benin: northern continuity. Nigeria: inland and maritime route redundancy.
What to do first	Designate incident contacts, a continuity protocol and an alternative route for one essential supply chain per pilot crossing.

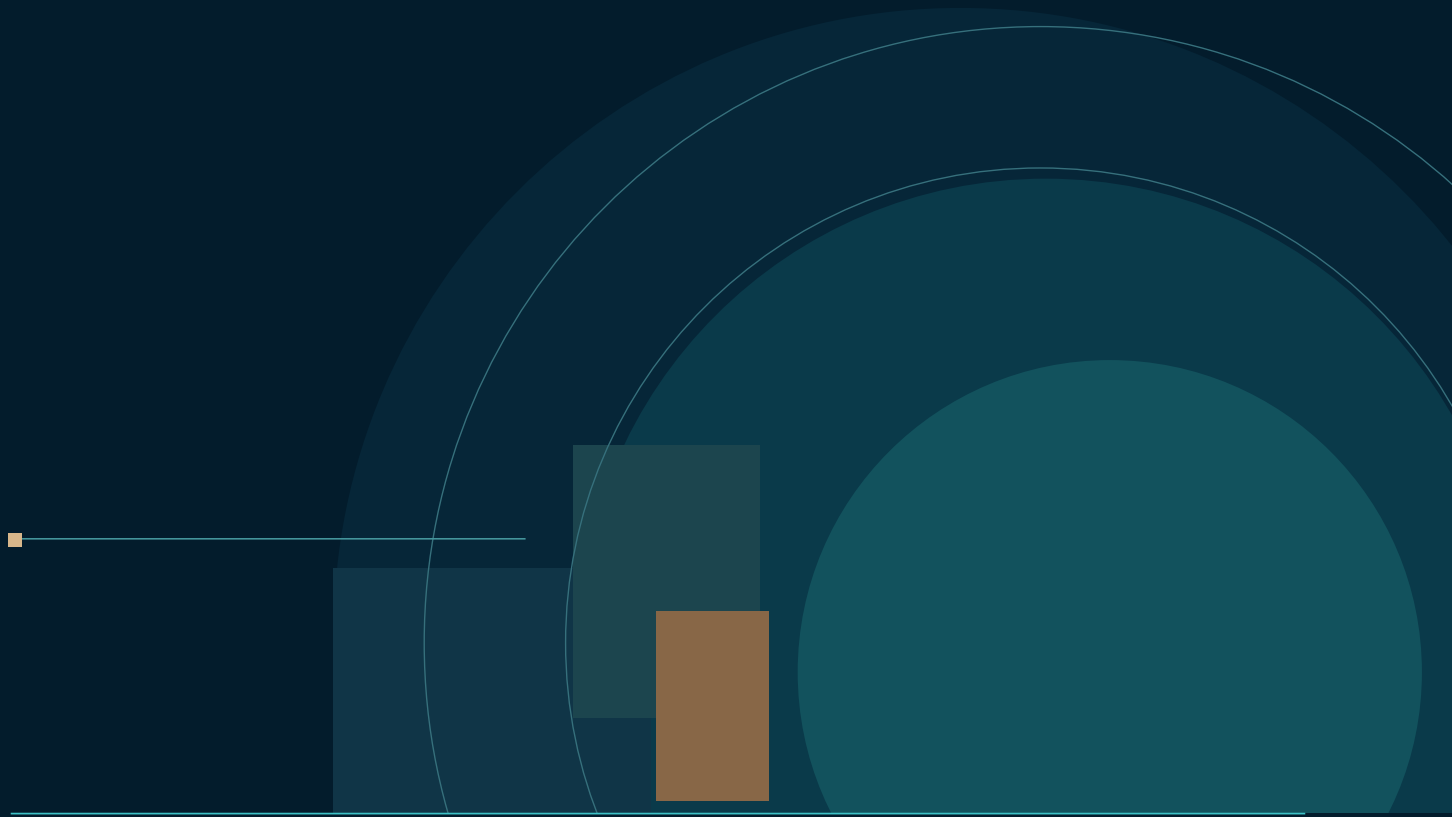
THE GULF OF GUINEA AND ATLANTIC WEST AFRICA

CHAPTER

09

African cooperation and integration

ECOWAS, AfCFTA, the Eco and payments



African cooperation and integration

Make AfCFTA preferences deliver a shipment

ECOWAS adopted its regional AfCFTA implementation strategy in 2023 [S1]. Translate tariff schedules and product-specific rules of origin into a workflow that a firm can complete. Test an actual certificate, border entry, tax treatment, receipt and payment. The ECOWAS Trade Liberalisation Scheme and AfCFTA preferences operate under different legal routes. Firms need a clear basis for choosing an applicable regime and a remedy when a valid claim is rejected.

Make African-currency payments practical

PAPSS allows eligible users to pay or receive through participating institutions in local currencies. Its published architecture includes prefunding, multilateral netting and a hard-currency settlement step for net positions under the described arrangement [S2]. Bank access, currency pairs, quote spreads, liquidity, compliance and reversals still matter. BCEAO's PI-SPI concerns instant payments in the UEMOA area [R07]. Test its actual connectivity to other rails before assuming interoperability.

The Eco is an ECOWAS monetary project. The September 2026 Convergence Council reported a 2027 target and outstanding requirements [S3]. Underwriting and payment pilots should use available currencies and rails. Monetary convergence calls for credible inflation and fiscal performance, reserve governance, crisis facilities and decisions on participation.

ECOWAS–AES: preserve practical cooperation

Burkina Faso, Mali and Niger withdrew from ECOWAS effective January 2025. ECOWAS announced interim treatment for movement and trade [S9]. Its application must be checked at each border. The first ECOWAS–AES ministerial dialogue in Dakar on 17 October 2026 opened a channel for cooperation [R02]. The institutions and territorial perimeters of ECOWAS, AES and UEMOA differ. Maintain cooperation on customs contacts, cargo documents, dispute escalation and essential movements. Require both sides to report performance on the same sample.

Layer	What to test	Metric
AfCFTA preference	Eligible order, origin proof, customs application	Share of valid preference claims honoured
Settlement	Quote and pay the same invoice through two available rails	All-in spread, fees, reversals, time to beneficiary
ECOWAS–AES transit	Documented handover and escalation	Cleared share, p90 time, duplicate inspections
Eco readiness	Published convergence and institutional conditions	Verified compliance and credible settlement backstops

Start with transactions firms can repeat

Customs authorities should publish the reason when an eligible preference claim is rejected. Standards agencies should test whether participating countries accept the same product documentation. Banks should quote the exchange spread, fees and time to beneficiary before payment. Chambers can recruit smaller firms and publish where the sequence breaks. Separate faster settlement from access to trade credit and working capital.

Strategic judgement	Decision implications
What we conclude	Make integration visible through accepted preference claims, cleared transit and settled invoices. Treat the Eco as a separate institutional decision.
Confidence	High on the formal mechanisms and dated stages. Moderate on adoption and cost gains. Measure by route and bank.
Country implications	Guinea, Sierra Leone and Liberia: onboard banks and SMEs. Côte d'Ivoire, Togo and Benin: test CFA interfaces and transit. Ghana and Nigeria: compare local-currency quotes and origins. All eight: publish rejection reasons.
What to do first	Customs authorities, banks and chambers should run one AfCFTA shipment-and-payment pilot per selected trade pair, publishing results quarterly.

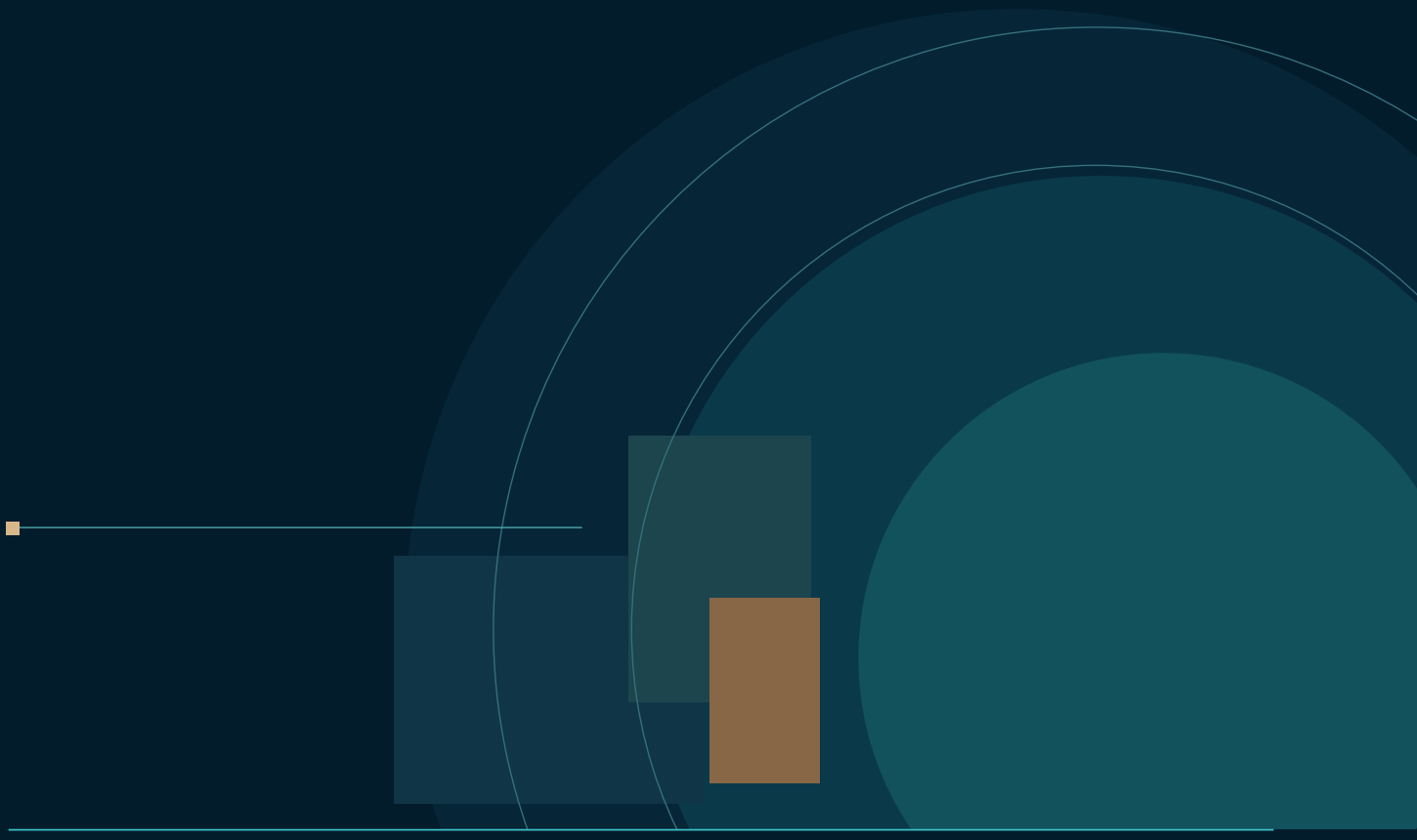
THE GULF OF GUINEA AND ATLANTIC WEST AFRICA

CHAPTER

10

Capital and negotiating external terms

Mobilise African finance and bargain for control over outcomes



Capital and negotiating external terms

Match the instrument to the cash flow

Afreximbank provides trade finance and payment infrastructure. AfDB, Africa50, BOAD and EBID can finance or help prepare qualifying long-lived assets [S2; S16–S17]. Pension funds and insurers need predictable long-term cash flows, governance, liquidity and risk limits. Africa50 reports a US$222.5 million first close in December 2023 with significant African institutional participation [S17]. Treat commitments as fund-level evidence. The BRVM and national exchanges can deepen disclosure and distribution, subject to issuer and market constraints [S13].

Use purchase-order and receivables finance for working capital. Match infrastructure tenor and currency to income. Use guarantees for defined risks and record them in public accounts. Reserve long-duration institutional savings for investment-grade exposures or transparently structured vehicles with a credible exit and fiduciary safeguards.

African negotiators should set the terms of comparison

Negotiation	African actor and objective	Terms to insist on
External loan	Finance ministry and debt office compare effective cost under stress	Currency, grace, collateral, escrow, cross-default, disclosure, renegotiation and debt sustainability
Concession	Public authority and users define minimum operating performance	Tariff formula, access, service metrics, land impacts, maintenance, reversion and dispute remedy
Market access	Trade ministry and producer associations defend viable access	Origin, standards equivalence, data burden, adjustment periods, mutual recognition and review
Technology and operating partnership	Buyer, regulator and local suppliers secure learning and interoperability	Procurement opportunities, training, data rights, open interfaces and exit

Pool negotiating capacity

African governments should compare transactions using standard downside assumptions for demand, exchange rates, force majeure and public guarantees. Publish a non-confidential term summary before commitments. External finance and market access can widen options where African actors preserve credible alternatives, oversight and renegotiation capacity.



Figure 4. Financing the productive cycle. Source: AIC2030 analytical synthesis.

Use alternatives to improve the terms

Compare offers against a maintained existing service, a smaller phased project and competing sources of finance. Use common demand and exchange-rate stress assumptions. Publish who bears losses under each option and which terms can be reopened. Figure 4 traces the operating cash cycle. A faster payment rail can shorten that cycle, while inventory and receivables finance cover distinct cash gaps. Negotiate them separately.

Strategic judgement	Decision implications
What we conclude	Mobilise regional capital where cash flows justify it and negotiate external finance, concessions and market access against explicit public-interest tests.
Confidence	High on instrument distinctions. Moderate on allocation pathways. Transaction exposure remains uncertain without full terms.
Country implications	Guinea and Liberia: concession access and collateral. Sierra Leone: trade finance. Côte d'Ivoire, Togo and Benin: regional debt and exchange disclosure. Ghana: guarantees and arrears. Nigeria: FX risk and large contract exposure.
What to do first	Establish a joint negotiation and risk-review panel and publish the first three transaction summaries before financial commitment.

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CHAPTER

11

Scenarios and the architecture of economic sovereignty

Rank first moves and specify what would change them



Scenarios and the architecture of economic sovereignty

Three plausible paths to 2030

Scenario	Drivers	Signposts and proposed thresholds
Service-led integration	Customs performance, merchant demand, settlement adoption and reliable power	Two pilot crossings achieve at least 20% lower median release time with p90 no worse, and at least 85% of eligible sampled invoices settle within one business day, for two quarters
Fragmented resilience	Persistent controls, route switching and uneven liquidity	Border p90 rises 25% over baseline or planned diversions exceed 10% of pilot shipments for two quarters. Expand contingencies and review the route mix
Capital-led expansion with weak linkages	Strong project pipelines, slow local supplier entry and fiscal pressure	Two major lots advance without published guarantee and access terms, or less than 70% of pilot supplier orders are delivered and accepted. Pause commitments and renegotiate

Thresholds are proposed monitoring triggers, not observed values, forecasts or legal criteria. Set the baseline in the first 90 days. Record season, route, cargo, sample size and cancellations. Disaggregate results by firm size and geography. The steering group should review quarterly and publish which decision changed.

Intra-African wildcards

An ECOWAS–AES transit accord could reopen practical options faster than expected. A payment-liquidity disruption across African rails could interrupt otherwise viable trade. A WAPP settlement default or unexpected supply surplus could reverse the relative economics of backup power. An African pension consortium could accelerate selected projects where contracts meet fiduciary tests. A major coastal flood or Sahelian crop failure could redirect flows and expose shared dependence. Pre-agree a response owner and reassessment date for each event.

Ranked regional interventions

Rank and first action	Indicative financial scale	Likely gains, losses and blockers
1. Clear and pay for trade on existing corridors. Pilot two crossings and two settlement pairs	US$2–5m illustrative design envelope for 12 months: systems, operations, training and independent measurement. Excludes civil works and liquidity commitments	SMEs and reliable operators gain. Delay rents and intermediary margins may fall. Customs agencies, banks and incumbent agents can block interfaces
2. Secure essential supplies and power. Track seasonal inputs and pilot delivery-backed electricity exchange	US$3–8m illustrative diagnostics and pilot envelope. Excludes inventory, grid works and credit guarantees. The US$465m BEST approval is a separate programme benchmark [S7]	Farms, households and firms gain. Some emergency intermediaries and backup suppliers lose sales. Utilities and treasuries can block settlement or budgets
3. Protect coastal–Sahel continuity. Agree contingency and transit protocols	US$1–3m illustrative coordination and monitoring envelope. Excludes policing and infrastructure	Traders and border communities gain. Informal toll collectors lose rents. Security agencies and rival authorities can block information sharing
4. Open supplier markets and tighten capital terms. Start with two buyer cohorts and common appraisal	US$2–6m illustrative preparation envelope. Excludes working-capital commitments, guarantees and construction	Qualified firms and taxpayers gain. Protected suppliers and opaque concessionaires face competition. Anchor firms, ministries and financiers can block disclosure

The ranges are analyst planning assumptions for multi-country pilots. For each, scope staff and technical assistance, implementation, monitoring and contingency. They are indicative, unapproved and subject to competitive costing. The approximate US$15 billion highway estimate is a separate capital decision [S4–S6].

Sovereignty as exercised choice

The strongest near-term gains come from rules and services African institutions can operate together now. Reliable trade makes regional demand visible. That demand justifies capital on better terms and creates room for African firms to invest. Test who exercises access, earns income, bears loss and can change a commitment. If the answer cannot be verified in transactions, service logs or public accounts, the intervention needs another decision gate.

Three comparative findings

First, production capacity and gateway scale do not guarantee affordable essential supplies. Nigeria and Ghana show why the household price, delivery window and financing terms belong in the same assessment [R96–R98; R113; R116].

Second, the priority differs by gateway. For the western mineral and bulk systems, third-party access and domestic supplier orders matter most. On the Abidjan–Lagos axis, the immediate gain is more predictable clearance and settlement across national jurisdictions. Governments, operators and firms share responsibility for delivery [R77–R84; S4–S6].

Third, water and power can determine whether a productive relationship works. Volta Lake has documented operator-described service. Proposed river links and electricity arrangements need evidence of operating days, dispatch, payment and sustained demand [R100–R107; S20].

Decide when to change course

Use the three scenarios at the level of a crossing, supply chain, payment pair or investment lot. Delivery leads should publish the 90-day baseline, review signposts quarterly and name the party responsible when a trigger is crossed. Scale after demonstrated service improvements and repeat orders. Pause commitments when access terms, liabilities or resilience deteriorate. Annex B explains how the proposed triggers and pilot envelopes were set.

Strategic judgement	Decision implications
What we conclude	Prioritise operating integration, essential functions and continuity, then scale productive investment against verified demand and negotiated terms.
Confidence	Moderate on intervention order. High on the need for transparent decision gates. Low on pilot costs before country-level scoping and procurement.
Country implications	Guinea, Sierra Leone and Liberia: begin with selected gateway and supplier links. Côte d'Ivoire, Ghana, Togo and Benin: lead coastal service pilots. Nigeria: anchor demand, payments and risk disclosure. All eight: publish comparable results.
What to do first	Convene the national delivery leads for a 90-day baseline and approve only the initial pilots with named budgets, outcomes and reassessment dates.

Annex A | Country profiles

Eight decision profiles and common-year evidence

The profiles consolidate the country evidence. Population, growth and other panel values refer to 2024 unless a different observation year is shown. Population and current-dollar GDP measure different things. The first figures are from the WDI extraction documented in [R32; R127]. National figures provide context for country decisions. They do not measure corridor or enterprise performance.

Guinea

Simandou changes the scale of mineral logistics. The public question is whether the system enables third-party traffic and creates orders for domestic suppliers. Publish access rules, benchmark procurement and audit the terms on which mining receipts enter the public accounts [R80–R81].

Sierra Leone

Freetown's bulk handling evidence has practical relevance for cement and rice. Measure landed cost and reliability from berth to buyer before generalising to other cargo [R82]. Domestic demand and supplier viability should govern support.

Liberia

Test the interface between resource concessions, Monrovia's operations and domestic suppliers. National tonnage and an operating change at one port are distinct observations [R83–R84]. Establish the effects on small firms and priority supply chains.

Côte d'Ivoire

Connect Abidjan gateway services, processor demand and supplier orders. Cashew programme outcomes and sector-wide processing remain separate [R51–R52]. Measure retained value through actual purchases, utilisation and supplier earnings.

Ghana

Use Tema's verified traffic record and Ghana's fiscal reset to prioritise operational reliability and affordable power. Track arrears, actual service and user charges. Traffic volume alone does not establish firm productivity [R50; S11].

Togo

Measure Lomé-linked inland services and crop input availability by season. Distinguish fertilizer imports from timely farm access [R53]. Establish a northern continuity protocol and evidence of predictable transit.

Benin

Distinguish Cotonou cargo composition from domestic processing [R29]. Protect access in northern supply chains and document alternative routes. Prioritise service reliability and buyer-led supplier demand.

Nigeria

Use domestic demand and operating scale to test industrial linkages, faster release and settlement. Track petrol and FX reform effects on real household costs and working capital [S10]. Nigerian terminal clocks and corporate accounts support specific operating judgements [R23; R49; R96].

Baseline and supporting indicators

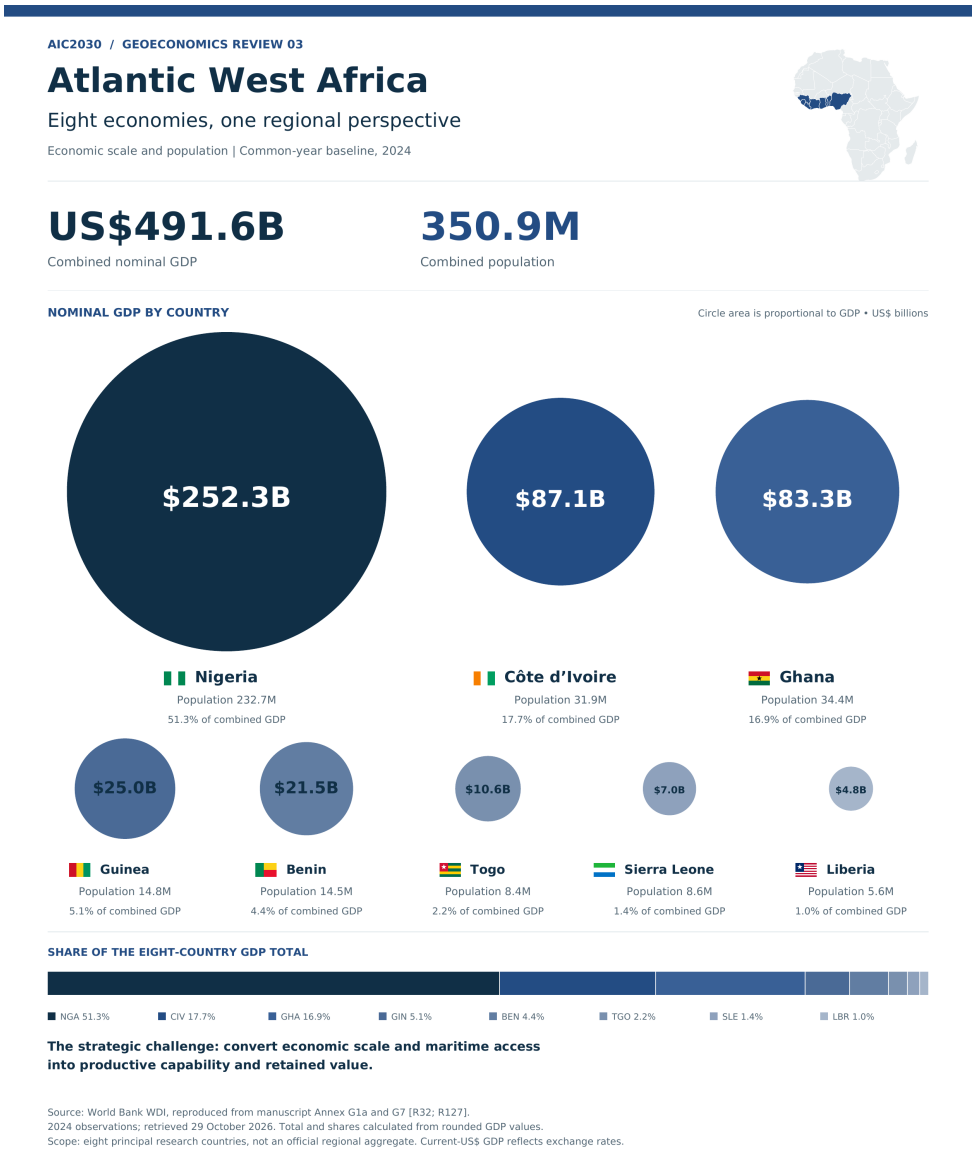
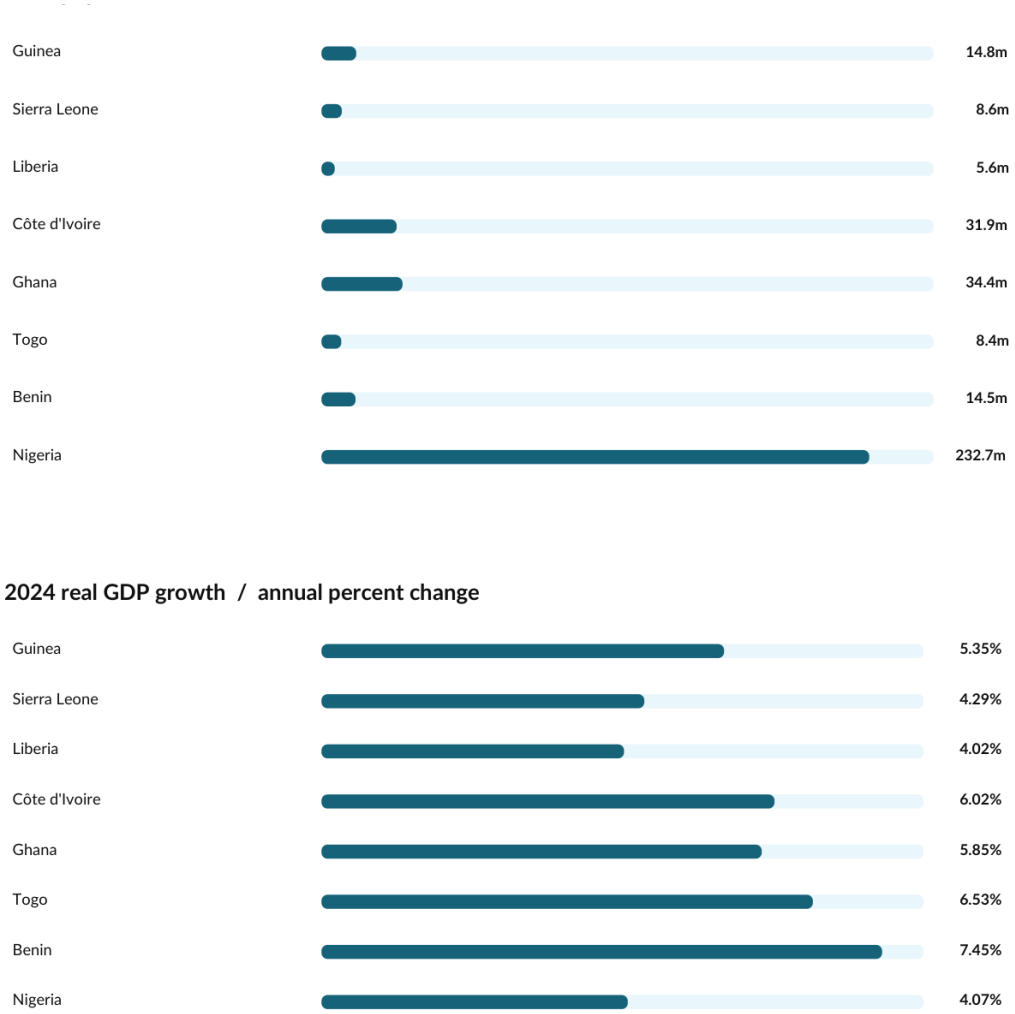


Figure A1. Eight-country nominal GDP and population. Source: WDI [R32; R127]. GDP sum uses rounded values.



Source: original Review 03, Annex G1a (p. 122), WDI, 2024 observations [R32]. National statistics, not corridor outcomes. Population shares and growth rates are not aggregated into a regional growth rate.

Figure A2. Population and real growth across the eight study economies, 2024 [R32].

Economy	Population: million	Real GDP growth: %
Côte d'Ivoire	31.934	6.02
Ghana	34.427	5.85
Togo	8.407	6.53
Benin	14.463	7.45
Nigeria	232.679	4.07
Guinea	14.755	5.35
Sierra Leone	8.642	4.29
Liberia	5.613	4.02

Economy	Manufacturing: % GDP	Electricity access: % people	Trade: % GDP
Senegal	14.22	82.9	68.24
Mauritania	5.01	52.2	93.60
The Gambia	1.45	69.0	42.17
Guinea-Bissau	9.17	43.7	40.37
Cabo Verde	5.16	98.4	96.90
Cameroon	12.88	72.0	34.40
Equatorial Guinea	25.81	65.1	74.29
Gabon	19.46	95.1	92.05

Country	Agriculture, forestry, fishing / GDP, 2024 (%)	Private credit / GDP (%; year)
Guinea	30.96	10.67 (2024)
Sierra Leone	29.16	3.97 (2024)
Liberia	33.83	17.21 (2024)
Côte d'Ivoire	15.86	22.52 (2024)
Ghana	20.58	8.92 (2024)
Togo	21.34	25.37 (2024)
Benin	24.23	18.98 (2024)
Nigeria	25.87	13.21 (2023)

Country	Food / merchandise imports (%; year)	Fuel / merchandise imports (%; year)
Guinea	NA	NA
Sierra Leone	NA	NA
Liberia	23.09 (2023)	31.77 (2023)
Côte d'Ivoire	20.46 (2024)	26.86 (2024)
Ghana	14.02 (2024)	25.95 (2024)

Country	Food / merchandise imports (%; year)	Fuel / merchandise imports (%; year)
Togo	17.65 (2024)	15.17 (2024)
Benin	33.27 (2024)	13.65 (2024)
Nigeria	11.02 (2024)	37.96 (2024)

Country	Fertilizer nutrients, kg / arable ha (year)	Freshwater stress, 2022 (%)
Guinea	4.19 (2024)	1.37
Sierra Leone	2.67 (2023)	0.50
Liberia	7.55 (2024)	0.26
Côte d'Ivoire	28.40 (2024)	5.09
Ghana	43.31 (2024)	6.31
Togo	15.70 (2024)	3.39
Benin	25.54 (2024)	0.98
Nigeria	13.04 (2024)	9.67

Country	GDP PPP, current int.$ bn	GDP/person, US$
Guinea	67.5 (2024)	1,695 (2024)
Sierra Leone	30.5 (2024)	807 (2024)
Liberia	10.5 (2024)	851 (2024)
Côte d'Ivoire	245.3 (2024)	2,728 (2024)
Ghana	277.2 (2024)	2,419 (2024)
Togo	32.1 (2024)	1,266 (2024)
Benin	64.2 (2024)	1,485 (2024)
Nigeria	2,117.4 (2024)	1,084 (2024)

Country	Govt debt / GDP, %	Govt balance / GDP, %	Revenue excl. grants / GDP, %
Guinea	32.0 (2024)	-3.2 (2024)	NA

Country	Govt debt / GDP, %	Govt balance / GDP, %	Revenue excl. grants / GDP, %
Sierra Leone	47.0 (2024)	-5.2 (2024)	NA
Liberia	56.4 (2024)	-2.5 (2024)	NA
Côte d'Ivoire	59.5 (2024)	-4.0 (2024)	13.4 (2023)
Ghana	70.1 (2024)	-6.0 (2024)	15.0 (2023)
Togo	66.2 (2024)	-6.8 (2024)	15.7 (2023)
Benin	60.5 (2024)	-3.1 (2024)	NA
Nigeria	39.3 (2024)	-1.3 (2024)	NA

Country	External debt, US$ bn	External debt / GNI, %	External service / exports, %
Guinea	5.39 (2024)	23.2 (2024)	3.7 (2024)
Sierra Leone	2.33 (2024)	31.1 (2024)	9.5 (2024)
Liberia	2.23 (2024)	50.5 (2024)	9.1 (2024)
Côte d'Ivoire	40.56 (2024)	48.8 (2024)	24.7 (2024)
Ghana	37.41 (2024)	46.9 (2024)	9.4 (2024)
Togo	4.29 (2024)	43.2 (2024)	13.8 (2024)
Benin	14.16 (2024)	66.6 (2024)	26.8 (2024)
Nigeria	108.76 (2024)	60.0 (2024)	21.9 (2024)

Country	CPI inflation, %	Reserves, import months	Short-term / external debt, %
Guinea	8.1 (2024)	1.3 (2024)	7.0 (2024)
Sierra Leone	28.6 (2024)	1.8 (2024)	7.5 (2024)
Liberia	8.2 (2024)	2.0 (2024)	0.0 (2024)
Côte d'Ivoire	3.5 (2024)	NA	10.6 (2024)
Ghana	22.8 (2024)	2.6 (2024)	7.0 (2024)

Country	CPI inflation, %	Reserves, import months	Short-term / external debt, %
Togo	2.9 (2024)	NA	3.4 (2024)
Benin	1.2 (2024)	NA	9.0 (2024)
Nigeria	33.2 (2024)	7.2 (2024)	20.4 (2024)

Country	Current account / GDP, %	Net FDI inflows / GDP, %	Remittances / GDP, %
Guinea	-1.6 (2024)	5.6 (2024)	2.5 (2024)
Sierra Leone	-14.1 (2024)	1.7 (2024)	4.6 (2024)
Liberia	2.5 (2024)	9.9 (2024)	21.3 (2024)
Côte d'Ivoire	-4.5 (2024)	3.6 (2024)	2.0 (2024)
Ghana	1.9 (2024)	2.1 (2024)	3.6 (2024)
Togo	-0.3 (2020)	1.9 (2024)	8.7 (2020)
Benin	-8.2 (2023)	1.8 (2024)	1.7 (2023)
Nigeria	7.5 (2024)	0.6 (2024)	8.8 (2024)

Country	Gross capital formation / GDP, %	Taxes / GDP, %
Guinea	32.1 (2024)	NA
Sierra Leone	20.5 (2024)	NA
Liberia	NA	NA
Côte d'Ivoire	20.9 (2024)	13.0 (2023)
Ghana	9.9 (2024)	12.4 (2023)
Togo	22.4 (2023)	13.9 (2023)
Benin	35.1 (2024)	NA
Nigeria	NA	NA

Country	Population under 15, %	Population 65+, %	Age dependency / 100
Guinea	40.9 (2024)	3.5 (2024)	79.7 (2024)

Country	Population under 15, %	Population 65+, %	Age dependency / 100
Sierra Leone	38.1 (2024)	3.2 (2024)	70.4 (2024)
Liberia	39.5 (2024)	3.3 (2024)	74.9 (2024)
Côte d'Ivoire	40.9 (2024)	2.6 (2024)	76.9 (2024)
Ghana	35.8 (2024)	3.7 (2024)	65.4 (2024)
Togo	40.8 (2024)	3.5 (2024)	79.7 (2024)
Benin	41.6 (2024)	3.1 (2024)	80.7 (2024)
Nigeria	41.0 (2024)	3.0 (2024)	78.8 (2024)

Country	Urban population, %	Labour participation 15+, %	Unemployment, labour force %
Guinea	38.1 (2024)	52.8 (2024)	5.1 (2024)
Sierra Leone	45.4 (2024)	53.6 (2024)	3.1 (2024)
Liberia	55.5 (2024)	76.6 (2024)	2.9 (2024)
Côte d'Ivoire	54.0 (2024)	67.1 (2024)	2.3 (2024)
Ghana	58.4 (2024)	59.1 (2024)	2.8 (2024)
Togo	43.8 (2024)	57.9 (2024)	1.9 (2024)
Benin	52.5 (2024)	76.3 (2024)	1.6 (2024)
Nigeria	63.0 (2024)	82.6 (2024)	3.0 (2024)

Country	Life expectancy, years	Under-5 mortality / 1,000	Secondary enrolment, gross %
Guinea	60.9 (2024)	92.1 (2024)	NA
Sierra Leone	62.0 (2024)	90.5 (2024)	86.9 (2023)
Liberia	62.3 (2024)	86.4 (2024)	37.7 (2020)
Côte d'Ivoire	62.1 (2024)	64.5 (2024)	65.3 (2024)
Ghana	65.7 (2024)	35.9 (2024)	75.7 (2024)
Togo	62.9 (2024)	56.1 (2024)	63.4 (2023)

Country	Life expectancy, years	Under-5 mortality / 1,000	Secondary enrolment, gross %
Benin	61.0 (2024)	74.7 (2024)	43.6 (2022)
Nigeria	54.6 (2024)	115.6 (2024)	46.9 (2023)

Country	Adult literacy, %	Consumption/person, 2015 US$
Guinea	NA	704 (2024)
Sierra Leone	NA	1,019 (2024)
Liberia	NA	NA
Côte d'Ivoire	50.0 (2021)	1,475 (2024)
Ghana	76.5 (2021)	1,728 (2024)
Togo	72.6 (2022)	772 (2023)
Benin	51.4 (2022)	853 (2024)
Nigeria	70.4 (2024)	NA

Country	Arable land, % land	Forest, % land	Internal water, m3/person
Guinea	24.7 (2024)	20.0 (2024)	16,080 (2022)
Sierra Leone	21.9 (2024)	34.0 (2024)	19,331 (2022)
Liberia	5.2 (2024)	66.1 (2024)	37,221 (2022)
Côte d'Ivoire	15.7 (2024)	12.1 (2024)	2,528 (2022)
Ghana	20.7 (2024)	30.9 (2024)	914 (2022)
Togo	48.7 (2024)	22.5 (2024)	1,425 (2022)
Benin	32.3 (2024)	28.1 (2024)	749 (2022)
Nigeria	40.8 (2024)	18.9 (2024)	990 (2022)

Country	At least basic drinking water, % population
Guinea	74.2 (2024)
Sierra Leone	68.1 (2024)

Country	At least basic drinking water, % population
Liberia	78.8 (2024)
Côte d'Ivoire	77.2 (2024)
Ghana	89.9 (2024)
Togo	64.8 (2024)
Benin	69.6 (2024)
Nigeria	82.2 (2024)

Annex B | Methods and instruments

Transaction and evidence register

Record origin, destination, product, size, direction, observed dates, data source, stage, price, time, losses, payment date, entity and verification status. Use consistent release, ship, gate and inland-delivery timestamps. Record censored, diverted and cancelled shipments so slow or failed movements do not disappear from the sample. Report median and p90 with sample size.

Instrument	Procedure	Output
Port and corridor clock	Compare matched cargo samples before and after a specified intervention	Median, p90, delivered cost, losses, cancellations
Preference and payment	Log tariff regime, origin proof, bank quote, settlement and rejection	Honoured claims, all-in cost, time and reversals
Investment terms	Stress demand, currency, guarantee exposure and maintenance	Public obligations, upside allocation and review rights
Essential supply	Apply the six Chapter 6 tests to a product, route and season	Named substitute, exposed users, response lead and cost
Sovereign fiscal space	Separate government debt, external debt, service, arrears and guarantees	Debt service, currency and contingent exposure, with denominators

Calculations and observational boundaries

Case	Reproducible calculation or source	Interpretation
Tema, 2023–24	(1,668,688 ÷ 1,190,695 − 1) × 100 = 40.14% [R50]	TEU growth only
Takoradi, 2023–24	(32,558 ÷ 35,940 − 1) × 100 = −9.41% [R50]	Separate port and cargo composition
Cotonou, 2024–25	(14,696,273 ÷ 9,651,633 − 1) × 100 = 52.27% [R29]	Published merchandise tonnes. Each annual component sum is one tonne below the corresponding total
Lagos clocks	Nigerian Shippers' Council, Table 2 [R49]	Ship, cargo and truck periods are separate observations
Eight-country nominal GDP	Rounded country values sum to US$491.6bn. Full-precision sum US$491.548835bn [R32; R127]	Study aggregate, current US dollars

Decisions under uncertainty

Identify the mechanism, comparison case, competing explanation and evidence that would reverse the decision. Assign an owner and a review date. Treat programme outputs, operator records and household outcomes as separate evidence. Do not add overlapping clocks or infer manufacturing impact from traffic.

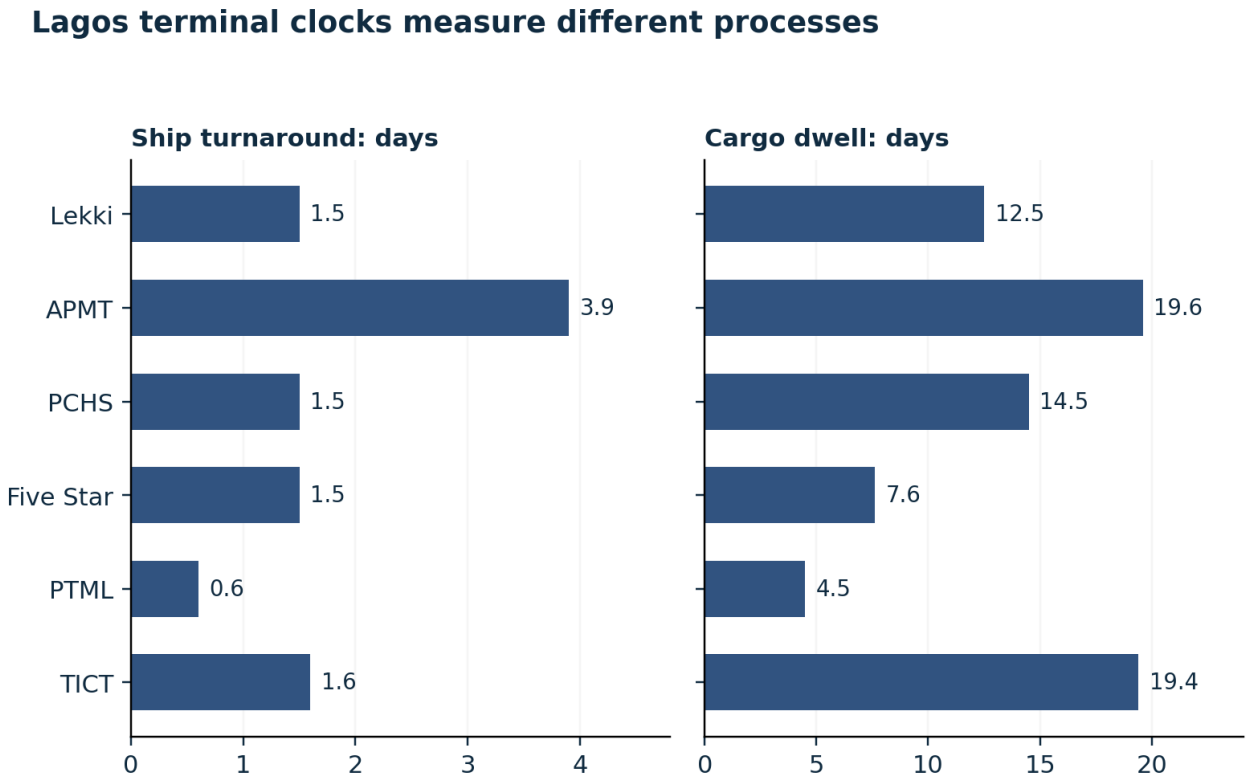


Figure B1. Lagos terminal clocks, 2024. Source: Nigerian Shippers' Council, Table 2 [R49].

Basis for pilot budgets and scenario triggers

The US$8–22 million total is the arithmetic sum of four 12-month planning ranges. The allocations below are a transparent scoping breakdown of those ranges. They are analyst assumptions, with no vendor quotations or country-approved budgets. Validate by pricing staff time, sites, systems and monitoring in the first 90 days. Assign shared costs once.

Pilot	Indicative components, US$ millions	Total, US$ millions
Clearance and payments	Interfaces 0.9–2.2, field operations and training 0.7–1.8, measurement and contingency 0.4–1.0	2–5
Essentials and power	Supply diagnostics 0.8–2.0, utility metering and settlement pilot 1.4–4.0, monitoring and contingency 0.8–2.0	3–8
Coastal–Sahel continuity	Protocol and coordination 0.4–1.0, route trials and monitoring 0.4–1.4, contingency 0.2–0.6	1–3
Supplier markets and capital terms	Two buyer cohorts 0.9–2.8, appraisal and legal support 0.7–2.2, monitoring and contingency 0.4–1.0	2–6

These envelopes exclude civil works, inventory, lending principal, guarantees and policing. They exclude the separate capital programmes cited in the conclusion.

The signposts are decision rules chosen for operational materiality. A 20% decline in median release time means a five-day baseline must fall to four days. A stable or improving 90th percentile guards against shifting delays to the slowest shipments. The 85% settlement trigger requires 85 of 100 eligible sampled invoices to settle within one business day. The 70% supplier trigger means that fewer than 70 accepted deliveries per 100 orders warrants review before scaling. These cutoffs express the proposed tolerance for delay or failure in a pilot. They are neither historical estimates nor universal performance standards.

The 25% increase in the 90th percentile and 10% diversion share are early warnings of deterioration. Record the denominator, failed attempts and route changes. Match seasonal baselines, test sensitivity around each cutoff and agree minimum sample sizes before interpreting movements. Use the quarterly review to adjust thresholds where the observed variation makes them uninformative.

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