Standing Committee
for Economic and Commercial Cooperation of the
Organization of the Islamic Cooperation
COMCEC

Designing Integrated Multimodal Transport Systems in OIC Member Countries

Survey & Case Study

26TH MEETING OF THE COMCEC TRANSPORT AND COMMUNICATIONS WORKING GROUP

20 APRIL 2026

Expert Survey Design

Survey Scope:

- A structured questionnaire will be conducted with transport and logistics experts from OIC Member Countries.

Participants:

- Experts from official authorities,
- Academics,
- Transport policy experts,
- Logistics sector professionals,

The questionnaire will explore:

- multimodal transport infrastructure
- institutional coordination
- digital integration and smart transport
- regulatory and governance issues
- investment and financing challenges

Analysis of Key indicators

Key indicators:

- Logistics Performance Index (LPI) scores and rankings
- Transport infrastructure indicators
- Trade and connectivity measures
- Regional development indicators

Potential Analytical Insights

- Regional disparities among OIC countries
- Differences in logistics system performance
- Structural weaknesses in transport connectivity

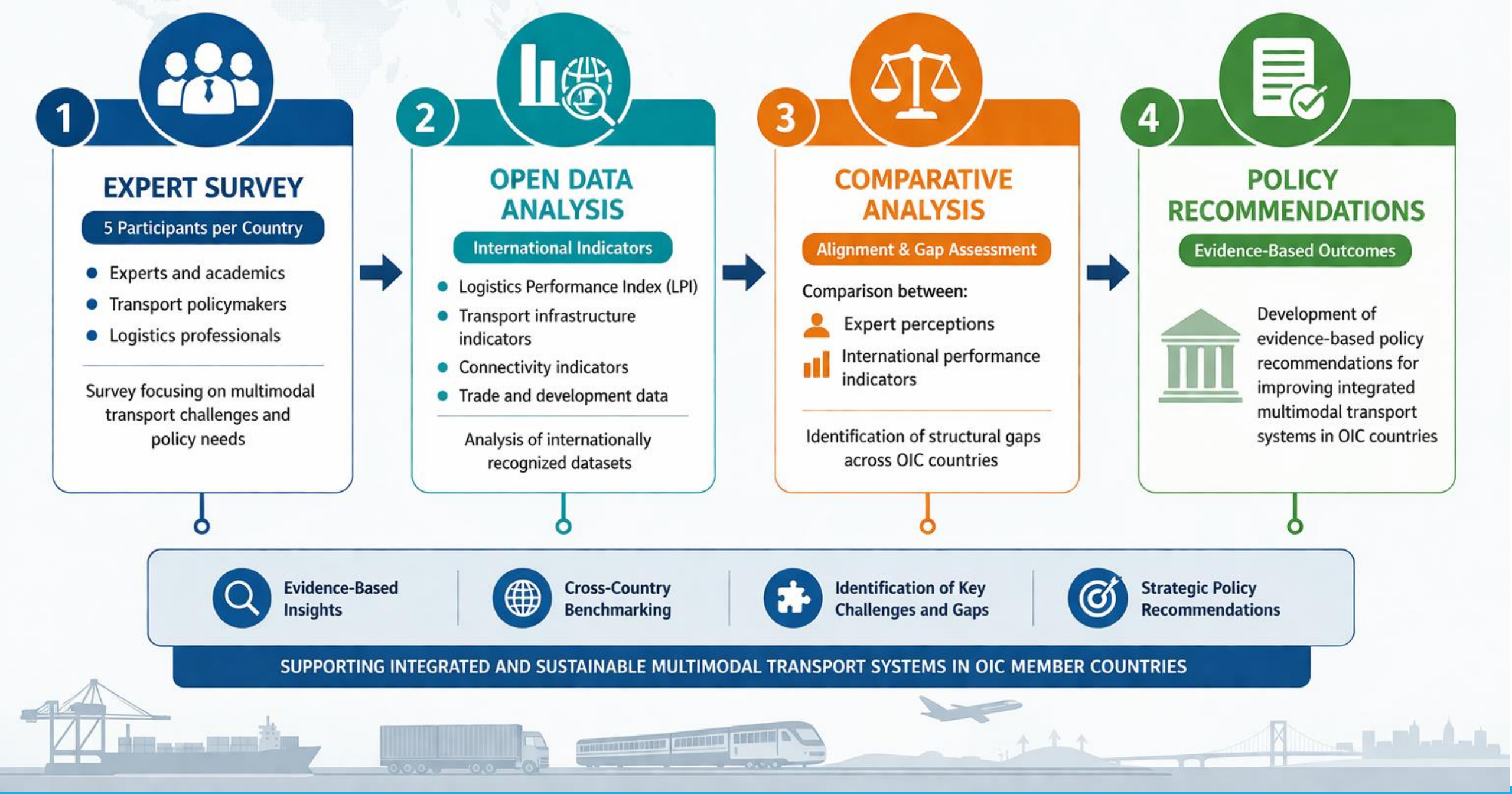
Integrating Survey Insights and International Indicators

Comparative Analysis

- Alignment between expert perceptions and country performance indicators
- Differences between high and low logistics-performing countries
- Regional similarities and structural barriers

Policy-Relevant Outcomes

- Key challenges in multimodal transport integration
- Priority areas for investment and policy reform
- Determining the Dimensions of Multimodal Transportation Integration
- Strategic recommendations for OIC Member Countries.


1
EXPERT SURVEY
5 Participants per Country
Experts and academics
Transport policymakers
Logistics professionals
Survey focusing on multimodal transport challenges and policy needs
2
OPEN DATA ANALYSIS
International Indicators
Logistics Performance Index (LPI)
Transport infrastructure indicators
Connectivity indicators
Trade and development data
Analysis of internationally recognized datasets
3
COMPARATIVE ANALYSIS
Alignment & Gap Assessment
Comparison between:
Expert perceptions
International performance indicators
Identification of structural gaps across OIC countries
4
POLICY RECOMMENDATIONS
Evidence-Based Outcomes
Development of evidence-based policy recommendations for improving integrated multimodal transport systems in OIC countries
Evidence-Based Insights
Cross-Country Benchmarking
Identification of Key Challenges and Gaps
Strategic Policy Recommendations
SUPPORTING INTEGRATED AND SUSTAINABLE MULTIMODAL TRANSPORT SYSTEMS IN OIC MEMBER COUNTRIES

Country	Desk/Field Visit	GDP per capita (current US$)	Income Level	LPI	Merchandise exports (current million US$)
Egypt, Arab Rep.	Field	3.338,5	Lower middle income	3,10	42.247,0
Azerbaijan	Field	7.283,8	Upper middle income	2,71	26.554,0
Türkiye	Desk	15.892,7	Upper middle income	3,40	261.800,0
Netherlands	Desk	67.520,4	High income	4,10	921.218,0
Viet Nam	Desk	4.717,3	Lower middle income	3,30	404.824,0

Case Study Countries

Field Visits

- In-depth country studies will be conducted in **Egypt** and **Azerbaijan**.

Desk-Based Case Study

- **Netherlands, Vietnam and Türkiye** will be analyzed using national datasets and policy documentation.

EGYPT

Field Visit
(OIC)

3.1

Logistics Performance Index (LPI)

Rationale for Selection

- Strategic Suez Canal corridor linking global trade
- Large demand with port–hinterland bottlenecks
- Need for modal shift (road → rail/waterways)

Highlights

- Heavy reliance on road transport (~96%)
- Key ports + dry port development
- High potential for integrated corridors

~ 115 M

Population

~ $ 3,300

GDP per capita

~ $ 42 B

Merchandise Exports

AZERBAIJAN

Field Visit
(OIC)

Logistics Performance Index (LPI)

Rationale for Selection

- Key transit bridge (Caspian–Central Asia–Europe)
- Strong rail–sea–road corridor structure
- Relevant for cross-border integration challenges

Highlights

- Balanced modal distribution
- Growing regional transit role
- Focus on coordination & customs systems

~ 10 M

Population

~ $ 7,300

GDP per capita

~ $ 26 B

Merchandise Exports

TURKIYE

Desk-Based Case
(OIC)

Logistics Performance Index (LPI)

Rationale for Selection

- Strategic Europe–Asia logistics hub
- Strong trade flows & corridor connectivity
- Representative of upper-middle-income OIC countries

Highlights

- Part of Middle Corridor / TRACECA
- High capacity but low rail share (~5%)
- Strong integration reform potential

~ 85 M

Population

~ $ 15,900

GDP per capita

~ $ 262 B

Merchandise Exports

NETHERLANDS

Desk-Based Case
(Non-OIC)

4.1

Logistics Performance Index (LPI)

Rationale for Selection

- Global leader in multimodal logistics
- Advanced corridor governance (TEN-T)
- Benchmark for high-efficiency systems

Highlights

- Strong port–hinterland integration
- Advanced digital logistics systems
- Model for institutional coordination

~ 18 M

Population

~ $ 67,500

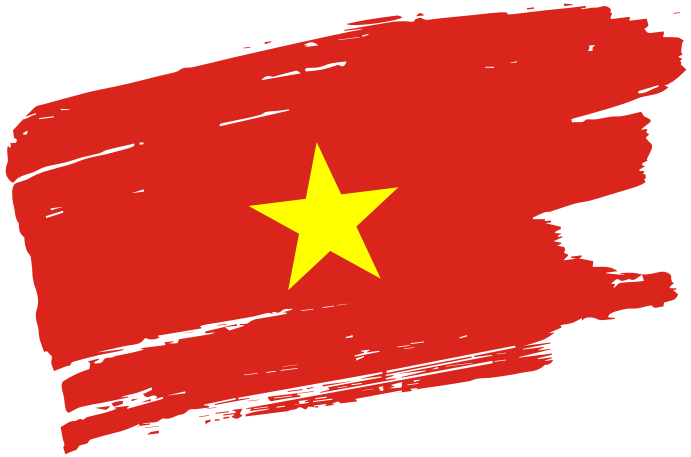
GDP per capita

~ $ 921 B

Merchandise Exports

VIET NAM

Desk-Based Case
(Non-OIC)



Logistics Performance Index (LPI)

Rationale for Selection

- Fast-growing export-oriented economy
- Relevant for developing country logistics
- Comparable to many OIC contexts

Highlights

- Strong manufacturing-driven logistics demand
- Fragmented operator structure
- Example of scalable multimodal reforms

~ 101 M

Population

~ $ 4,700

GDP per capita

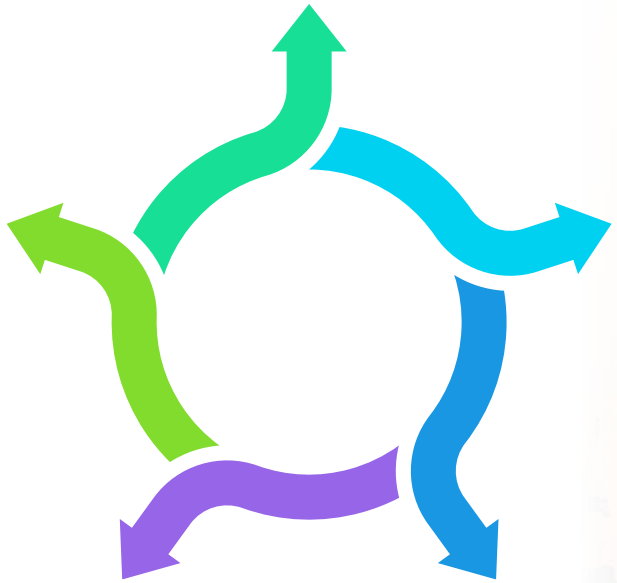
~ $ 405 B

Merchandise Exports

Logistics System

Vietnam is a rapidly growing actor in global supply chains

Moi reforms
86)
nsformed the
nomy



Shift from agriculture → industrial & export-oriented economy

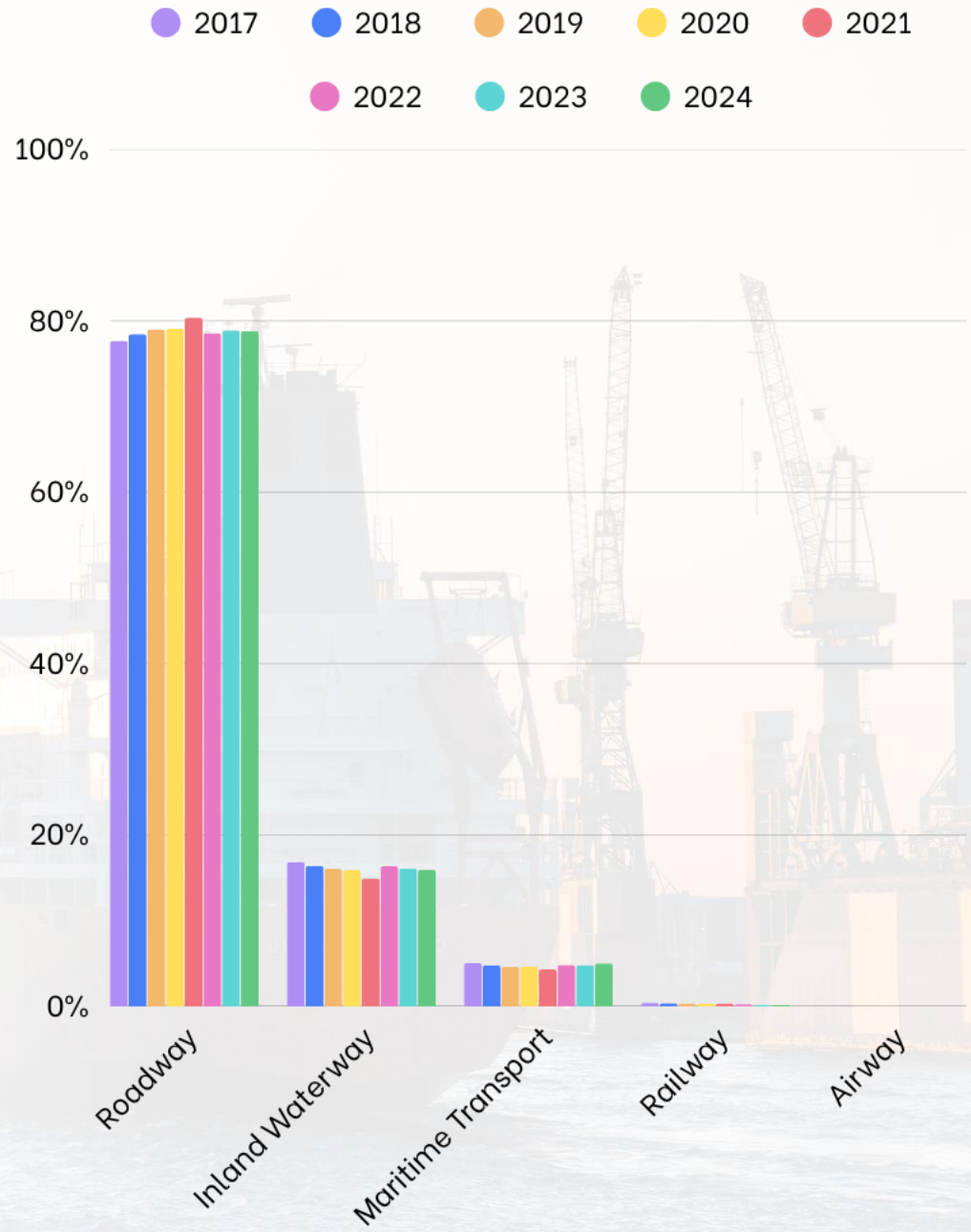
Logistics costs: 20–25% of GDP

Logistics plays a critical role in economic growth

Volume of Freight Carried

Mode of Transport	2017	2018	2019	2020	2021	2022	2023	2024
Roadway	77,68%	78,46%	79,00%	79,07%	80,38%	78,54%	78,90%	78,82%
Inland Waterway	16,83%	16,37%	16,04%	15,90%	14,95%	16,35%	16,08%	15,93%
Maritime Transport	5,06%	4,78%	4,61%	4,69%	4,31%	4,82%	4,80%	5,03%
Railway	0,41%	0,37%	0,31%	0,32%	0,35%	0,28%	0,20%	0,20%
Airway	0,02%	0,03%	0,03%	0,02%	0,01%	0,01%	0,01%	0,02%

Source: *General Statistical Office of Viet Nam (2025)*



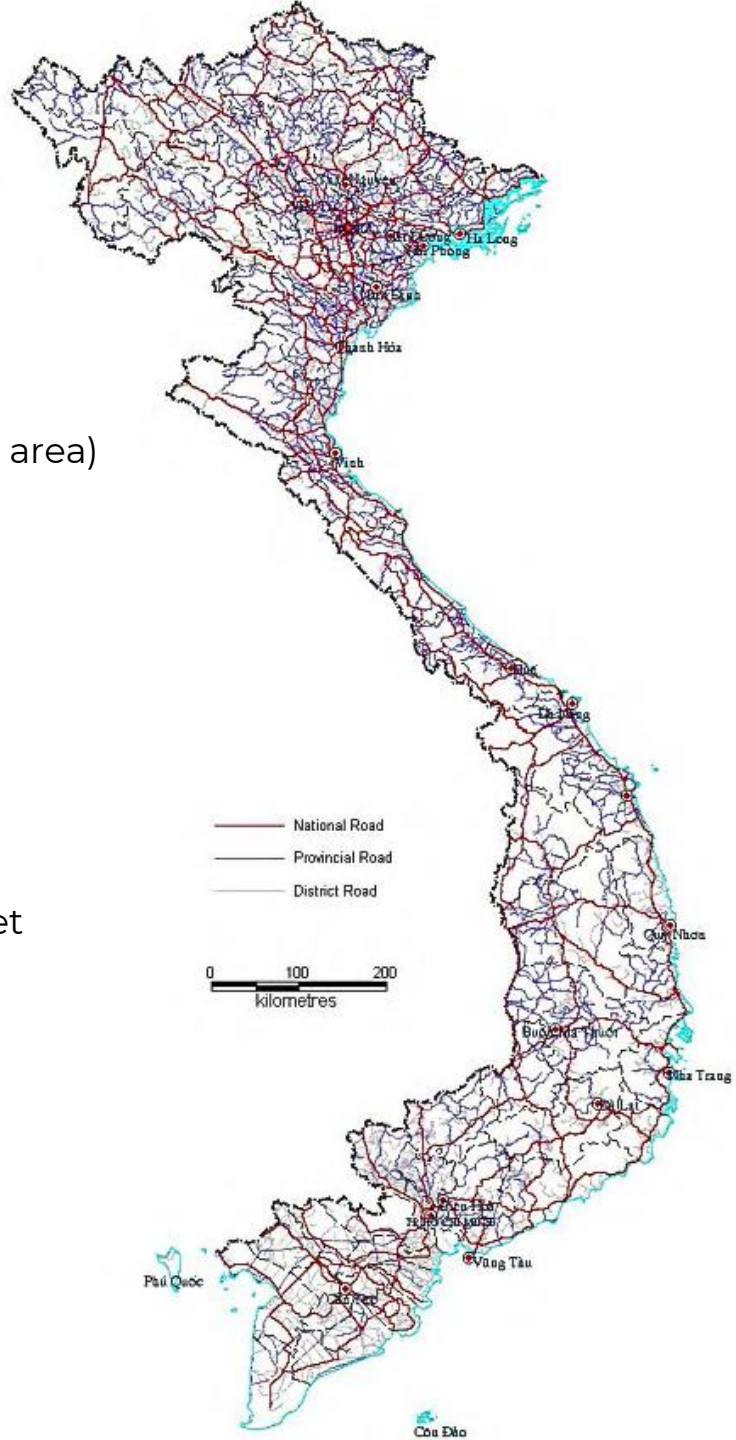
Road Transport

System pressures
- Severe congestion (e.g., Cat Lai Port area)
- Increased accident rates
- Rising carbon emissions

Advantages
- Flexibility
- Door-to-door delivery

Challenges
- Traffic congestion
- High emissions
- Old diesel truck fleet

Dominant Mode
- Most preferred mode



Source: *The Comprehensive Study on the Sustainable Development of Transport System in Vietnam (VITRANSS 2) Subsector Report No. 1: Road and Road Transport*

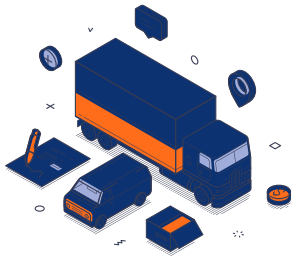
Road Transport

Major investments

- Multi-billion $ highway expansion
- Example: North–South Expressway

Share

~79% of total freight volume

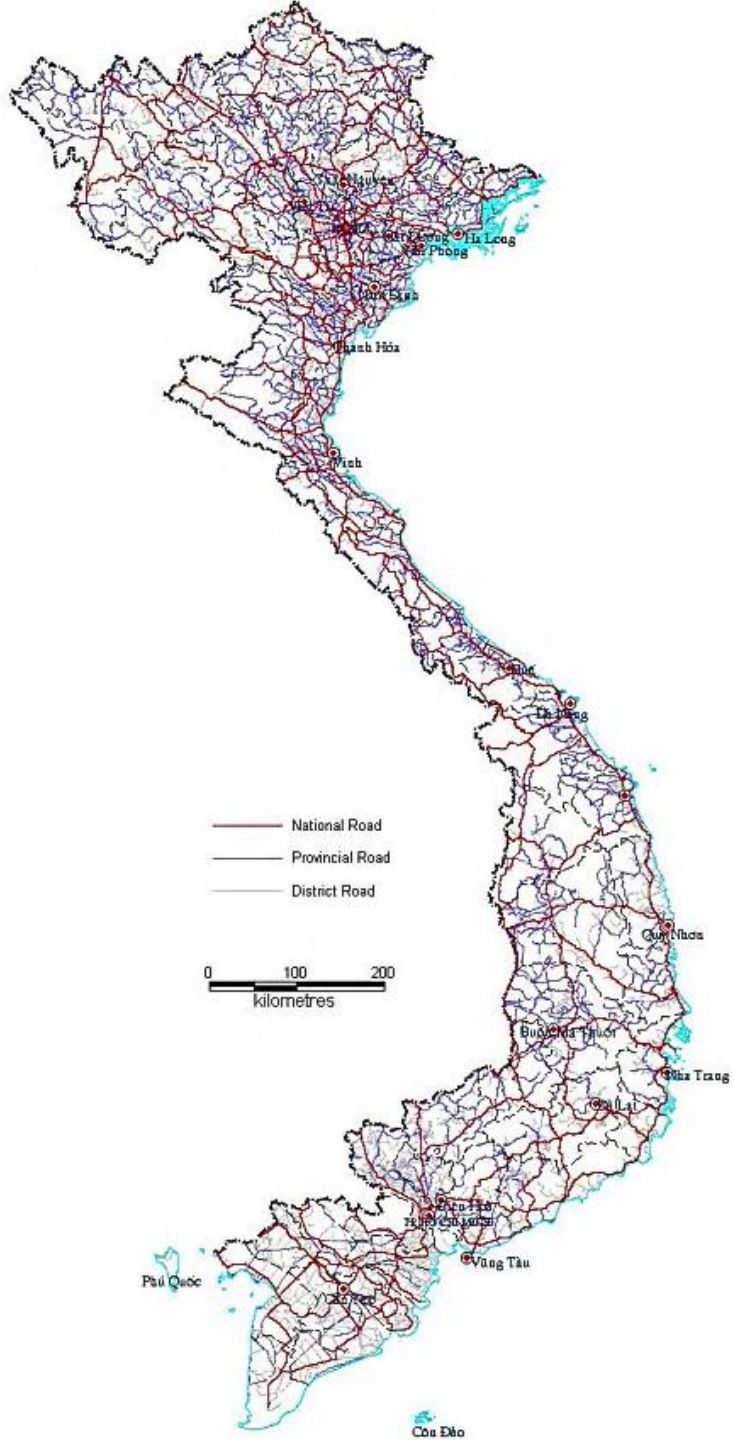


Fleet structure

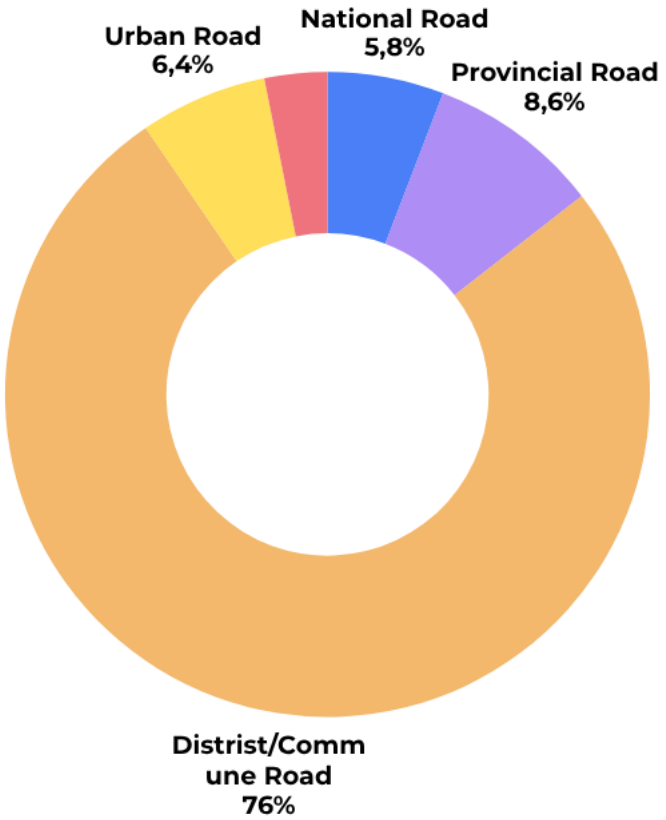
- Majority <5 tons capacity trucks
- Predominantly diesel (fossil fuel)

Impacts

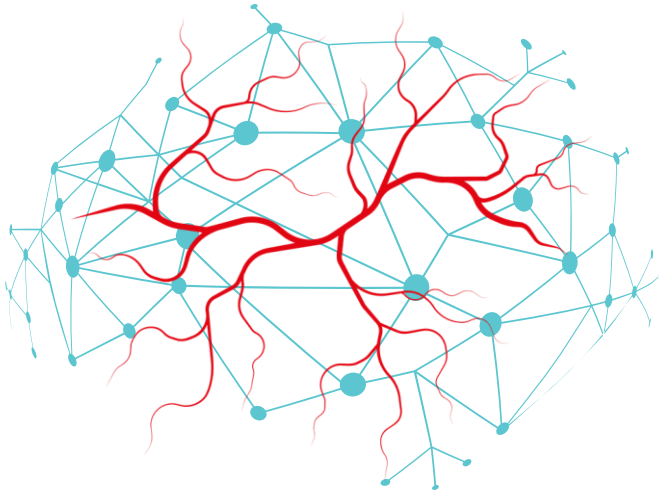
Lower operational efficiency
Higher environmental pollution



Road Transport

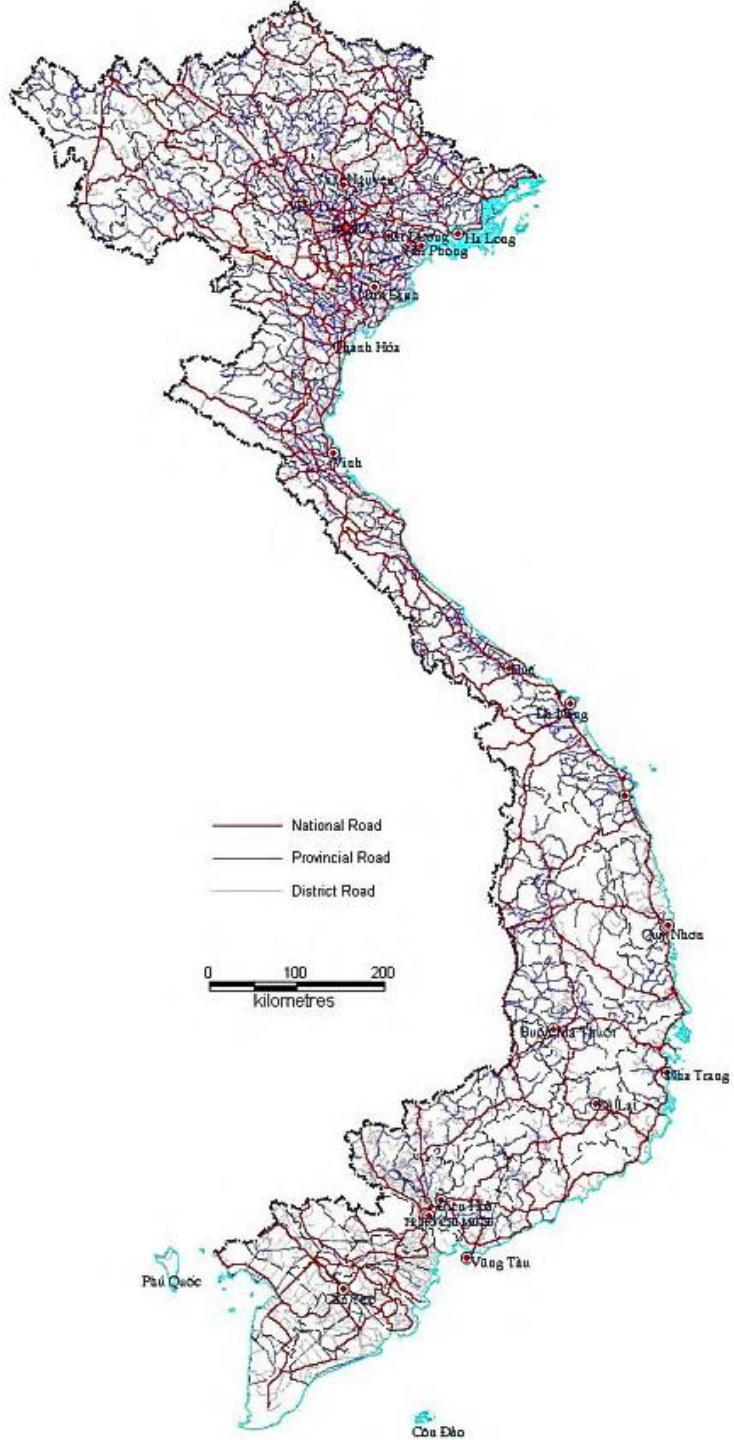


Composition by Kilometers



Total Length

~295.120 km



Inland Waterways

Key southern inland waterways channels and ports

Total Length

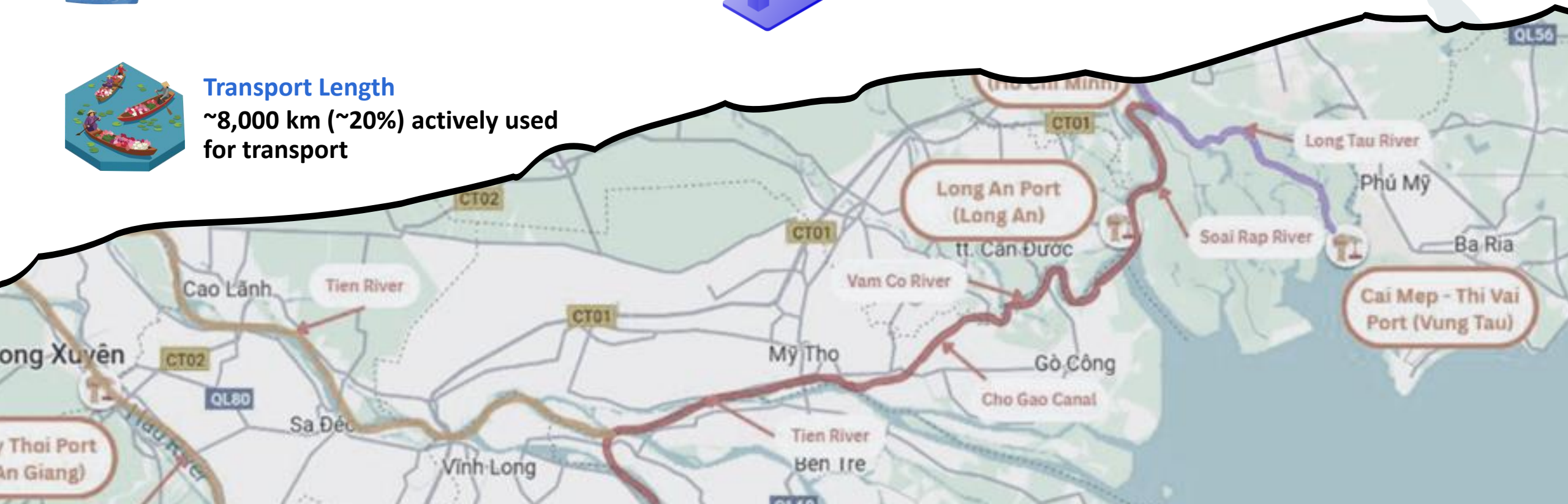
>41,000 km inland waterways network

Share

~16% of total freight volume

Transport Length

~8,000 km (~20%) actively used for transport



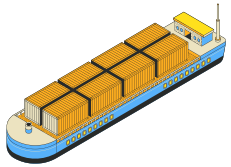
Inland Waterways

Advantages:

- Lower cost vs road transport
- More environmentally friendly

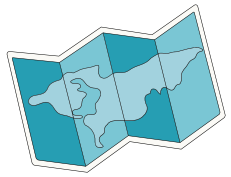
Constraints:

- Insufficient dredging
- Shallow water levels
- Low bridge clearance
- Poor port infrastructure



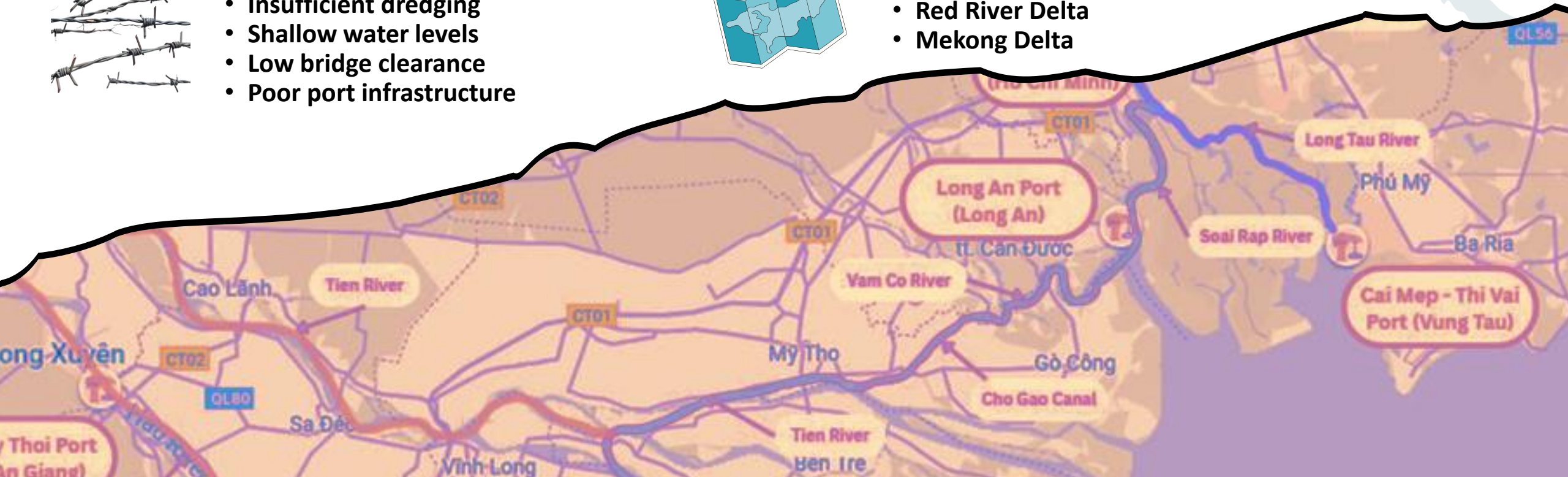
Suitable cargo types

- Bulk goods (rice, coal)
- Construction materials (sand, gravel)



High potential regions

- Red River Delta
- Mekong Delta



Maritime

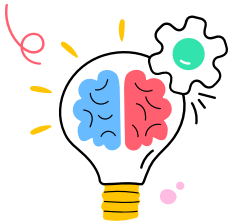
Viet Nam Ports

Share

- ~5% of total freight volume

Coastline Length

- ~3,200 km

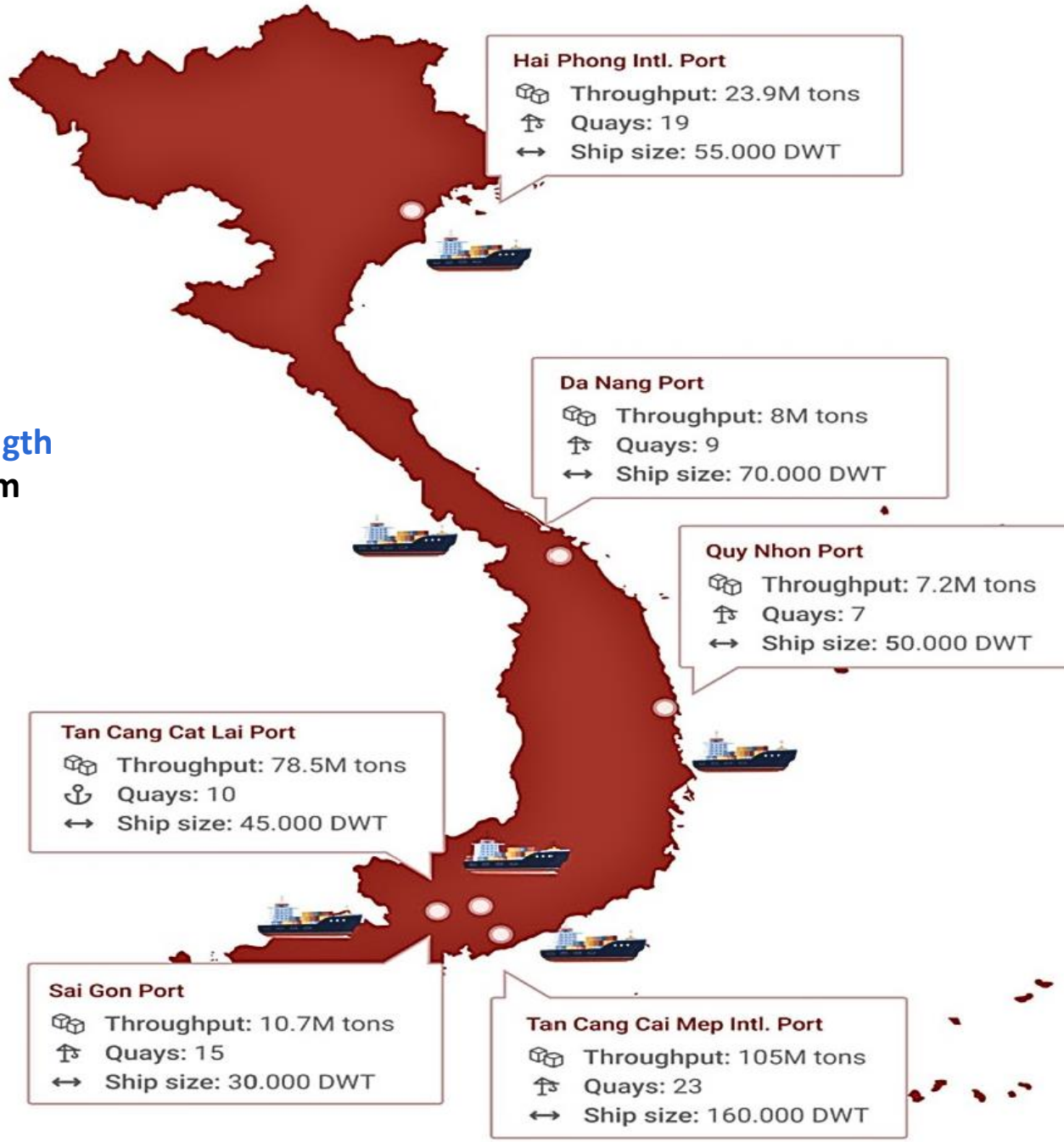


Strategic development shift

- From fragmented small ports → deep-water port investment
- Major projects: Lach Huyen (North), Cai Mep–Thi Vai (South)

Overall implication

- High global trade potential
- Infrastructure imbalance reduces efficiency



Maritime

Port distribution

- Dozens of ports across coastal regions
- Key hubs: Hai Phong, Da Nang, Ho Chi Minh City, Ba Ria–Vung Tau

Key bottlenecks

- Limited hinterland connectivity
- Narrow access roads
- Weak dry port integration

Operational impact

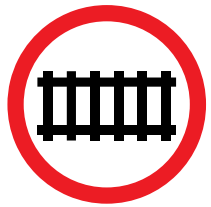
- Direct docking of mother vessels
- Reduced reliance on transshipment hubs (e.g., Singapore, Hong Kong)

Railway

Viet Nam Railways

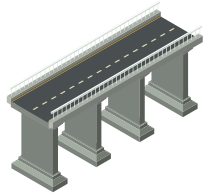
Share

~0.5% of total freight volume



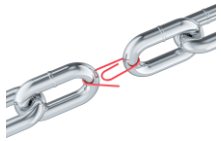
Railway network length

~2,600–3,300 km



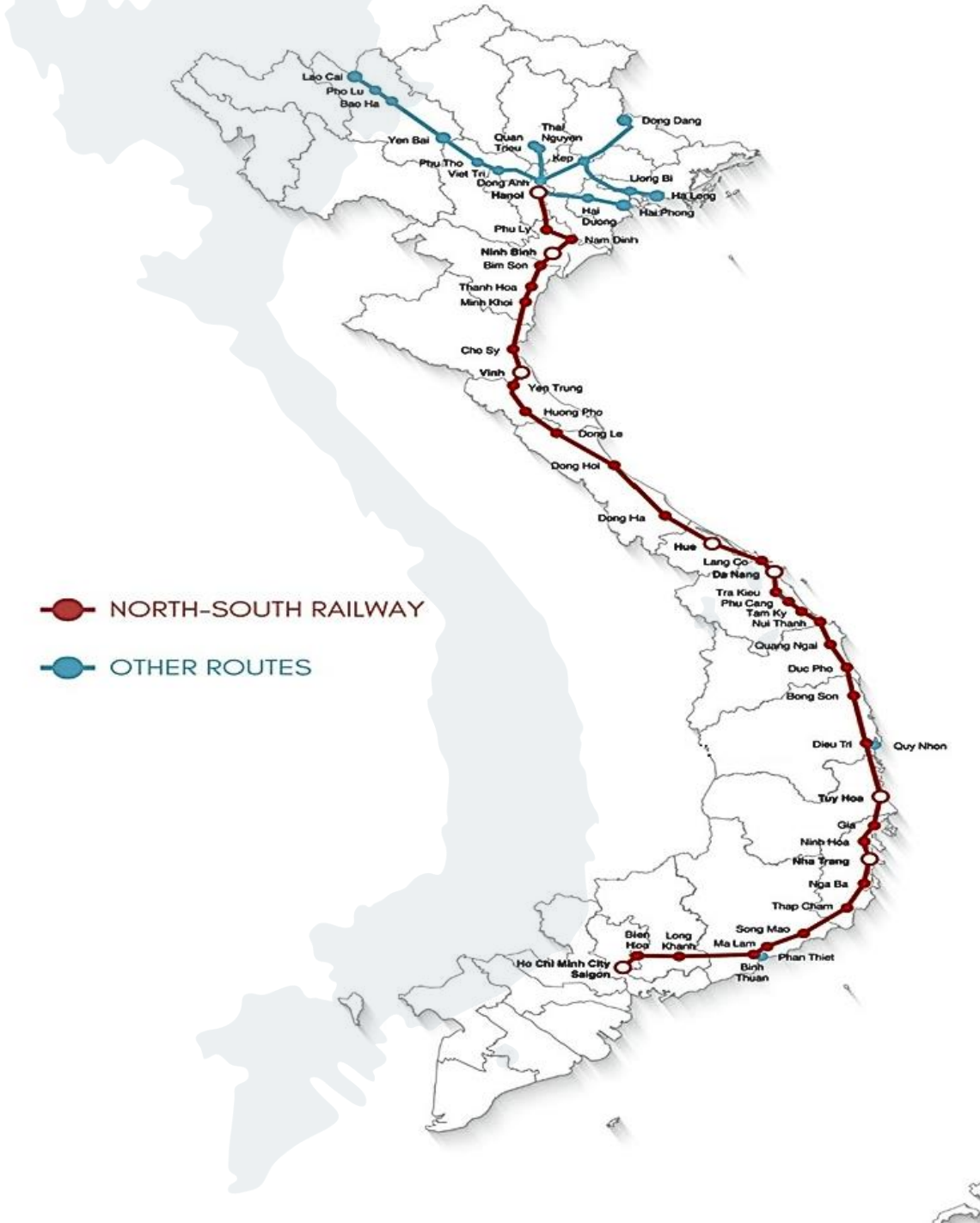
Infrastructure characteristics

- **Majority 50–100 years old**
- **Predominantly 1-meter narrow gauge**

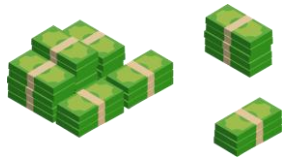


Overall implication

- **Weakest transport mode in all system**



Railway



Investment challenge

- High modernization costs
- Financing constraints → project delays

Key constraints

- Aging locomotives
- Weak integration with major ports

Capacity limitations

- Low-speed operations
- Lack of double-track lines
- Limited port connectivity

Airway

Viet Nam Airports

Share

~0.02% of total freight volume

Key hubs & trend

- **Noi Bai (Hanoi)**
- **Tan Son Nhat (Ho Chi Minh City)**
- **Rapid growth in air cargo traffic**

Cargo type

- **High-value, low-volume goods**
- **Examples: electronics, semiconductors, perishables**

Airway

Operational structure

- Majority via passenger aircraft cargo holds
- Limited dedicated freighter fleet

Infrastructure gap

- Insufficient cold storage capacity
- Below regional standards (vs Thailand, Malaysia)

Overall implication

- High strategic importance
- Capacity and infrastructure constraints limit growth

Institutional & Legal Fragmentation

Lack of Centralized Logistics Governance

- **Key Problem:** No **single national logistics authority**

Responsibilities Split Across:

- Ministry of Transport
- Ministry of Industry & Trade
- Ministry of Planning & Investment

Consequences:

- Overlapping regulations
- Poor coordination
- Inefficient policy implementation

➢ Governance fragmentation leads to **system-wide inefficiency**

National Logistics Strategies and Master Plans

Key Policy: 2017 Prime Ministerial Decree

- Sector growth: **15–20% annually**
- Reduce logistics costs: **16–20% of GDP**
- Global ranking: **Top 50 in LPI**

National Logistics Centers Master Plan (2015)

- Objective: Solve **infrastructure gaps,** Reduce **scattered storage inefficiencies**
- Develop **21 mega logistics centers**
- Integrated with:
  - Road | Rail | Ports | Inland waterways
- **Strategic Hub Locations**
  - **North:** Hanoi, **Central:** Da Nang, **South:** Ho Chi Minh City
  - Designed as **multimodal hubs (2020–2030)**

Future Vision (2025–2035 | Vision 2050)

- Priorities:
  - Port infrastructure development
  - Supply chain modernization
  - Inter-provincial logistics corridors

Vietnam has a **clear strategic roadmap** — the challenge lies in **execution and system integration**

Vietnam Multimodal Transport – High Potential, Low Integration

Extreme Road Dependency

- Cargo transported by road:
  - **North: ~95%**
  - **Central: ~99%**
  - **South: ~60–70%**

Waterway Potential

- Strong natural advantage:
  - Long coastline, dense river networks
- Efficient for:
  - Long-distance coastal shipping (1,400–1,600 km)
  - Bulk cargo (100–300 km)
- Limitation for container transport due to :
  - Poor dredging
  - Low bridge clearance
  - Limited port mechanization

Rail – The Weakest Link (<1%)

- Key issues:
  - Outdated (50–100 years old)
  - Narrow gauge
  - Lack of modern logistics services

➢Vietnam's multimodal system is **fragmented and road-dominated**, limiting efficiency and increasing logistics costs

Logistics Centers & ICDs in Vietnam

Current Structure

- Mostly small-scale, fragmented ICDs (<10 ha)
- Developed without national planning (2003–2008)
- Function as basic clearance depots, not true logistics hubs

Regional Distribution

- Concentrated in North & South
- Central region largely underdeveloped
- North:
  - Road-dependent
  - Minimal rail integration

South vs North Performance

- South Vietnam more advanced
  - Serves ~70 industrial zones
  - Integrated with ports via road + waterways
- Functions as extension of seaports

➢ Vietnam's ICD system is **fragmented and uneven**, with the South showing **early signs of effective integration**

Ho Chi Minh City as a Logistics Hub

- Contributes **~25% of national GDP**
- Handles **~70% of Vietnam's foreign trade (South region)**
- **60–70% of national container volume**
- Major hub for feeder shipping
- Integrated with **~70 industrial zones**
- Efficient ICD network near ports (20–70 km)
- Good road + waterway connectivity
- ~9,600 logistics firms (**36.7% nationwide**)
- ~54% of advanced logistics providers located here

Cat Lai Port – Core Hub

- ~33% of national container volume
- ~5.6 million TEU (2020)
- Operating near full capacity (~90%)

Key Challenges in Multimodal Transportation

High Cost & Low Efficiency

- Logistics costs: **~20–25% of GDP**
- Much higher than global benchmarks

Infrastructure Imbalance

- Heavy reliance on road (>70%)
- Weak rail (<1%) and underused waterways
- Poor port–hinterland connectivity

Fragmented Governance

- No unified logistics authority
- Overlapping regulations & bureaucratic delays

Low Digitalization

- Limited use of digital services
- Manual processes reduce efficiency & transparency

SMEs & Skill Gaps

- Market dominated by SMEs with limited capacity
- >90% workforce lacks formal logistics training

➢ Vietnam's logistics challenges are **systemic**, requiring integration across **infrastructure, policy, and technology**

Key Lessons from Vietnam's Logistics System

Integration matters more than investment
→ **Vietnam shows high investment but low efficiency due to poor coordination**

Overreliance on road reduces efficiency
→ **>70% of freight by road causes congestion and high costs**

Logistics hubs need central planning
→ **Vietnam's ICDs developed "self-derived" and fragmented**

Port–hinterland links are critical
→ **Ports like Cai Mep lack strong inland connections**

Governance integration is essential
→ **Multiple ministries create regulatory overlap and delays**

Digital & skills gaps limit performance
→ **Low tech adoption + workforce skill shortages reduce efficiency**

Thank You

Dr. Akif Fidanoğlu

Faculty of Transportation and Logistics- Istanbul University

akif.fidanoglu@istanbul.edu.tr

+90 555 459 16 91