Department of Transportation

Paving the Path: Decarbonising Transport in India and the Region

India's Freight Transition and Lessons from the Region

Organised by: UC Davis India ZEV Research Centre

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The Claridges, New Delhi, India

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India and the Philippines

INDIA		PHILIPPINES
3,287,263	LAND AREA (sq. km)	298,170
1,441,719,852 (1st)	POPULATION 2024 (people)	118,616,858 (13th)
437.57	POP. DENSITY 2024 (people per sq.km.)	397.82
USD 2,612.5 INR 216,837.5	GDP 2023 (per capita)	USD 3,720.00 INR 308,760.00
6.3%	GDP GROWTH 2023 (annual change in %)	5.6%
USD 2.23 billion INR 185.09 Billion (0.48% of Total Export) (0.13% of Total Import)	BILATERAL EXPORTS 2022	USD 963 million INR 79.93 Billion (0.88% of Total Export) (1.34% of Total Import)
28.2	MEDIAN AGE (years)	25

DELHI (Location of New Delhi)		METRO MANILA (Location of Manila City)
1,483	LAND AREA (sq. km)	636
33,807,403	POPULATION 2024 (people)	14,941,953
22,796.63	POP. DENSITY 2024 (people per sq.km.)	23,493.64
USD 7,215.93 INR 598,922	GRDP (per capita)	USD 7,873.32 INR 653,485

Despite weak global conditions, we expect strong domestic demand to grow to 6 percent in 2023 and move to its growth potential over the medium term
- Ralph Van Doorn, World Bank Senior Economist

The Philippines is likely to achieve its target of becoming an upper middle-income economy by 2025.
- National Economic and Development Authority

This transition will have significant implications for the country's fiscal situation and access to concessional loans, like the Official Development Assistance.
- National Economic and Development Authority

The Philippines will grow at its potential this year and next and is on track toward its goal to become an upper middle-income country.
- Kelly Bird, ADB Philippines Country Director

With high GDP growth, PH is described as the **"fastest growing" economy** among member countries of the ASEAN.
-World Economic Forum

NOTE: Latest available data/estimates were used for comparison

I USD = 83 INR = 56 PHP

Where are we

TOURISM

75th OUT OF **117** COUNTRIES based on **2021 TRAVEL & TOURISM INDEX**[1]

Tourism Share to GDP (2022, PHP 1.38T) **6.2%**

The Philippines got a score of **3.7**, lagging behind neighboring countries **(Indonesia at 4.4, Thailand at 4.3, Malaysia at 4.3)**

ROAD SAFETY

4.1%

Cost of road crash fatalities and injuries as % to GDP[3]

Road crash fatalities and serious injuries cost **~USD 11.08 BILLION** (INR 929.67 BILLION)

URBAN MOBILITY READINESS

58th OUT OF **60** COUNTRIES based on 2021 **URBAN MOBILITY READINESS INDEX**[4]

OLIVER WYMAN FORUM Berkeley UNIVERSITY OF CALIFORNIA

Manila got a score of **31.2%**, lagging behind neighboring cities **(Kuala Lumpur at 45.1%, Jakarta at 39.9%)**

USD 22.80 BILLION

(INR 1.89 TRILLION)

ANNUAL DIRECT ECONOMIC COST OF TRAFFIC CONGESTION

(USD 63.6M a day) in NCR and **USD 15.90B** in neighboring provinces of Bulacan, Rizal, Laguna, and Cavite as of 2017[2]

USD 295.25 Billion (INR 24,506 Billion) PHL GDP (2019) = 7%

1,022,009 Public School Classrooms

USD 8.74 Billion (INR 725.12 Billion) PHL FDI (2019) = 240%

2,150 Provincial Hospitals

USD 298.30 Billion (INR 24,759 Billion) PSE Market Cap (Dec 2019) = 10%

4.3 million Irrigated Land (has.)

ENVIRONMENTAL

MOST VULNERABLE TO DISASTER RISK

out of **193** countries based on **2022 WORLD RISK INDEX**[5]

CLIMATE PROJECTIONS

- 1.8°–2.2°C increase in temperatures by 2050
- Wetter wet season, drier dry season
- Increased incidence of extreme weather and hazard events
- 0.48-0.65 m rise in sea levels by 2100

KEY CLIMATE IMPACTS

- **Agriculture**: Crop loss/failure; soil erosion; Increased pest infestations; Rising food prices & food imports
- **Water**: Water shortages; Degraded water quality; Increased flood & landslide risk
- **Energy**: Reduced energy production potential; Increased demand for energy services
- **Coastal Ecosystems**: Loss of coastal defense, marine habitat & biodiversity; Reduced fish populations
- **Infrastructure/Services**: Damage to roads, bridges, and water and sanitation facilities
- **Human Health**: Loss of life and livelihoods; Increased risk of vector-/waterborne disease and population displacement

USD 783.04 MILLION

(INR 64.99 BILLION)

ANNUAL (2014) ECONOMIC LOSS DUE TO PORT CONGESTION[6]

~21,925 Modern PUJs (@INR 2.96M per unit)

~175,400 14ft. Fiberglass hull boats (@INR 370K per unit)

LOGISTICS

LOGISTICS COST BY COMPONENT

27.16% of sales as of 2018

- 2.47% Logistics Administration
- 8.78% Inventory Carrying
- 5.20% Warehousing
- 10.71% Transport

Higher than neighboring ASEAN countries: Indonesia (**21.4%**), Vietnam (**16.3%**), and Thailand (**11.11%**)[7]

LOGISTICS PERFORMANCE

43rd (60th (2018 LPI)) out of **139** countries based on **2023 LOGISTICS PERFORMANCE INDEX** with a World Bank Logistics Performance Index (LPI) of **3.3** (from **2.9** in 2018, 1=Low, 5=High)[5]

[1] Travel & Tourism Development Index 2021: Rebuilding for a Sustainable and Resilient Future Insight Report. World Economic Forum. May 2022.
[2] Roadmap for Transport Infrastructure Development for GCR (JICA 2019)
[3] Philippines's Road Safety Country Profile (World Bank - Global Road Safety Facility 2016)
[4] Urban Mobility Readiness Index 2022 Report. Oliver Wyman Forum and University of California, Berkeley.
[5] WorldRiskReport 2022 - Focus: Digitalization. *https://reliefweb.int/report/world/worldriskreport-2022-focus-digitalization.*
[6] Philippine Institute of Development Studies (PIDS 2014)
[7] An Assessment of Logistics Performance of Manufacturing Firms in the Philippines (DTI and IFC (WB) 2018)
[8] World Bank Logistics Performance Index (https://lpi.worldbank.org/international/global)

I USD = 83 INR = 56 PHP

Climate Change Risk Profile of the Philippines

2021 CLIMATE RISK INDEX[1]

4th OUT OF **180** COUNTRIES

Long-Term Climate Risk Index
(2000-2019 annual averages)

Countries most affected by weather events (2000-2019)	
1	Puerto Rico
2	Myanmar
3	Haiti
4	Philippines
5	Mozambique
6	The Bahamas
7	Bangladesh
8	Pakistan
9	Thailand
10	Nepal

2022 WORLD RISK INDEX[2]

MOST VULNERABLE TO DISASTER RISK

OUT OF 193 COUNTRIES

Countries with the highest disaster risk worldwide are the **Philippines (WRI 46.82)**, India (WRI 42.31), and Indonesia (WRI 41.46).

CLIMATE PROJECTIONS

- 1.8°–2.2°C increase in temperatures by 2050
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KEY CLIMATE IMPACTS

Agriculture
Crop loss/failure; soil erosion
Increased pest infestations
Rising food prices & food imports

Water
Water shortages
Degraded water quality
Increased flood & landslide risk

Energy
Reduced energy production potential
Increased demand for energy services

Coastal Ecosystems
Loss of coastal defense, marine habitat & biodiversity
Reduced fish populations

Infrastructure/Services
Damage to roads, bridges, and water and sanitation facilities

Human Health
Loss of life and livelihoods
Increased risk of vector-/waterborne disease and population displacement

PHILIPPINE CLIMATE RISK PROFILE

Climate Stressors and Climate Risks URBAN INFRASTRUCTURE/SERVICES

Stressors	Risks
Increased temperatures	Damage to urban infrastructure, including roads and bridges
Severe weather events	Damage to water and sanitation facilities, increasing health risks
Sea level rise	Coastal inundation and storm surges, leading to infrastructure damage and forced migration

[1] Global Climate Risk Index 202. Germanwatch. *https://www.germanwatch.org/en/19777.*
[2] WorldRiskReport 2022 - Focus: Digitalization. *https://reliefweb.int/report/world/worldriskreport-2022-focus-digitalization.*
[3] Philippine Climate Risk Profile - Country Fact Sheet. United States Agency for International Development (USAID)

DOTr is bridging the gap towards our VISION for the transportation sector

Pursuant to the marching orders of the President, DOTr is bridging the gap from where we are now towards the vision for a transportation sector where transportation services are **comfortable, accessible, safe, sustainable,** and **affordable** through DOTr's four transportation sectors…

DOTr is BUILDING BETTER and BUILD MORE by…

2016-2022	2022-2028	2028 AND BEYOND
Continuing and finishing projects from the **previous administration**		
	Starting and finishing projects by the **current administration**	
		Starting and passing projects to the **next administration**

Transport Vision, Mandate and Governing Policies

"We will transform the Philippine transport industry and elevate it to global standards.

Our mantra then shall be COMFORTABLE, ACCESSIBLE, SAFE, and AFFORDABLE transport service throughout the country."

Jaime J. Bautista
Secretary of Transportation

"We must keep the momentum. And aspire to

BUILD BETTER MORE."

President Ferdinand "Bongbong" Marcos, Jr. *during his July 2022 SONA*

8-POINT SOCIOECONOMIC AGENDA

of the Marcos Administration

NEAR-TERM

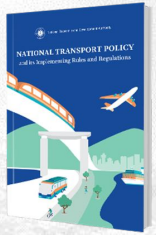
Protecting Purchasing Power and Mitigating Socio-economic Scarring

1. ENSURE FOOD SECURITY
2. REDUCE TRANSPORT AND LOGISTICS COSTS
3. REDUCE ENERGY COST TO FAMILIES
4. TACKLE HEALTH
5. STRENGTHEN SOCIAL PROTECTION
6. ADDRESS LEARNING LOSSES
7. ENHANCE BUREAUCRATIC EFFICIENCY
8. SOUND FISCAL MANAGEMENT

MEDIUM-TERM

Creating More Jobs, Quality Jobs, Green Jobs

1. PROMOTE INVESTMENTS
2. IMPROVE INFRASTRUCTURE
3. ENSURE ENERGY SECURITY
4. INCREASE EMPLOYABILITY
5. EXPAND & IMPROVE DIGITAL INFRASTRUCTURE
6. ENCOURAGE R&D AND INNOVATION
7. PURSUE A GREEN AND BLUE ECONOMY
8. ESTABLISH LIVABLE & SUSTAINABLE COMMUNITIES



NATIONAL TRANSPORT POLICY

TRANSPORT VISION

"safe, secure, reliable, efficient, integrated, intermodal, affordable, cost-effective, environmentally sustainable, and people-oriented ***national transport system that ensures improved quality of life of the people****".* c

PHILIPPINE DEVELOPMENT PLAN 2023-2028

CHAPTER 12

SUSTAINABLE, RESILIENT, INTEGRATED, AND MODERNIZED INFRASTRUCTURE FACILITIES AND SERVICES DELIVERED

Seamless and inclusive connectivity via local and international linkages achieved

- *A* ***National Transportation Master Plan*** *will be formulated and adopted.*
- ***Intermodal transport facilities*** *will be constructed and upgraded to achieve seamless connectivity.*
- ***Active transport networks*** *will be developed.*
- *Applicable* ***mass transportation systems*** *(i.e., railways, road-based, and ferry systems) will be developed in metropolitan areas.*
- *The* ***nautical highway*** *will be improved.*
- *Existing* ***airports*** *will be improved and new ones will be strategically developed to address future demand.*
- ***Cargo and freight rail infrastructure*** *to connect strategic infrastructure such as ports will be developed and expanded.*
- ***Cold chain logistics*** *and* ***management facilities*** *will be developed.*
- *The implementation of the* ***Unified Logistics Pass (ULP) and Transport Accreditation, Permit and Pass for Ports (TAPPP)*** *will be made seamless and well-integrated.*
- ***Transport safety*** *and* ***security*** *will be ensured.*
- ***Gender mainstreaming, inclusion, and accessibility*** *will be main considerations in all stages of transport project implementation.*

ENVIRONMENTAL
(Energy Intensity, Emissions, Pollution, etc.)

SOCIAL
(Gender, Accessibility, Congestion, etc.)

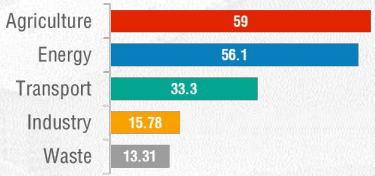
ECONOMIC
(Cost, Speed, Capacity, Flexibility, Reliability, etc.)

SUSTAINABLE TRANSPORTATION

- optimizes use for transport
- minimizes consumption
- generates low emissions
- minimizes adverse social impacts

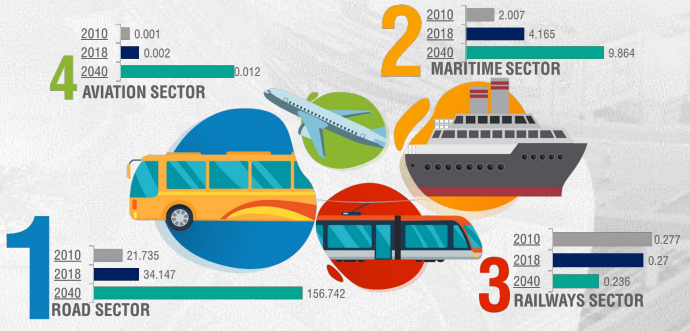
Our commitments to the PH Nationally Determined Contributions

3RD largest contributor of the Philippines' greenhouse gas emissions, next to **Agriculture Sector** and **Energy Sector.**



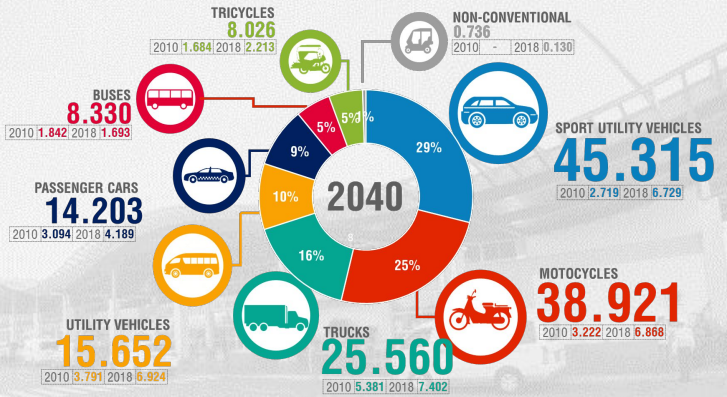
Greenhouse gas emissions by sector, Philippines, 2016
In million tons of carbon dioxide-equivalents ($MtCO_2e$).

Source: CAIT Climate Data Explorer via. Climate Watch
OurWorldInData.org/co2-and-other-greenhouse-gas-emissions



PHILIPPINE TRANSPORT SECTOR BASELINE GHG EMISSIONS IN MILLION TONS OF CARBON DIOXIDE-EQUIVALENTS ($MTCO_2E$)

The baseline and projections were estimated considering the economic growth targeted under the **Medium-Term Philippine Development Plan – Ambisyon 2040,** and the expected growth in population.



ROAD TRANSPORT SECTOR
2040 BASELINE GHG EMISSIONS BY MODE
(IN MILLION TONS OF CARBON DIOXIDE-EQUIVALENTS ($MTCO_2E$))

Our commitments to the PH Nationally Determined Contributions

PHILIPPINE NATIONALLY DETERMINED CONTRIBUTIONS (15 APRIL 2021)

Sector*	Projected Emissions** (Cumulative 2020-2030)		Projection Emission Reduction/Avoidance** (Cumulative 2020-2030)	
	BAU (MtCO2e)	w/ Mitigation (MtCO2e)	Mitigation (MtCO2e) Unconditional	Mitigation (MtCO2e) Conditional
Agriculture	539.1	380.8	0	The first PH NDC submitted to UNFCCC last 15 April 2021 commits **75%** reduction of GHG emissions from BAU, of which 2.71% is unconditional and **72.29%** **(2414.56 MtCO2e)** is conditional.
Waste	286.1	221.2	7.99	
IPPU	279.8	228.2	13.1	
Transport	**689.2**	**644.7**	**44.5**	
FOLU	-113.4	-812.9	-	
Energy	1659.5	1613.6	25.08	
Total	**3340.3**	**2975.1**	**90.67 (2.71%)**	

TRANSPORTATION SECTOR UNCONDITIONAL MITIGATION OPTIONS

Public Utility Vehicle Modernization (PUVM-1) Program

Railways Projects

Motor Vehicle Inspection System (MVIS-1) Program

Bus Rapid Transit (BRT) Projects

The Department of Transportation (DOTr) proposed Nationally Determined Contribution for the greenhouse gas emissions reduction covers the transport fleet modernization and inspection, modal shift, and infrastructure development.

DOTr will BUILD MORE by BUILDING BETTER

How are we *Building Better*?

Better Project Identification, Prioritization, and Preparation

- Gap Analysis vis-a-vis Existing Master Plans
- Updating and Development of New Master Plans
- Prioritization of Master Plan-Identified Projects
- More Robust Project Preparation

Broader and More Diversified Funding Strategy

- Diversifying Funding & Financing Partners
- Diversifying into PPP Funding
- Broadening Funding Resources

Better Project Implementation Strategies

- Continuity
- Strengthening of Institutional Capacity
- Strategic Contracting and Credible Procurement
- Environmental, Social, and Governance (ESG)
- Absorptive Capacity

THINK BIG

BIG SOLUTIONS FOR BIG PROBLEMS

Our engagement with the International Transport Forum

National Study on Decarbonising Pathways for Freight Transport in the Philippines

Current ambition
Where we are heading

Climate Ambition
How far we must go

CURRENT POLICY SCENARIO
As expected / planned

- Technology stocks target for the LCV fleet
- Rail freight expansions
- Road upgrades
- Eco-driving
- Improving dwell time
- Change in energy mix

GREEN FLEET SCENARIO
New fleet measures considered

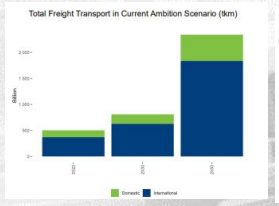
Interventions:

- Vehicle technology improvements through truck fleet renewal
- Stricter fuel economy standards for diesel trucks.

SEAMLESS CONNECTIVITY
Intermodality measures considered

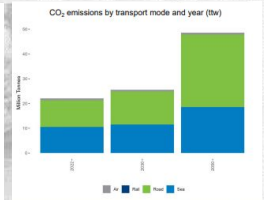
- Infrastructure improvement to increase port capacity
- Infrastructure improvement to reduce dwell times.
- High capacity vehicles to reduce associated emissions
- Asset sharing to increase load factors

By 2050:

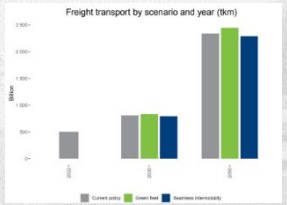


X4 Transport Activity

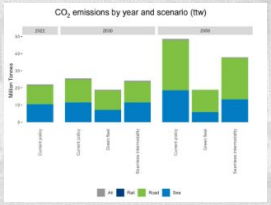
Trucks = 90% dom. freight



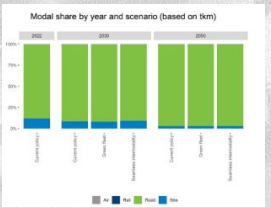
50 MtCo2 from transport



Decarbonising policies not oppressive of growth



Ambitious freight policies can halve emissions.



Modal shares do not vary significantly bet. scenarios

Our engagement with the International Transport Forum

National Study on Decarbonising Pathways for Freight Transport in the Philippines

RECOMMENDATIONS	DETAILS	ACTIONS TAKEN	CHALLENGES
Truck Fleet Renewal	Identify use cases for early adoption of zero-emission trucks in the Philippines and incentivise fleet conversions. Supporting pilot projects and offering purchase subsidies for electric trucks can promote low-carbon technologies in road transport	Tax incentives for manufacturers of EVs and components and the establishment of EV charging stations (EVCS) Motor Vehicle Inspection System + 15-year age limit for utility vehicles. Upstream project planning (e.g., Philippine Development Plan, National Transport Policy, and NDC Implementation Plan, National Innovation and Strategy Document, etc.)	15-year age limit scrapped without being implemented due to strong stakeholder resistance; Road worthiness as criteria rather than vehicle age; Non-mandatory Motor Vehicle Inspection System due to weak political support. Broadstroked master planning; Action items, targets, and accountability are lacking
Stricker Fuel Economy Standards for Trucks	Follow international best practices in adopting fuel economy standards for trucks. Fuel economy standards can promote fuel-saving measures such as aerodynamic retrofits, vehicle weight reductions, engine efficiency improvements and hybridization.	Minimum Euro 4 standards (2018) Mandatory Emissions Test	Veracity of the emission test results due to reported cases of falsification for profit of private emission testing centers. Road worthiness as criteria rather than vehicle age; Non-mandatory Motor Vehicle Inspection System due to weak political support.
Process Digitalization	Streamline and digitalize processes to reduce dwell times at cargo transfer points. This can smooth intermodal transport chains and reduce overall energy use and emissions if increasing the share of efficient modes.	Trusted Operator Program - Container Registry and Monitoring Sytem (TOP-CRMS) Unified Logistics Pass (ULP) Transport Accreditation Permit and Pass for Ports (TAPPP)	Strong resistance from stakeholders (business groups) Conceived duplication of systems. Poor integration of the applications in port operations.
Higher Capacity Vehicles	Invest on higher-capacity modes of transport to reduce associated emissions by reducing the vehicle kilometers required to transport the same amount of tons.	Freight rail development. - Subic-Clark Railway (7-km) - South Long Haul (577-km) - North Long Haul (8530km)	Currently no operational cargo and/or freight rail services in the country Withdrawn financing for Subic-Clark Railway (7-km) And South Long Haul (577-km)
Asset Sharing	Incentivise and enable asset sharing, for example through promoting digital technologies and platforms to connect logistics operators.		Inadequate human resources in STI and R&D; Underdeveloped research culture and productivity; Insufficient spending on R&D; Underdeveloped linkages among stakeholders in the R&D, technology, and innovation ecosystem; Lack of focus on information about markets or users and market system requirements
Institutional and Regulatory Measures	Enhance institutional alignment, not only between operators but also at a higher intergovernmental level, as well as regulatory or management measures	Legislations to decouple regulatory and commercial functions of transport agencies underway	Lack of coordination among government entities Legislations remain to be approved and put into law

Our engagement with the International Transport Forum

National Study on Decarbonising Pathways for Freight Transport in the Philippines

RECOMMENDATIONS	DETAILS	ACTIONS TAKEN	CHALLENGES
Charging Infrastructure	Promote private investments in charging infrastructure for depot-based vehicles with predictable, short-distance mission profiles which are candidates for early electrification.	RA 11697 or the Electric Vehicle Industry Development Act signed into law on 15 April 2022; CREVI or Comprehensive Roadmap for the Electric Vehicle Industry created pursuant to the law.	No shortage of EV supply in the country, but some people are hesitant because of lack of charging infrastructure. Need to amend various policies to accelerate EV adoption, such as the IRR of National Building Code and Green Building Code for the installation of charging stations.' Slow EV uptake due to high initial cost EV degraded battery recycling and disposal mechanisms Monitoring,verification and evaluation of EVs
Port Expansion	Invest in port capacity expansions and maximize utilization of existing assets to enable maritime transport to capture a higher modal share and increase competitiveness.	253 completed locally-funded port projects (2015-2024 GAA) as of 2023. 28 Ports completed in 2023. National Maritime Connectivity and Port Development Master Plan funded by the World Bank. Opening of new RORO routes, and the issuance of the revised rules in the grant of missionary route status for RORO passenger ships, and the development of the Maritime Route Rationalization and Information System.	Limited number of RORO vessels can be accommodated under the size of the country's ports The fleet of inter-island ferries is also aging, posing risks to commuters and the environment. Port investments driven by politics, capacity to implement the project remains low. Lack of institutional anchoring for overall integrated planning for multimodal transport remains

Our engagement with the International Transport Forum

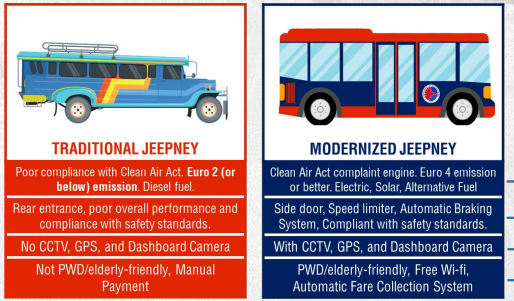
National Study on Decarbonising Pathways for Freight Transport in the Philippines

RECOMMENDATIONS	DETAILS	ACTIONS TAKEN	CHALLENGES
Logistics and Other Ancillary Facilities	Investments in infrastructure facilitate access for different transport modes to the node and can expand its capacity.	**Upstream planning: L**ogistics Master Plan completed; Maritime Industry Development Plan 2023-2028 completed **Midstream project development:** North Integrated Terminal System (Ongoing Pre-FS); Ilocos Norte Transport Hub (Investment Approved); Taguig City Integrated Terminal Exchange (Investment-Approved); Farm-to-Market Ports Network (Project Development, Loan Processing); Port Cold Chain Network (Project Development, Loan Processing); Roll-on Roll-off (RoRo) (Project Development, Loan Processing); New Cebu Int'l. Container Port Project (Investment-Approved)	Low on-site capacity for container storage and management Few inland container terminals privately operated, and none of them is connected to the port by freight rail. Port and ancillary facilities are insufficient and underdeveloped.
Rail and Road Network	Construct new or improved road and rail network (e.g. urban bypass or dedicated rail infrastructure)	**Ongoing Railway Projects (Passenger Rail Lines):** LRT 1 Cavite Extension (11.7 km); LRT 2 East Extension (3.8 km); MRT Line 7 (22.8 km); North-South Commuter Railway System (147 km); Metro Manila Subway Project (34 km); Current Operational Lines (161.8 km including LRT 1, LRT 2, MRT3, and PNR) Around 42 more railway project are under the various stages of planning and project development. 34,352.4 kilometers (kms.) of national roads and 173,977 kms. of local roads or a total road length of 208,329.4 kms.	Movement of goods and services from gateways and production areas to markets currently limited to road-based transportation options. Roads leading to ports and airports are often congested and deteriorate faster due to heavy truck loads.

PUBLIC UTILITY VEHICLE MODERNIZATION PROGRAM

1 FLEET MODERNIZATION

Upgrading public utility vehicle features for **increased safety**, **security**, and **convenience** of the riding public. The requirements are based on the **Omnibus Franchising Guidelines**.



TRADITIONAL JEEPNEY	MODERNIZED JEEPNEY
Poor compliance with Clean Air Act. **Euro 2 (or below) emission**. Diesel fuel.	Clean Air Act complaint engine. Euro 4 emission or better. Electric, Solar, Alternative Fuel
Rear entrance, poor overall performance and compliance with safety standards.	Side door, Speed limiter, Automatic Braking System. Compliant with safety standards.
No CCTV, GPS, and Dashboard Camera	With CCTV, GPS, and Dashboard Camera
Not PWD/elderly-friendly, Manual Payment	PWD/elderly-friendly, Free Wi-fi, Automatic Fare Collection System

PERFORMANCE UPGRADE

- ENVIRONMENT-FRIENDLY
- SAFE
- SECURE
- CONVENIENT

2 REGULATORY REFORM

Establishment of guidelines through Memorandum Circulars, Department Orders, etc. that will **strengthen support** and **ensure that the PUVMP objectives are met**

3 VEHICLE SCRAPPAGE

Proposed **scrapping program** for end-of-life vehicles, wherein the older PUVs (**not compliant to the Philippine National Standards and did not pass the roadworthiness test**) are taken off the road and its **components are properly and responsibly disposed of**.

4 ROUTE RATIONALIZATION

Responds to the oversupply of vehicles and overlapping of routes that result in operational inefficiencies of the transport services and worsening of traffic conditions by assigning **appropriate mode** based on **Passenger Demand** and **Road Hierarchy**

5 INDUSTRY CONSOLIDATION

Strategically merging smaller transport industry players to form into **a legal entity** either by **forming cooperatives or corporations**, among others, through the help of OTC and CDA.

6 FINANCING

Addresses the lack of financial capability for the drivers and operators to embrace the project. It provides **access to funding** for the operators and drivers by giving them the **special loan program** with **low down payment, low-interest rates**, and **long payment period.**

7 LOCAL PUBLIC TRANSPORT ROUTE PLAN

Aims to make the routes more responsive to passenger demand and determine the appropriate vehicle type depending on road hierarchy and configuration through LGU initiative and participatory planning.

8 COMMUNICATION

It aims to **raise the awareness of the public** about the definition and scope of the PUVMP, determine the affected stakeholders, and inform them about the advantages of the program.

9 STAKEHOLDER SUPPORT MECHANISM

Aims to provide a social safety net to the drivers and operators who may be displaced as a result of the Route Rationalization. It aims to enhance the skills of the drivers and operators who may be affected by the PUVMP and capacitate them through the different social support programs to be provided by the DOTr in collaboration with other government agencies.

10 INITIAL IMPLEMENTATION

It is the opening of new/developmental routes pending the finalization of the Route Rationalization Studies and LPTRP, intending to show the feasibility and facilitate the expedient implementation of the program.

ELECTRIC VEHICLE INDUSTRY DEVELOPMENT ACT

*"...as far as practicable, all manufacturers and importers of electric vehicles intended for use for public transportation shall coordinate with the DOTr and the NCCA to **emulate artistic design of the traditional jeepneys** to preserve the country's cultural heritage."*

-Chapter II, Section 9(d)

DAVAO PUBLIC TRANSPORT MODERNIZATION PROGRAM

a bus-based public transport system for Davao City, consisting of a core bus network of over 100 km and a feeder network of over 500 km.

WITH A TOTAL PROJECT COST OF

PHP 73.9 BILLION

800,000
PASSENGERS PER DAY

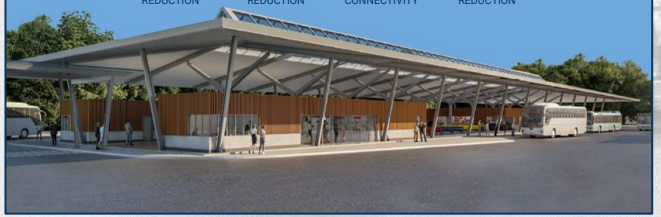
ROUTES		UNIQUE KILOMETERS	
122	29	~450	~670

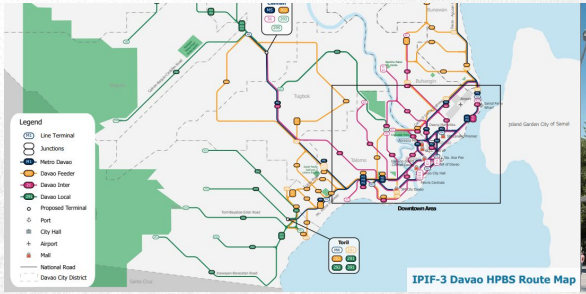
UNITS

~7,100 PUBLIC UTILITY JEEPNEYS	1,105 MODERN BUSES
	386 ELECTRIC VEHICLES

PROJECT BENEFITS

EMISSIONS REDUCTION | CONGESTION REDUCTION | TRANSPORT CONNECTIVITY | TRAVEL TIME REDUCTION





IPIF-3 Davao HPBS Route Map

DESCRIPTION

Construction of 5 depots, 3 terminals, 1 driving school, and 1,074 bus stops with shelters and poles. The Project will also procure around 1,105 units of buses equipped with state of the art ITS-capable equipment. The Project will also establish a bus driving school in cooperation with various government agencies. The delivery of financial and non-financial packages to 24,000 project affected persons will also be covered under the social development program.

Project Outputs	1. Improvement of the Public Transportation; 2. Strengthened Institutional Capacity; and 3. Delivery of Social Development Program to ensure delivery of social and economic safeguards for the affected stakeholders.
Total Project Cost	ICC-CC Approved: PHP 73,378.33 million (excluding financing charges).
Financing	ADB, GCF, ACGF, GOP and LGU