

DECARBONISING PATHWAYS FOR FREIGHT TRANSPORT IN THE PHILIPPINES

Scenario Design

13 December 2022

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On behalf of:







Content

- Outcomes of the workshop
- Proposed scenario designs
 - Current policies scenario
 - Climate ambition scenarios
- Next steps





Outcomes of the workshop

- Methodology
 - Two sessions
 - Polls for input on current and planned policies
 - Stakeholders from public and private sector
- Discussions on infrastructure development, port capacity, vessel refurbishment
- Feedback used to inform three scenarios



Policy scenarios for CO₂ reduction

The ITF aims to design scenarios to assess the CO_2 reduction potential of different policy pathways. The scenarios explore possible alternative futures, their impacts on the transport system and their externalities.

Current ambition Where we are heading Level of measure implementation: As expected / planned As expected / planned Enhanced + New fleet measures considered Enhanced + New intermodality measures considered





Current policies scenario

This scenario presents the evolution of CO₂ emissions if the current measures are implemented as planned but no further actions are considered.

Technology stocks target for the LCV fleet

Target level: 10-30% zero-emission LCV sales/registrations by 2030 (implementation starts in 2025).

Rail freight expansions

Two new rail lines in Luzon; operational by 2026. Road upgrades

From provincial to tertiary road: 10-30% by 2030 and 2050.

From tertiary to secondary road: 30-50% in 2030 and 2050.

From secondary to primary road: 10-30% in 2030 and 30-50% in 2050.

Eco-driving

This has already been implemented. This policy has the potential of reducing CO2 emissions by 1-2.5% in 2030 and by 5% in 2050. Improving intermodal dwell time (2025)

Truck-to-port: reduced by 20% in 2030 and by 45% in 2050.

Rail-to-port: reduced by 20% in 2030 and 2050.

Shipping-to-port: reduced by 20% in 2030 and by 45% in 2050. Change in the energy mix

A decrease in oil and coal trade is expected to be start by 2025.





Measures not included in the current policies scenario

Vehicle technology development	Zero-emissions targets for the 2 and 3 wheeler fleet	Operations management, innovation and digitalization	Asset sharing and the physical internet
	Zero-emissionstargets for the truck fleet		Use of drones/electric aircraft for goods delivery
			Airport environmental improvements: Environmental Management System
	Low-emission targets for ships/vessels		Alexandra in the Control of the Cont
	Aviation Fuel targets (SAFs)		Air operations improvements: Reduced acceleration altitude, single engine taxi out, idle reverse thrust (REVT), minimising fuel use
	Aviation ruei targets (SAFS)	Economic	Distance charges
	Rail freight electrification	instruments	
Infrastructure development	Port capacity increase		Carbon pricing
	Inland and coastal waterways expansion		
		Regulatory instruments	Speed reductions for road transport
	Nautical highways expansion		Heavy capacity vehicles (HCV)
			Fuel economy standards for internal combustion engine (ICE) vehicles and fuel
	Airport capacity increase		Incentives for renewal of fleet (vessels)
			Slow/smart steaming and speed reductions for maritime transport
			Emission factor of diesel trucks





Two climate ambition scenarios



Green fleet:

Vehicle technology improvements through truck fleet renewal
Stricter fuel standards for diesel trucks
Fleet renewal/vessel refurbishment to reduce the share of fueloil-intensive ships



Seamless intermodality:

Infrastructure improvement to increase port capacity
Infrastructure improvement to reduce dwell times
Asset sharing to increase load factors



Next steps

- Confirmation of the three scenarios (before 23 December 2022)
- Modelling scenarios (December 2022 February 2023)
- Scenario exploration tool validation (February/March 2023)
- Dissemination event + tool delivery & training (24-25 April 2023)



THANK YOU FOR YOUR ATTENTION

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