



Transport and Air Pollution

Trends, Challenges and Path forward

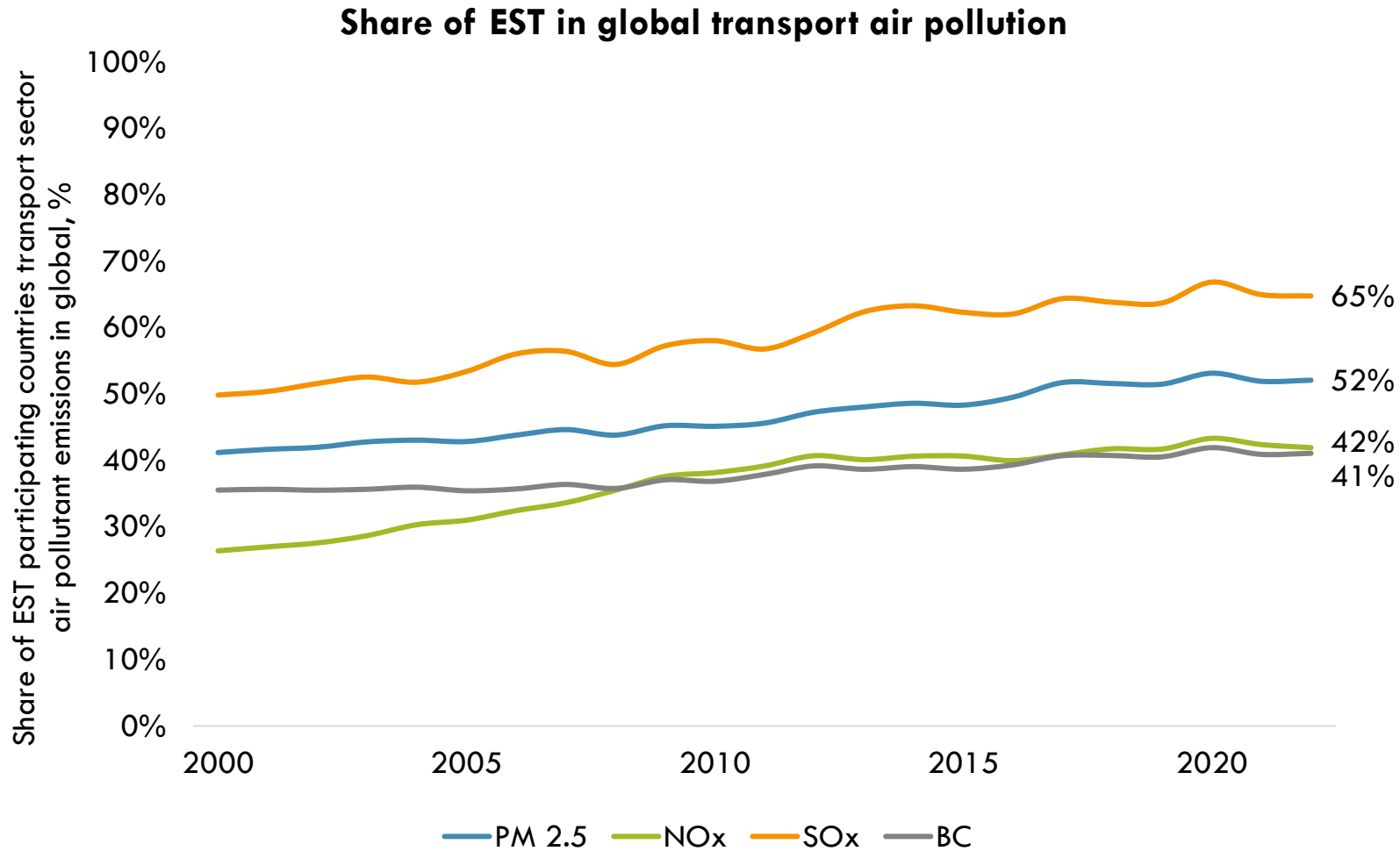
Adwait Limaye

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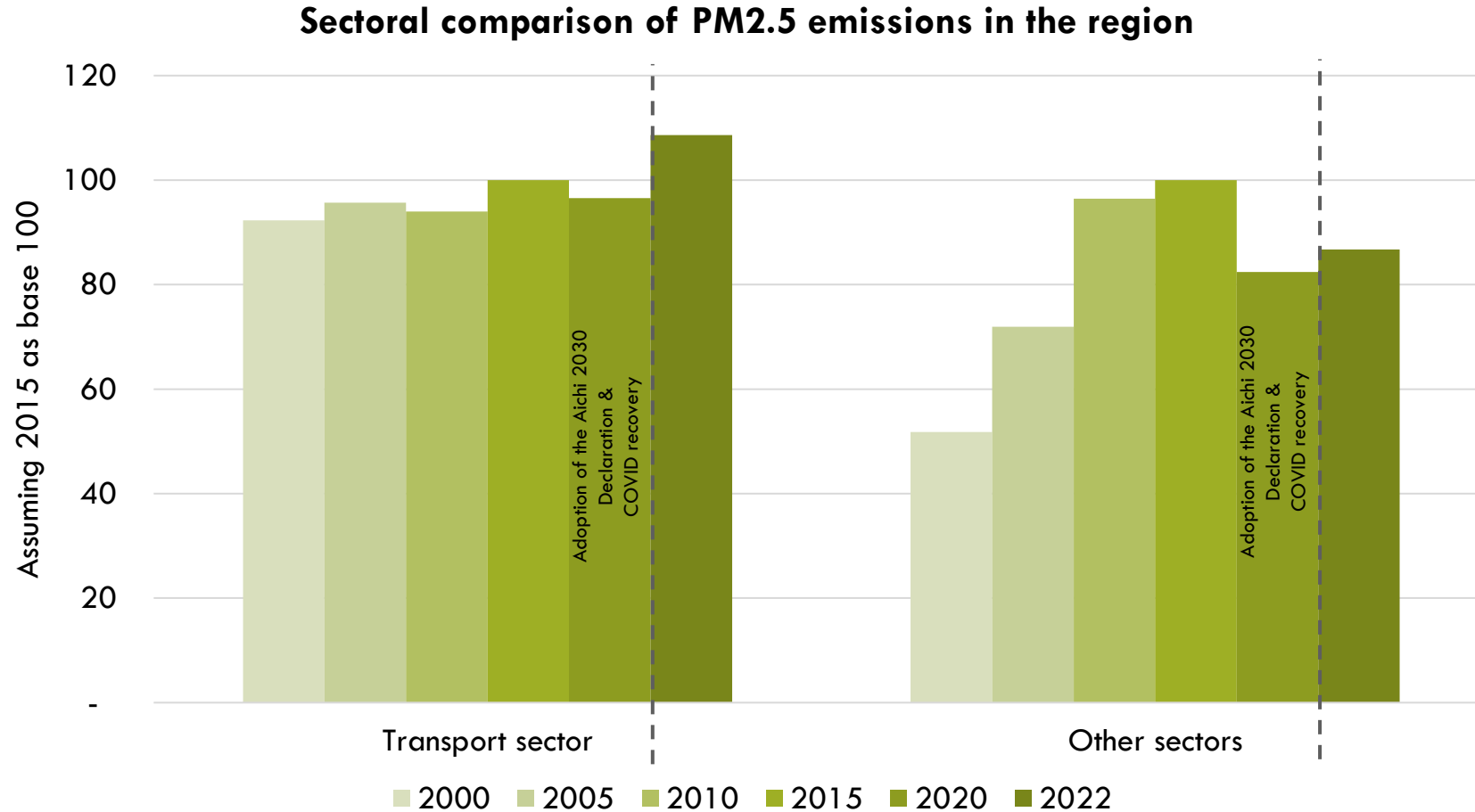
16th High-Level EST Forum
December 10, 2024



EST shares significant global transport air pollutant emissions

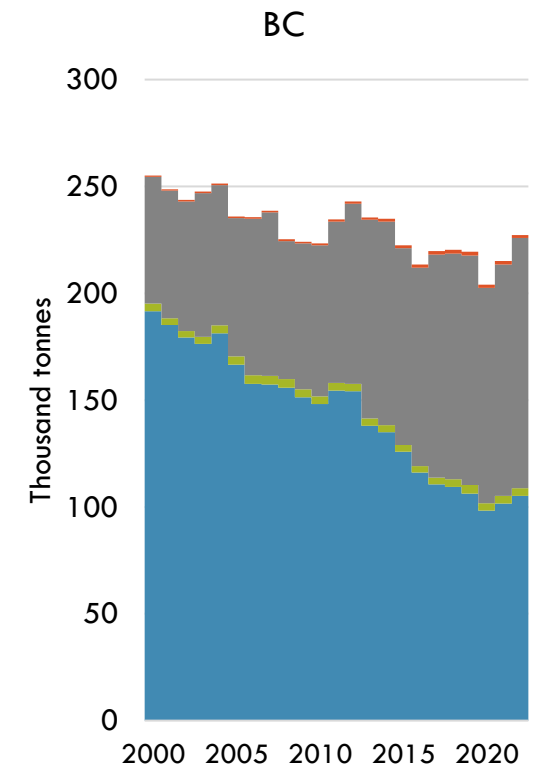
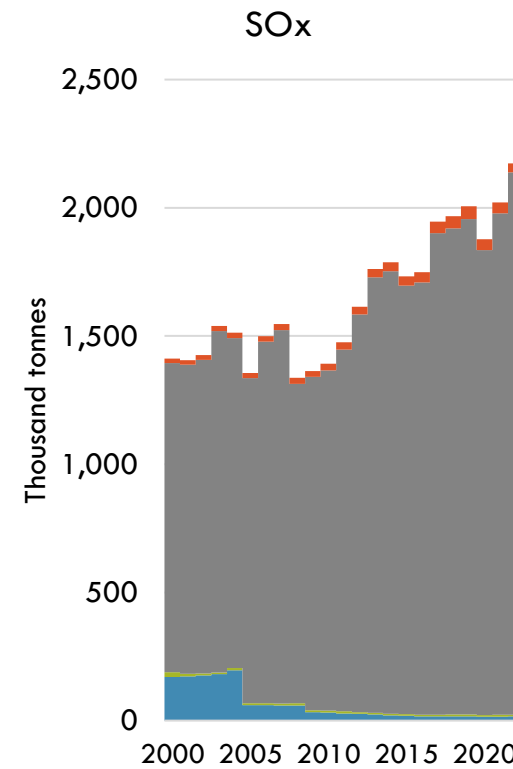
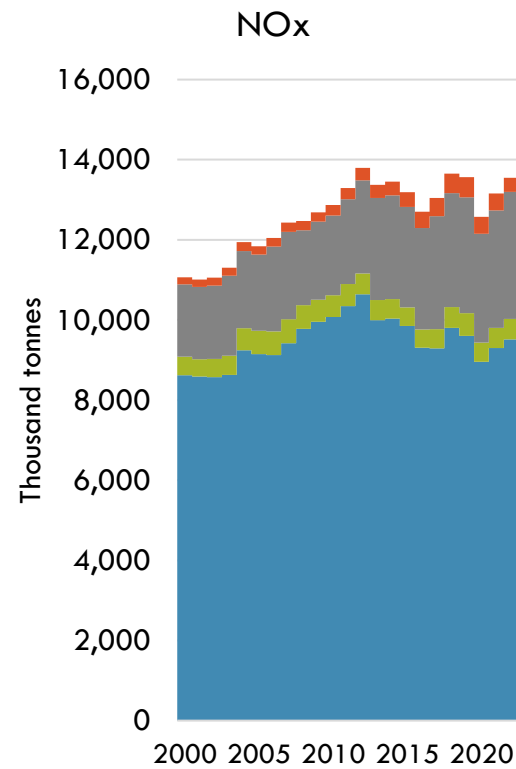
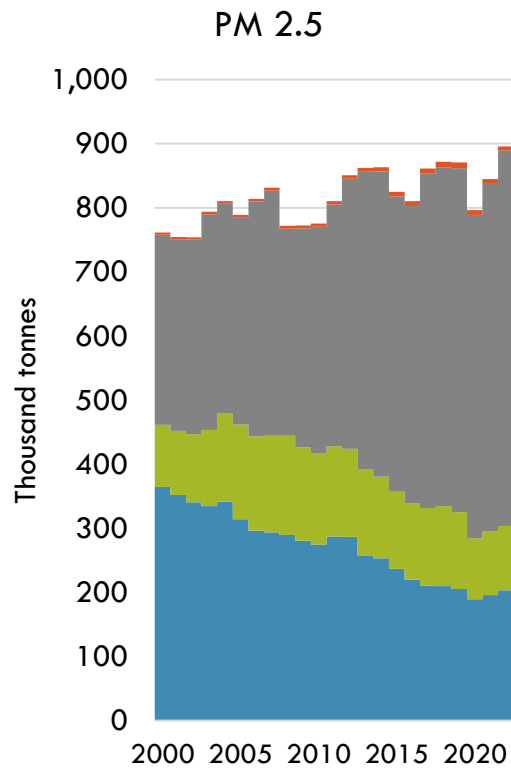


Transport PM2.5 emissions improvement - lags behind other sectors



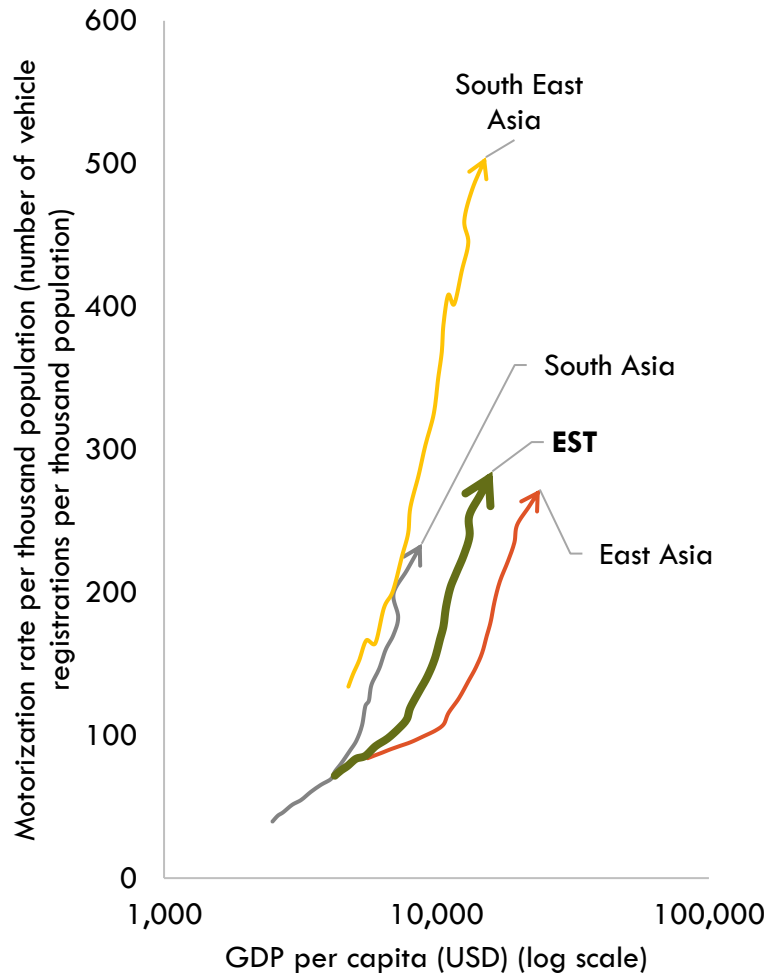
Air pollutants: varying trends across transport modes

■ Road ■ Rail ■ Domestic Navigation ■ Domestic Aviation

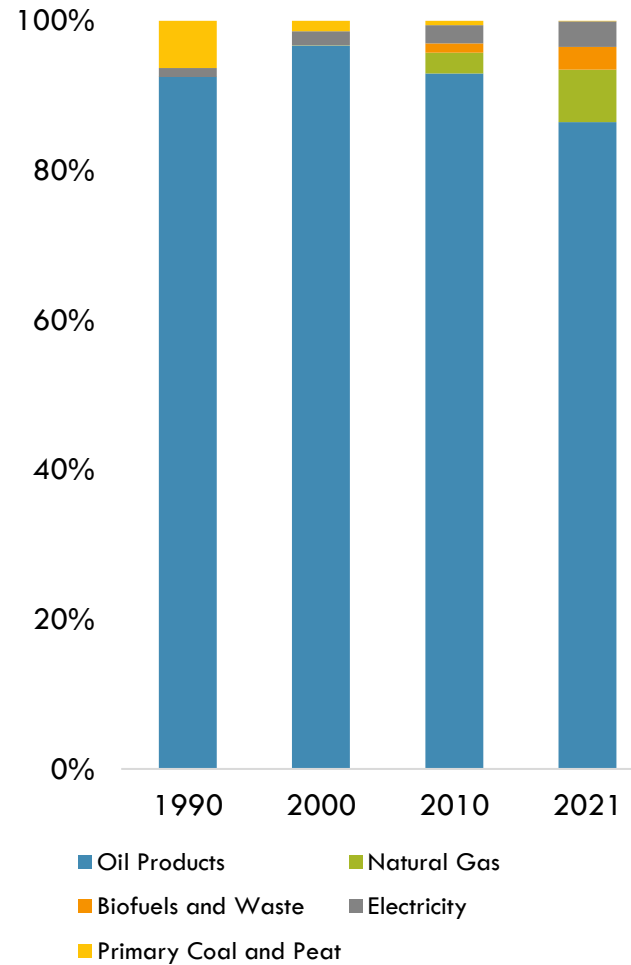


Drivers of the Transport air pollution scenario in the region

Increasing Motorization rate



Concentrated fuel source type



Other factors:

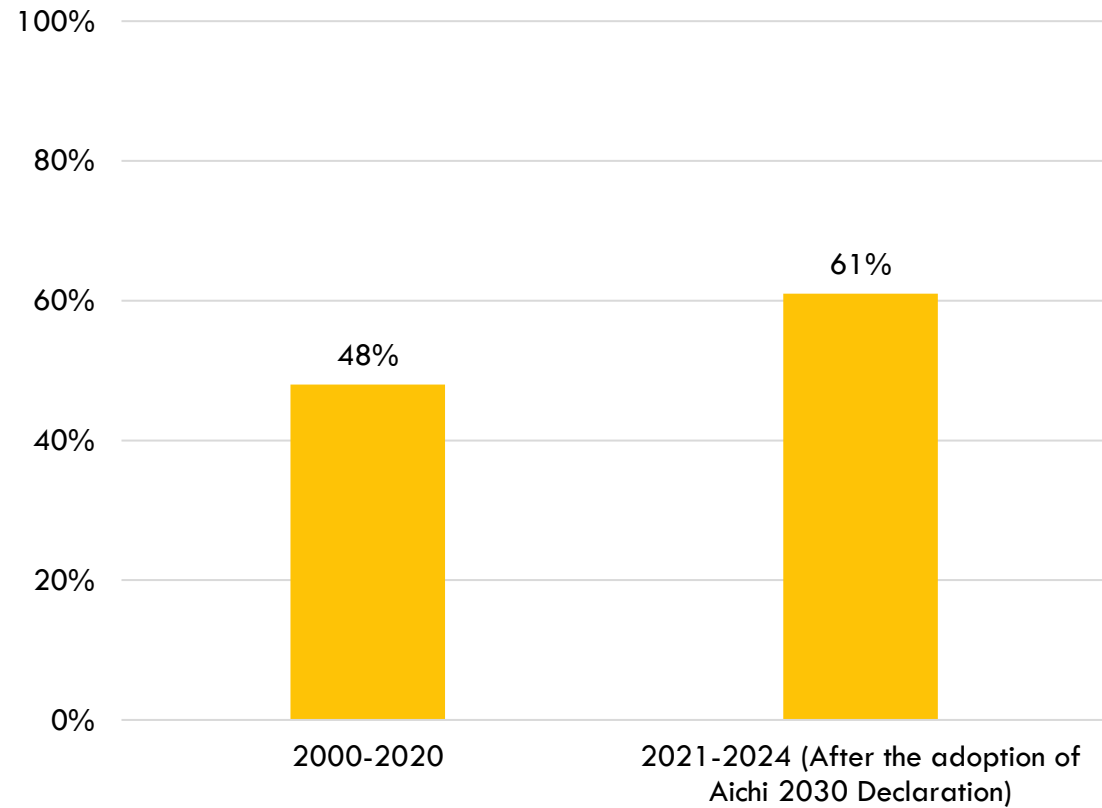
- Increasing transport activity
- Transport activity modal share
- Trade of used vehicles
- Role and status of HDVs – majorly diesel
- High population densities + higher concentrations

And

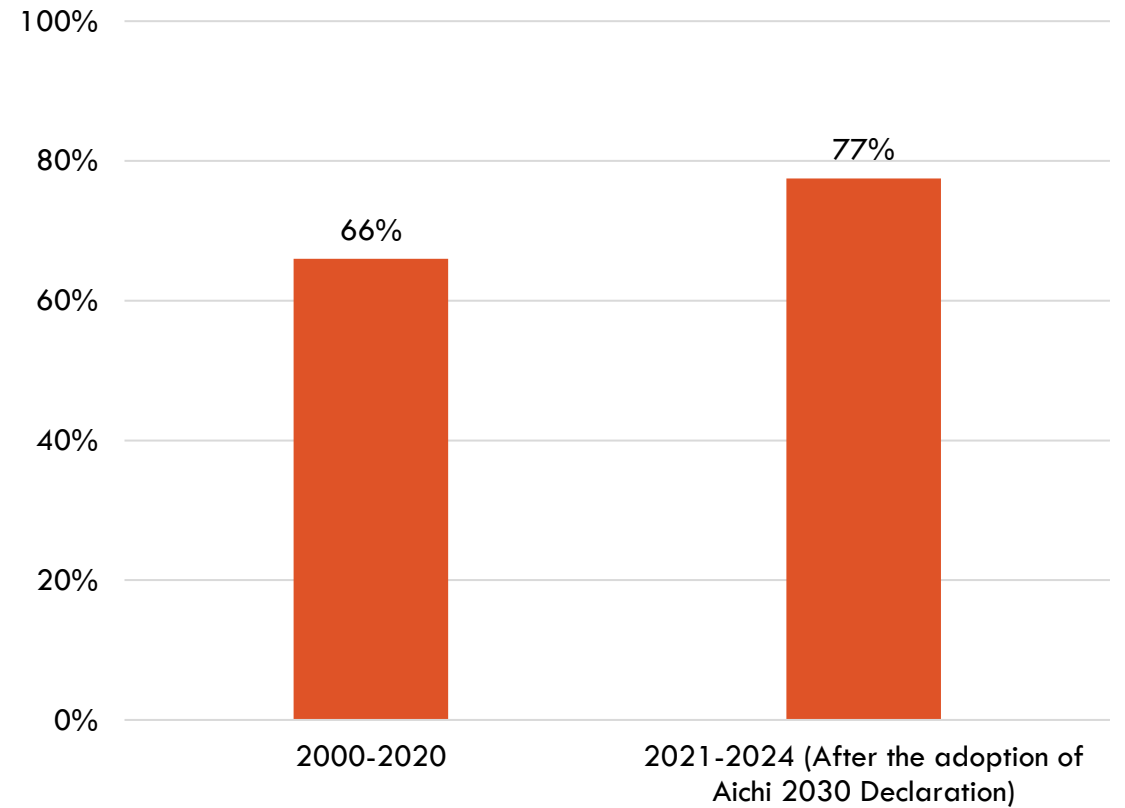
- **A developing Policy landscape and weak enforcement**

Asia's evolving transport policies: Tackling air pollution

Share of policy documents with air pollution element

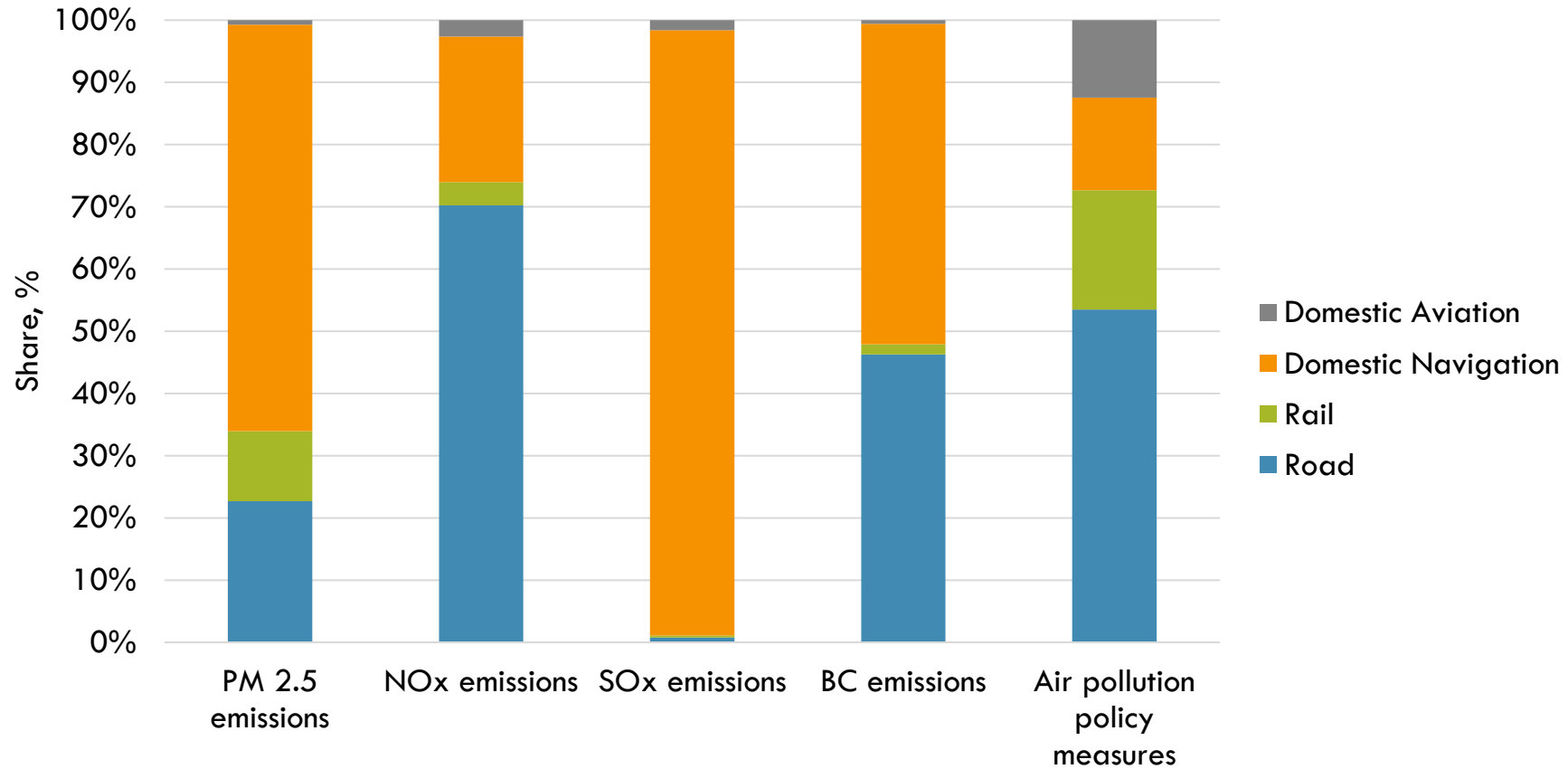


Share of policy measures with air pollution element



Roads dominate air pollution policy measures

Share of air pollutant emissions (2022) and policy measures with air pollution element (2000-2023) by mode



Direct air pollution reduction targets for the transport sector

COUNTRY	POLICY MEASURE	POLICY DOCUMENT	YEAR PUBLISHED
Brunei Darussalam	aiming to reduce transport's CO2 emissions by 40% and NOx by 32% compared to minimum levels by 2035	National Transport Policy	2014
Thailand	targets air pollution (PM2.5) and GHG emissions from the transport industry decrease by 4% per year until 2027	The Thirteenth National Economic and Social Development Plan 2023-2027	2023
Mongolia	aims to reduce the dust by 50% by building sidewalk, bicycle paths, children's playground and green areas in accordance with international standards	Action Plan of the Government of Mongolia 2020-2024	2020

Vehicle emission standards and fuel quality targets

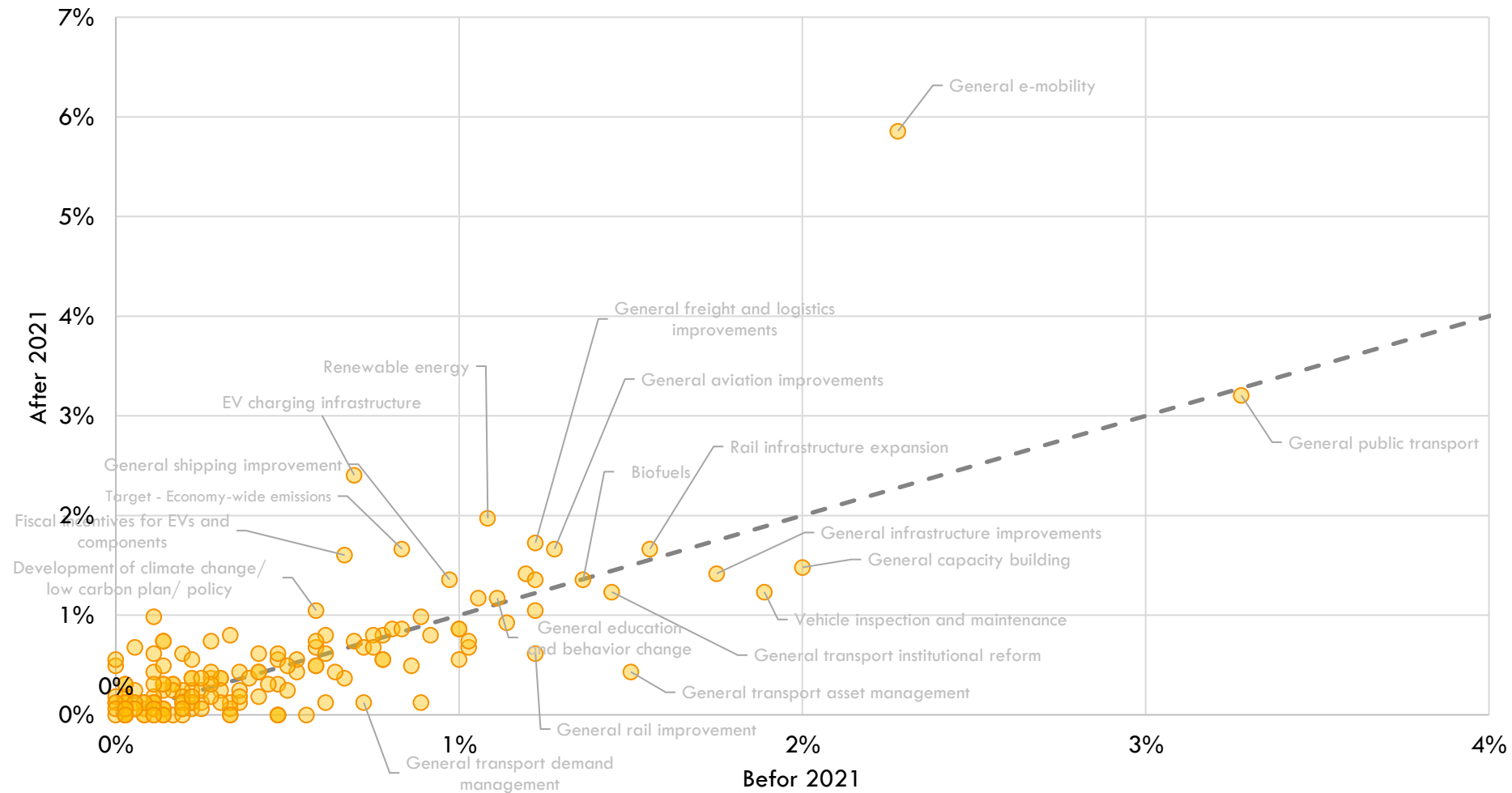
COUNTRY	POLICY MEASURE	POLICY DOCUMENT	YEAR PUBLISHED
BHUTAN	Implement BS-VII/ Euro VII by 2026	Low Emission Development Strategy (LEDS) - Surface Transport	2021
CAMBODIA	Imported cars to meet Euro V in 2027	Clean Air Plan of Cambodia	2022
CAMBODIA	Sulphur level to meet Euro V level by 2024	Clean Air Plan of Cambodia	2022
MALAYSIA	Update regulations requiring new vehicles meet Euro 5 requirements for all petrol engine vehicles in 2026.	Low Carbon Mobility Blueprint 2021-2030	2021
MALAYSIA	EURO 5 RON 95 & 97 by 2025	Green Technology Master Plan 2017-2030	2017
MONGOLIA	Meet up to 100 percent of the national demand for main fuels from domestic production meeting the Euro-5 standards by 2030	Mongolia Sustainable Development Vision 2030	2016
PAKISTAN	Implement fuel quality standards in transport to comply with Euro-5 or Euro-6 leading to complete shift to minimum Euro-5 by 2025, or Euro-6 by 2030	National Clean Air Plan	2022

Sample of e-mobility targets

COUNTRY	POLICY DOCUMENT	YEAR PUBLISHED	TARGET	TARGET YEAR
BANGLADESH	Mujib Climate Prosperity Plan	2021	Shift at least 30% of the transportation fleet to electric by 2030 We will ensure 100% of the rideshare fleet is green/electric.	2030
BHUTAN	Low Emission Development Strategy (LEDS) - Surface Transport	2021	100% light vehicles and buses imports to be EVs by 2045	2045
LAO PEOPLE'S DEMOCRATIC REPUBLIC	Updated Nationally Determined Contribution - LAO	2021	Conditional: 30% Electric Vehicles penetration for 2-wheelers and passengers' cars in national vehicles mix	2030
MALAYSIA	National Energy Policy 2022-2040	2022	Percentage of electric vehicle (EV) share = 38% from <1% in 2018	2040
NEPAL	Nepal LTS	2021	Increase e-vehicle sales to 90 percent of all private passenger vehicle sales (including two-wheelers) and 60 percent of all four-wheeler's public passenger vehicle sales by 2030. (excluding electric-rickshaws and electric three-wheelers).	2025
PAKISTAN	Pakistan Updated NDC 2021	2021	By 2030, 30 % of all new vehicles sold in Pakistan in various categories will be Electric Vehicles (EVs).	2030
PHILIPPINES	Comprehensive Roadmap for the Electric Vehicle Industry	2022	achieve at least a 5% EV share in corporate and government fleets, public transport operators, and industrial and commercial companies at the end year of the Medium Term (2034) and increasing to 10% by 2040	2034
SRI LANKA	Climate Prosperity Plan	2022	Fifty percent of new road vehicles are electric or hybrid 50% of public transportation, including suburban railway, is electrified including through retrofitting.	2030
VIET NAM	Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	achieve at least 50% vehicles using electricity and green energy; use electricity and green energy for 100% new taxis.	2030
BRUNEI DARUSSALAM	Second Voluntary National Review - BRN	2023	The country aims to increase EV share up to 60 per cent of total annual sales by 2035 as per the current ambition of the BNCCP.	2035
SINGAPORE	Singapore Green Plan	2021	All vehicles to run on cleaner energy by 2040	2040

Electrification and Public transport leading policy themes

Distribution of Air pollution relevant transport measures



In summary

- 250,000 premature deaths per year – **significant health burden**
- regions **significant global share** of transport air pollutant emissions – share is stagnating or slightly decreasing
- **Transport sector is lagging**

- **Road** subsector is ahead of the curve – getting **cleaner**, but inland water transport and domestic shipping is getting dirtier
- A number of **key drivers of the Transport air pollution** in the region are determining the status – vehicle motorization, fuel sources, transport activity, modal share etc.

- Policies are becoming **comprehensive**
- As a **co-benefit of Climate change measures**, Air pollution relevant measures are also increasing
- But there is still a **modal focus on road** transport

- Very **few direct** air pollution reduction targets
- Some related to **vehicle emission standards and fuel quality**
- Measures are **diversifying** in nature, but mostly dominated by **Electrification** and **public transport** improvement

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“ATO translates data into insights, policies, and investments”

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