Asian Transport Observatory

Asian Transport Observatory (ATO) – Building transport intelligence across Asia-Pacific

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22 January 2026

ADB ASIAN DEVELOPMENT BANK

AIIB ASIAN INFRASTRUCTURE INVESTMENT BANK

asiantransportobservatory.org

52 Economies (ADB Members + Russia and Iran)

460 Urban Centers (412 Asia-Pacific, 48 International)

>50 Urban Centers with a detailed review

ATO National Database

Explore over 450 transport indicators from 51 economies divided across nine categories

ATO National Transport Policy Documents Database

Explore close to 1100 transport policy documents in Asia and the Pacific

ATO Urban Database

Explore more than 260 urban level transport indicators across nine categories

ATO Cost Database

Explore more than 1,300 transport-related projects and benchmark their costs within subregions or income groups in Asia and the Pacific

ATO Analytical Outputs

Read about analysis made using ATO transport data and policy information

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Asian Development Bank (ADB) has Won the 2024 IRF Award for Environmental Stewardship for Asian Transport Outlook!

2024-10-18 Istanbul, Türkiye

Updates / Asian Development Bank (ADB) has Won the 2024 IRF Award ...

Pacific Sub-regional Observatory – Coming Soon!

The World Bank has joined the Asian Development Bank (ADB) and the Asian Infrastructure Investment Bank (AIIB) in supporting the Asian Transport Observatory (Asian Transport Observatory). The World Bank's contribution centers on a Pacific sub-observatory within the platform, designed to equip Pacific Island Countries (PICs) with data and insights for investment planning and policy reforms that reduce emissions and advance sustainable transport. This work is supported through the Accelerating Decarbonization of the Road Transport Sector in PNG and the Pacific Islands Road Transport Programmatic Advisory Services and Analytics (PASA). The effort will draw on collaboration with Pacific transport partners and produce PIC-focused knowledge products, including country profiles and thematic reports at national and regional levels.

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Asian Transport Observatory (ATO)

A Catalyst for Sustainable Transport in Asia

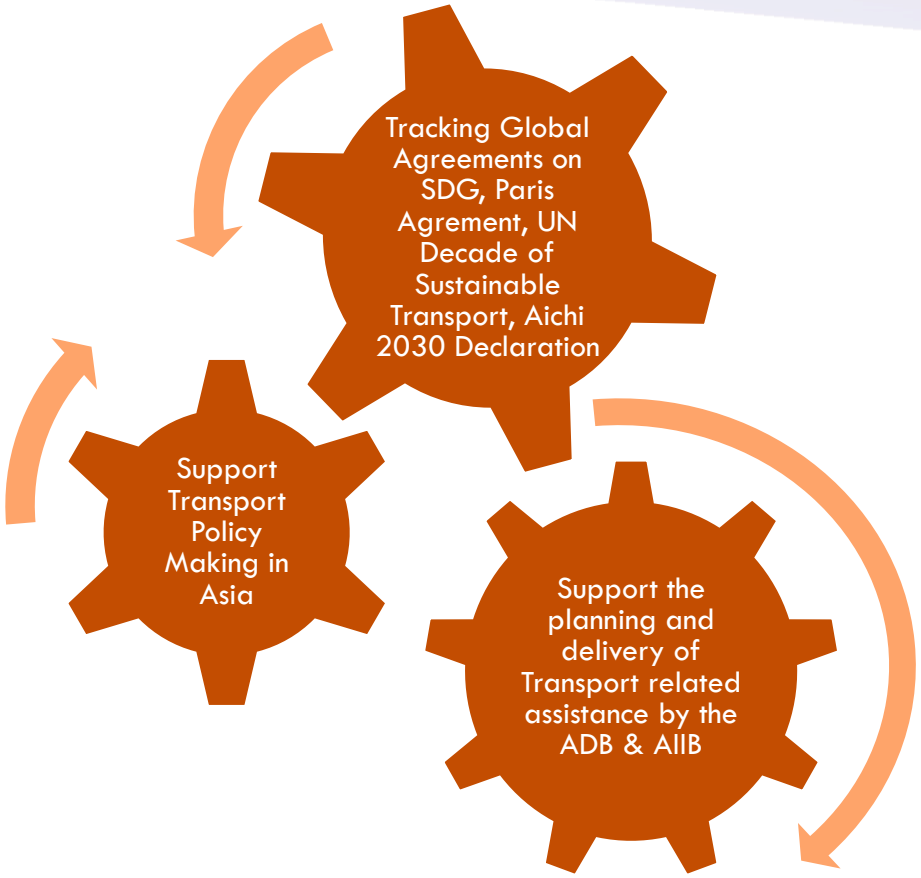
52 Economies (ADB Members + Russia and Iran)

460 Urban Centers (412 Asia-Pacific, 48 International)

>50 Urban Centers with a detailed data

700 Indicators

430k Data points



- **Brainstorming** — 2019 – 2020
- **Phase 1** — November 2020 – May 2021
- **Interim Phase** — June 2021 – October 2021
- **Phase 2** — November 2021 – November 2022
- **Phase 3** — March 2023 – November 2024
- **Phase 3.5** — December 2024 – Ongoing

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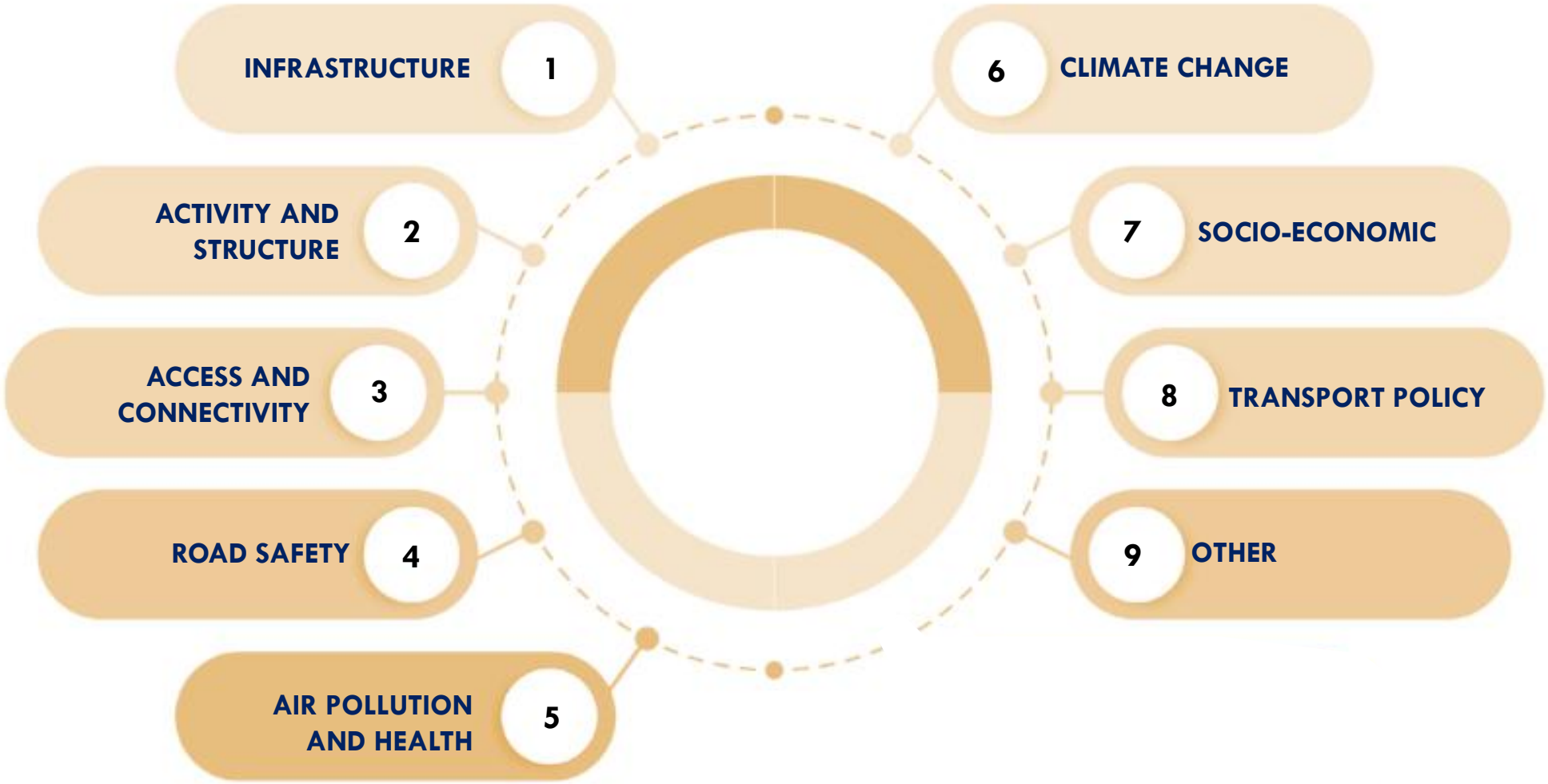
ATO - Dimensions



ATO adopts a unique Implementation Approach

Approach

- Primary + Secondary Sources + Data **contributions**
- Multiple Sources for single indicator
- Multiple Dimensions, Modes and Scale
- Data + Policy
- Incremental Approach

Dimensions

- Infrastructure
- Activity & Services
- Access & Connectivity
- Air Pollution
- Road Safety
- Climate Change
- Economic Impact

Scope

- Regional
- National
- Rural
- Urban
- Project

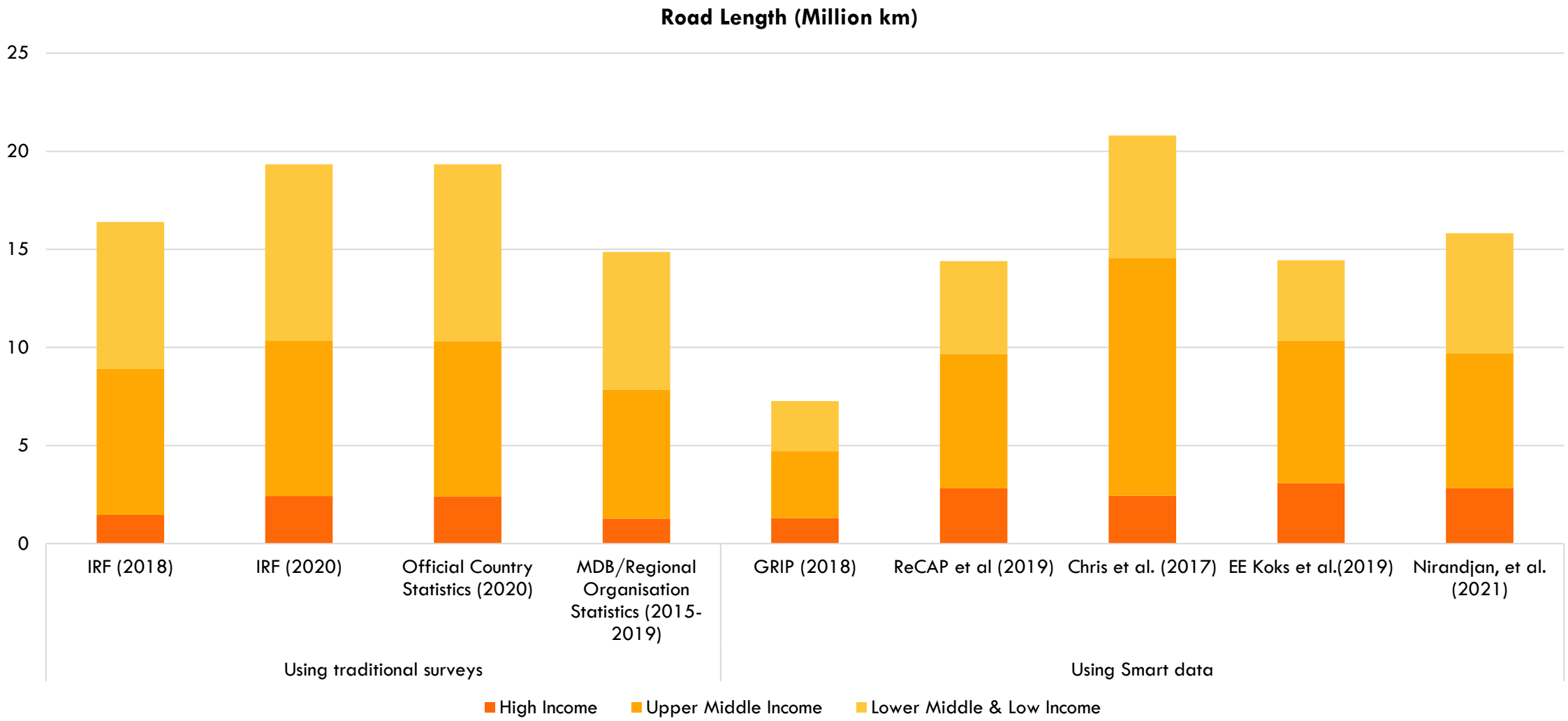
Insights

- Data
- Policy
- Institutional
- Financing
- Outlook

Products

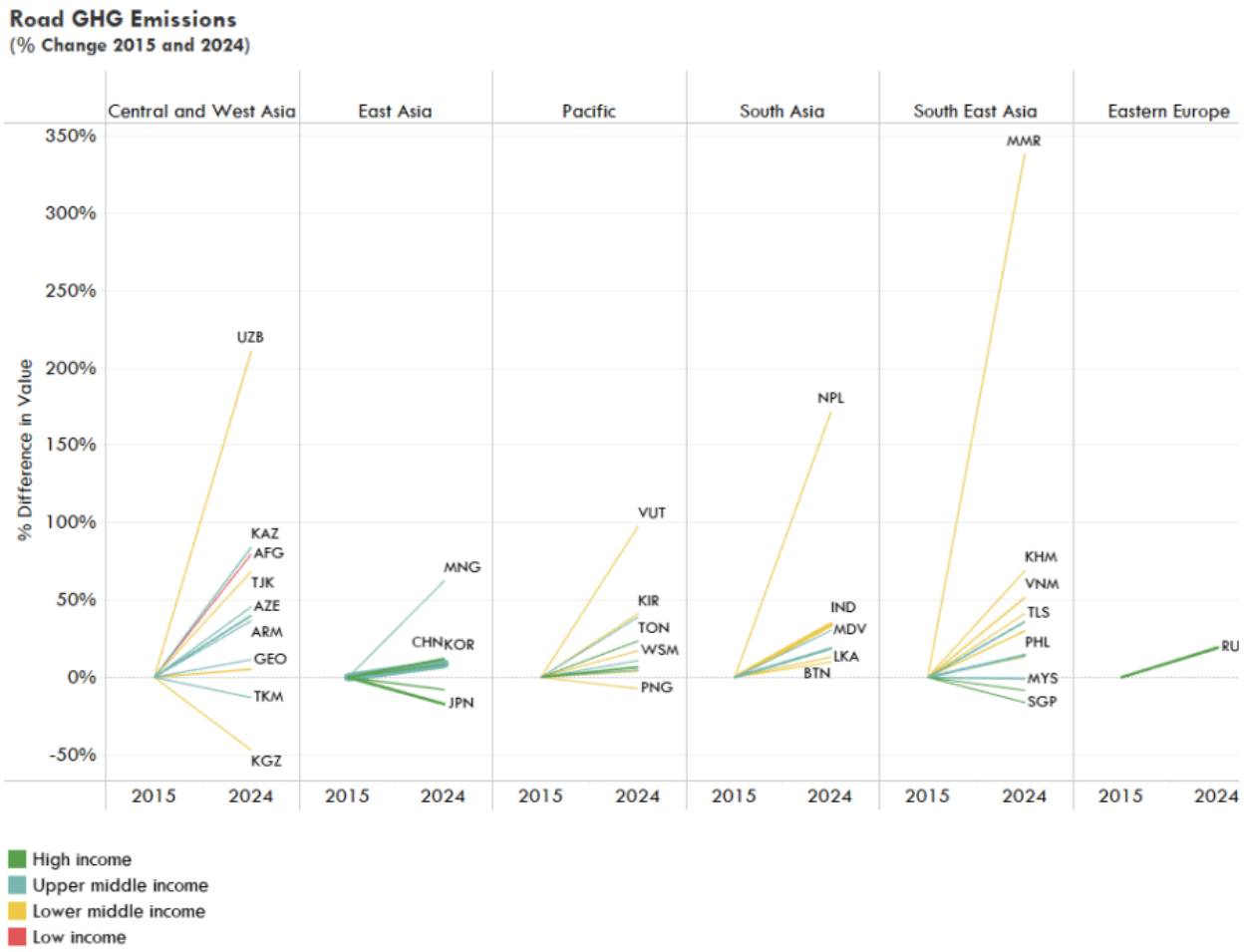
- National Database
- Urban Database
- Policy Tracker
- Cost Database
- Others - COVID Transport Database , ADB Portfolio
- Knowledge Products & Tracking Reports
- Country Profiles

ATO facilitates data validation

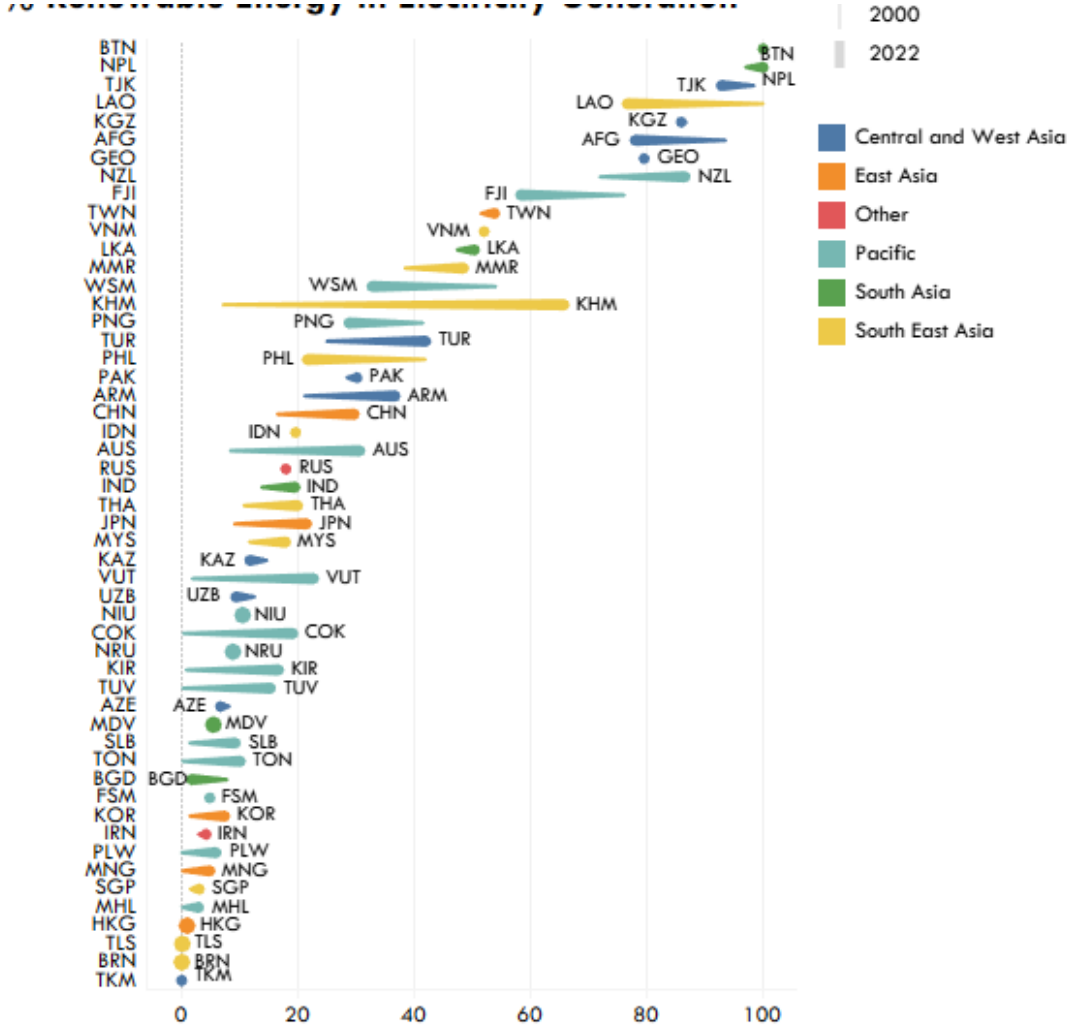


ATO facilitates benchmarking (National)

Road transport GHG Emissions Trajectories



% Renewable Energy in Electricity Generation



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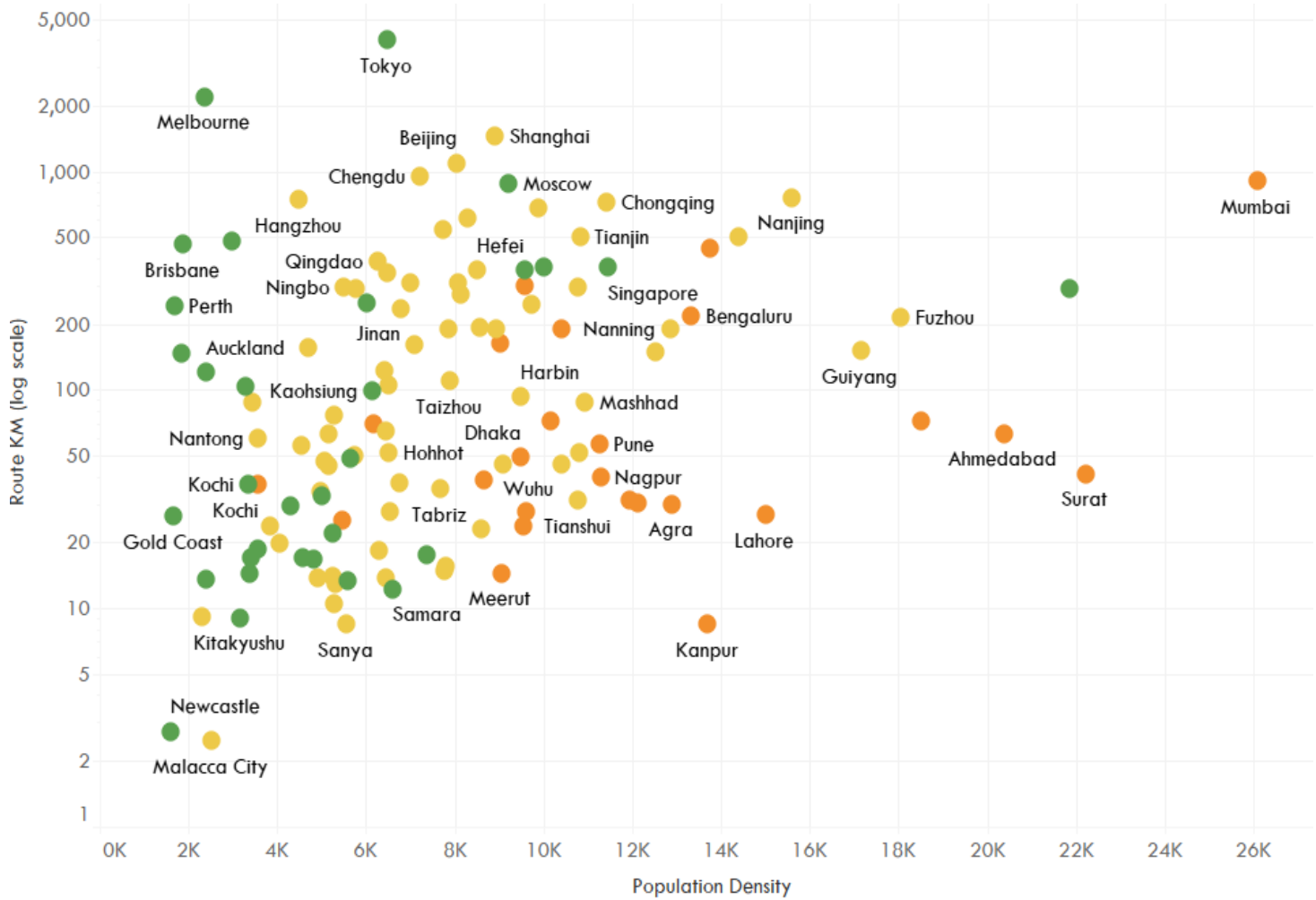
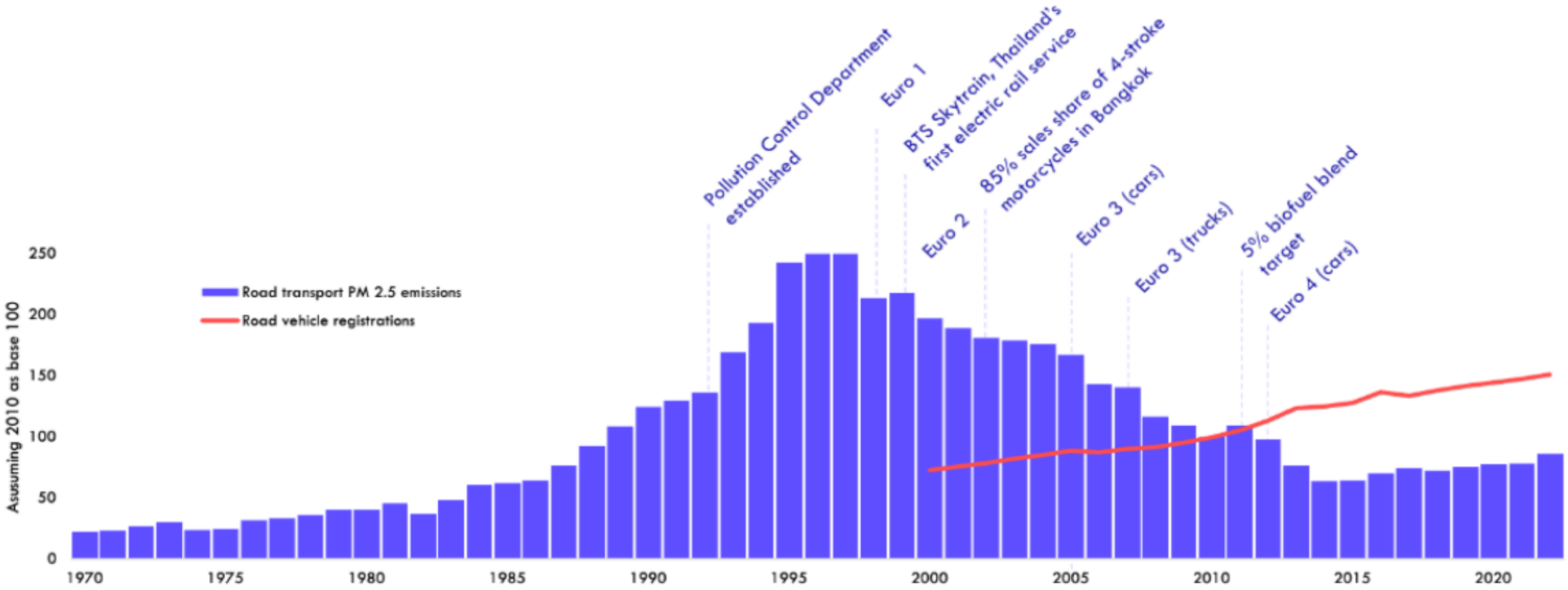
ATO facilitates benchmarking (Urban)

Rapid transit route kilometer vs. population density



ATO enables systematic assessment of how transport data aligns with policy



Thailand Road PM2.5 emissions and vehicle registrations

ATO is a one-stop solution for ~700 transport and related data indicators

ATO National Database Walkthrough Video – Sample indicator download

Asian Transport Observatory National Database

Indicator: **Trade - Electric LDV (including hybrid-electric)**
Indicator ATO Code: **TAS-VEP-081**
Description: **Primary trade data including import and export by product or service code. Data is presented as total value of trade. This considers code/s 870340, 870350, 870360, 870370, 870380**

Scope: **National**
Mode: **Road**
Sector: **Passenger**
Units: **Thousand USD**
Source: **International Trade Centre (ITC)**
Website: https://www.trademap.org/

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		Import							Export			
Economy Code	**Economy Name**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2017**	**2018**	**2019**	**2020**
AFG	Afghanistan				20	67		22				
ARM	Armenia	223	69	1,266	3,448	5,153	32,792	64,260	33			90
AUS	Australia	114,651	88,951	253,953	255,985	804,254	1,606,974	3,971,997	1,638	9,547	2,129	2,519
AZE	Azerbaijan		1,381	1,278	8,549	4,580	31,209	204,184			50	
BGD	Bangladesh	63,535	76,147	108,563	59,115	75,179	49,012	51,203			5	19
BTN	Bhutan	88	90	238	307	1,363	4,572	847			15	
BRN	Brunei Darussalam			3	156	2,021	1,086	2,015			68	
KHM	Cambodia	37	185	924	2,440	4,869	15,256	19,954		10		
CHN	People's Republic of China	1,909,103	1,663,345	3,498,353	1,917,699	2,907,745	3,560,263	3,989,259	223,674	329,444	961,049	2,551,611
COK	Cook Islands	92	11			3	10					

TOC | TAS-VEP-081 | +

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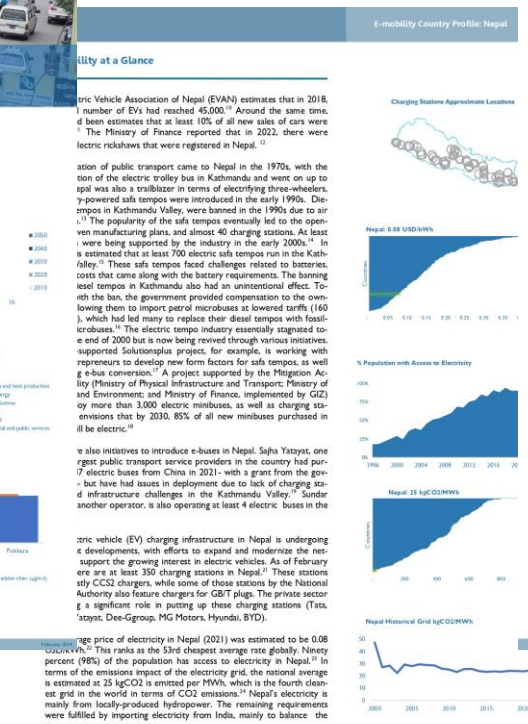
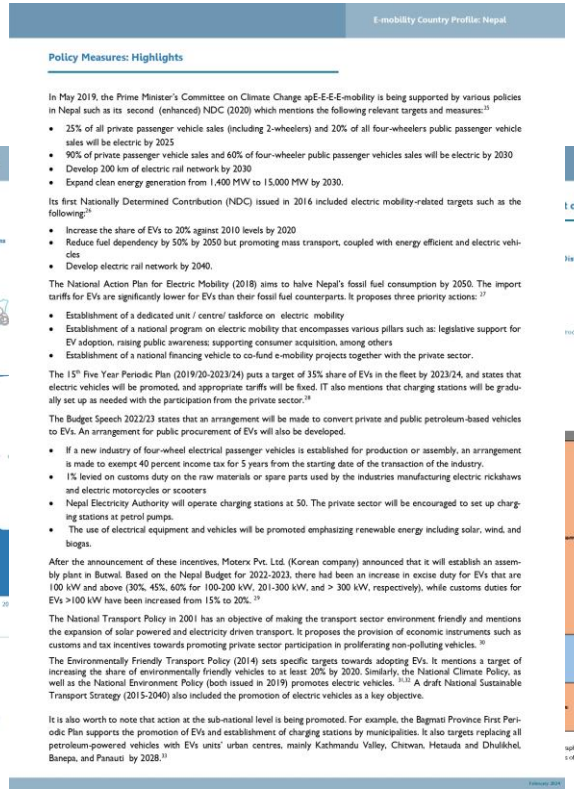
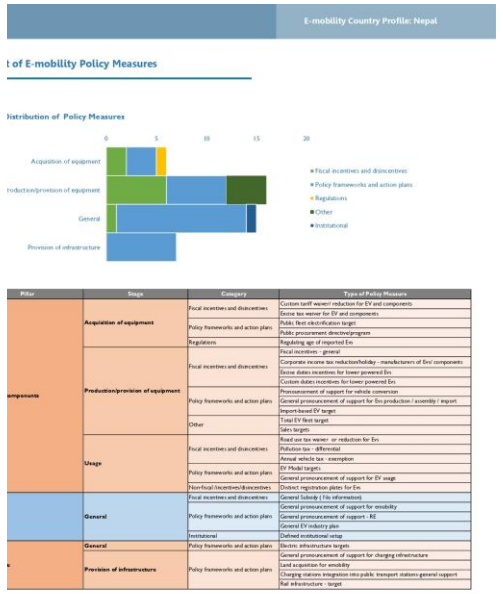
Capturing the main storylines – E-mobility profiles







Typologies of Indicators covered

- General
- Socio-economic & Transport Indicators

- Energy consumption and emissions
- Access to electricity
- Grid emission factor
- Distribution of policy measures and targets

Interactive Knowledge Products

Cross-cutting

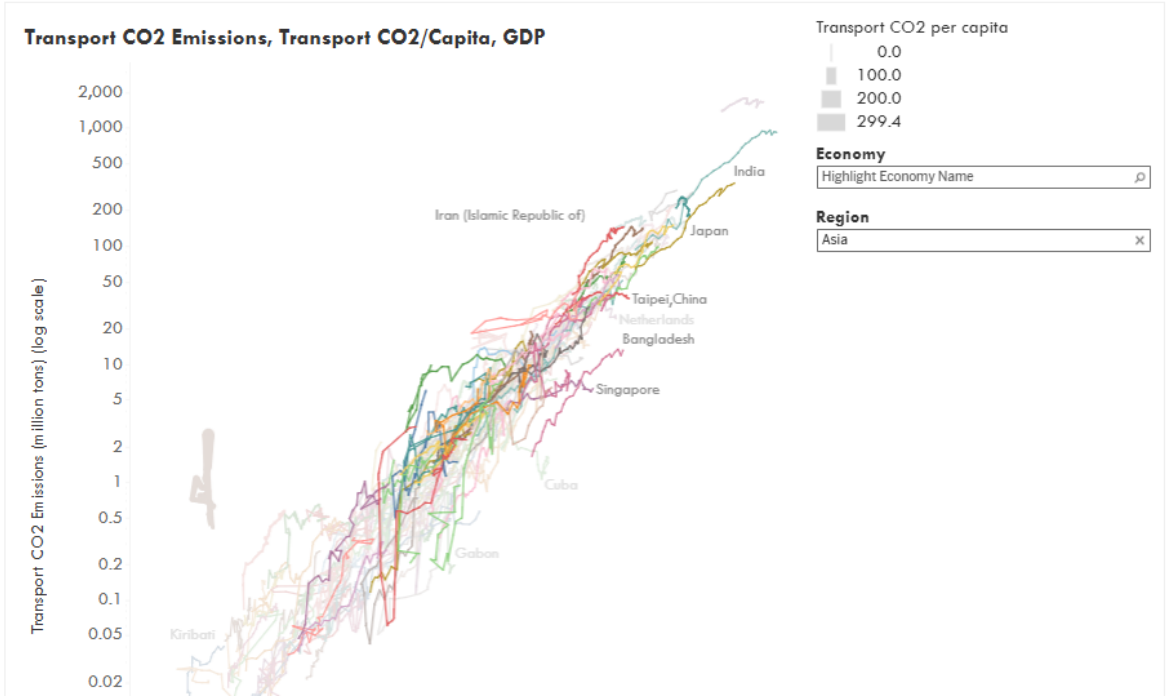
Transport CO2 Emissions Visualization Tool

Insights / Transport CO2 Emissions Visualization Tool

Heading into COP30, Asia's transport story is one of two truths: progress and persistence. Growth in emissions is easing, efficiency is up, and e-mobility is advancing. Decoupling—long deemed improbable—is starting to appear. It's a sign that smart policy and technology can shift the trajectory.

Please read The Two Faces of Progress: Decarbonizing Asia's Transport Sector for the full story. In addition, you can use the tools below which provide visual queues relating to the trajectories and progress of the different economies in terms of transport emissions.

The first tool allows you to check the trajectory of each of the economies in terms of transport CO_2 emissions from 1990 to 2024.

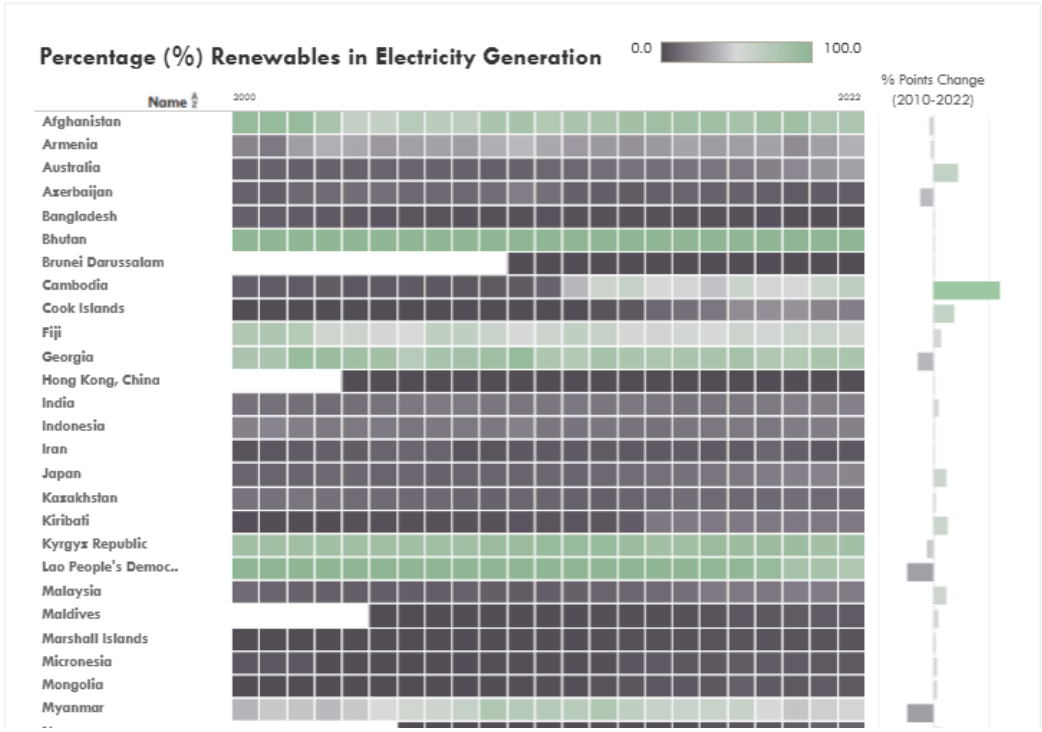


Renewable Energy Share in Electricity Generation - Visualization

Insights / Renewable Energy Share in Electricity Generation - Visualization

The renewable energy (RE) share in electricity generation (%) refers to the proportion of electricity generated from renewable sources such as wind, sol geothermal. This indicator measures how much of a country or region's electricity infrastructure relies on RE for generating electricity and reflects the t fossil fuels to clean energy.

The visual in the dashboard shows visualizes the percentage of renewable energy in electricity generation across different countries in Asia since the t century. It is based on data from the International Renewable Energy Agency (IRENA). The left portion indicates the evolution in the RE % shares from 2 while the bar chart on the right indicates the percentage points change between 2010 and 2022 and depicts the direction and strength of change towa integration of RE in electricity generation.



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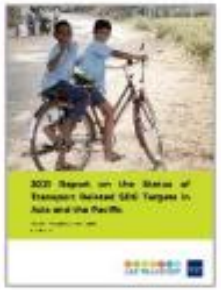
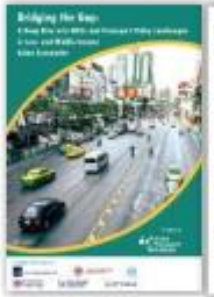
ATO Knowledge Products

Link





SDG Profiles
(39 countries)

Transport Climate Profiles
(24 countries)

Road Safety Profiles
(24 countries)

E-mobility Profiles
(10 countries)

Green Roads Profiles
(23 countries)

Gender Profiles
(20 countries)

Rail Profiles
(4 countries)

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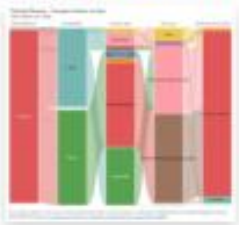
ATO Insights: Interactive visualisations

Link



Climate Financing: Transport Sector in Asia - Visualization

2024-11-26

The dashboard presents a detailed overview of climate finance flows specific t regional trends, funding distribution, and sources of investment.

Interactive Visualization

Tags: Climate, Climate finance

Transport CO2 Emissions Visualization Tool

2024-11-18

ATO has created a visualization / animation tool using the data from IEA-EDG data from 1990 onwards is represented in the visualization tool which aims at magnitude, direction, and speed of change in transport-sector emissions, ...

Interactive Visualization

Tags: emissions

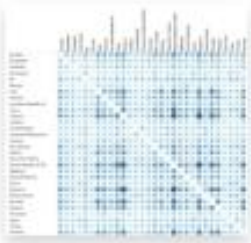
Urban Access to Public Transport - Visualization

2024-10-24

Access to public transport plays a critical role in creating inclusi Access to Public Transport—focuses on how well urban residen social equity, environmental sustainability, and economic oppor

Interactive Visualization

Tags: urban access, cities, public transport, urban centers



Liner Connectivity Index - Visualization

2024-11-08

The Liner Shipping Bilateral Connectivity Index (LSBCI) provides a comprehensive me between pairs of countries, capturing their level of integration into global liner shippi

Interactive Visualization

Tags: connectivity, Sustainable Transport, Maritime Transport, Global Trade, Supply chain

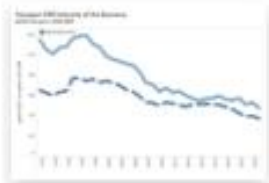
Renewable Energy Share in Electricity Generation - Visualization

2024-10-30

The renewable energy (RE) share in electricity generation (%) refers to the proportion renewable sources such as wind, solar, hydro, and geothermal.

Interactive Visualization

Tags: energy, e-mobility, electrification



Transport CO2 Intensity of the Economy

2024-10-15

Interactive Visualization

Tags:

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Partnerships

Data Sharing
- IRF
- ITEM
- TDCI
- ADB Statistics

Policy
- UNCRD
- UNESCAP Working Groups (rail, road)

Railways
- UNESCAP - ASEAN
- UIC

Roads
- ADB's Green Roads Toolkit
- IRF

Climate Change
- SLOCAT
- UNESCAP
- UK FCDO
- Climate Compatible Growth

Electric Vehicles
- ADB-GEF EV Platform
- UEMI

Road Safety
- Asia-Pacific Road Transport Observatory

Freight
- UNCTAD
- Smart Freight Center

Climate Resilience
- Life Links Council

Air Pollution
- Clean Air Asia

Urban Transport
- Mobilize Your City
- ITDP

Sub Regional/ Country
- World Bank
- MTI (Indonesia)
- SOTEN (Nepal)

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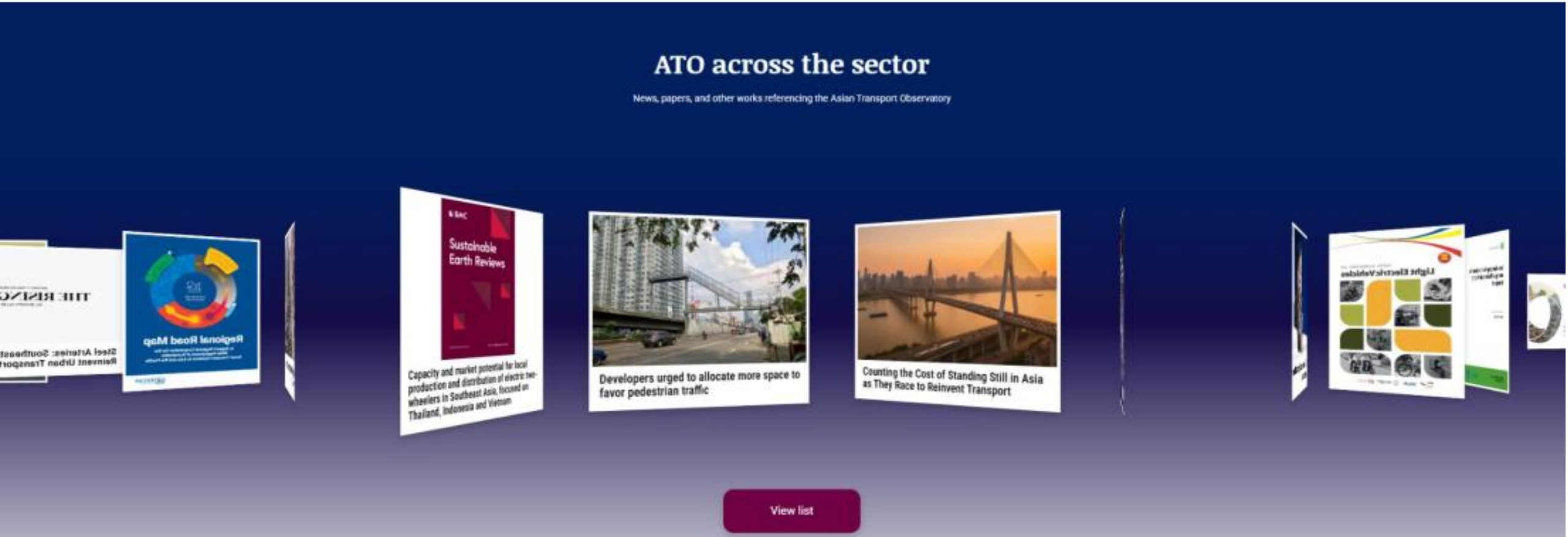
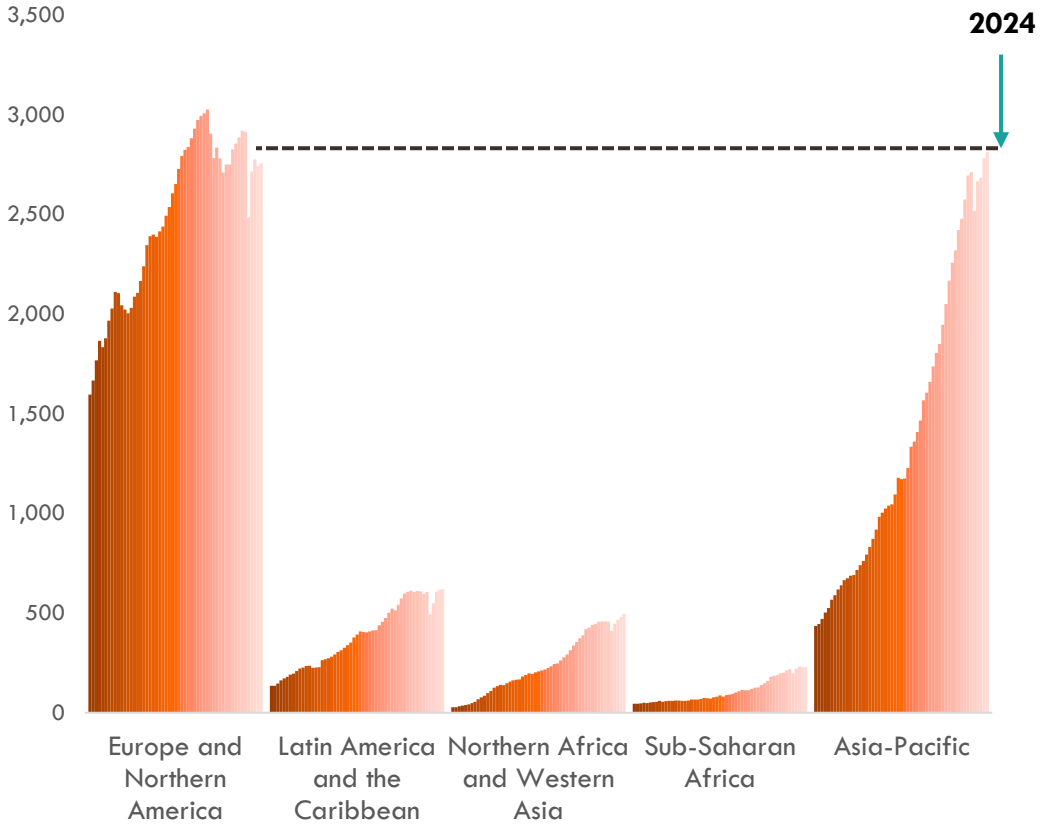


>300 reports, journal articles, news articles, multi-media citations in current Phase

E-mobility in context: ATO insights on transport decarbonization in Asia-Pacific region

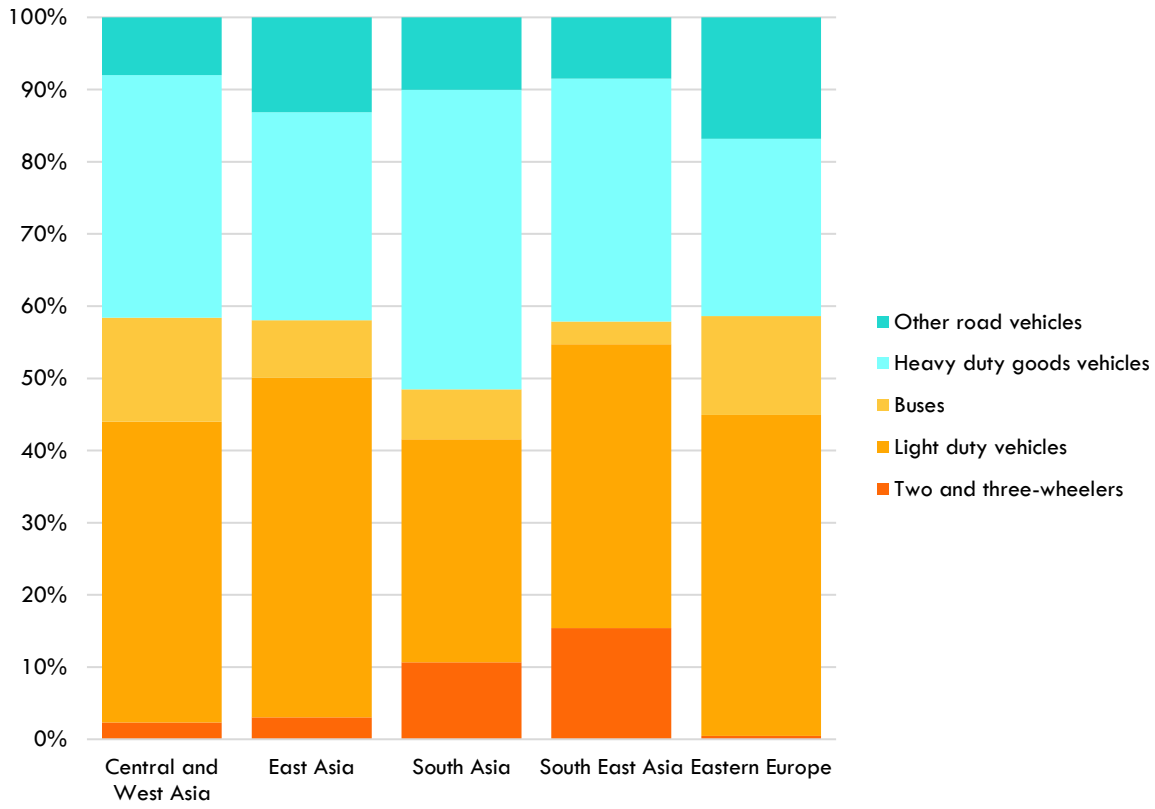
Asian Transport Observatory

Transport CO2 Emissions (million tons) (2000-2024)



Source: ATO visualization based on data from Crippa et al. (2023)

Road Transport CO2 Emissions Share by Sub-mode by Sub-region



Source: ATO analysis and visualization based on IIASA (2025)

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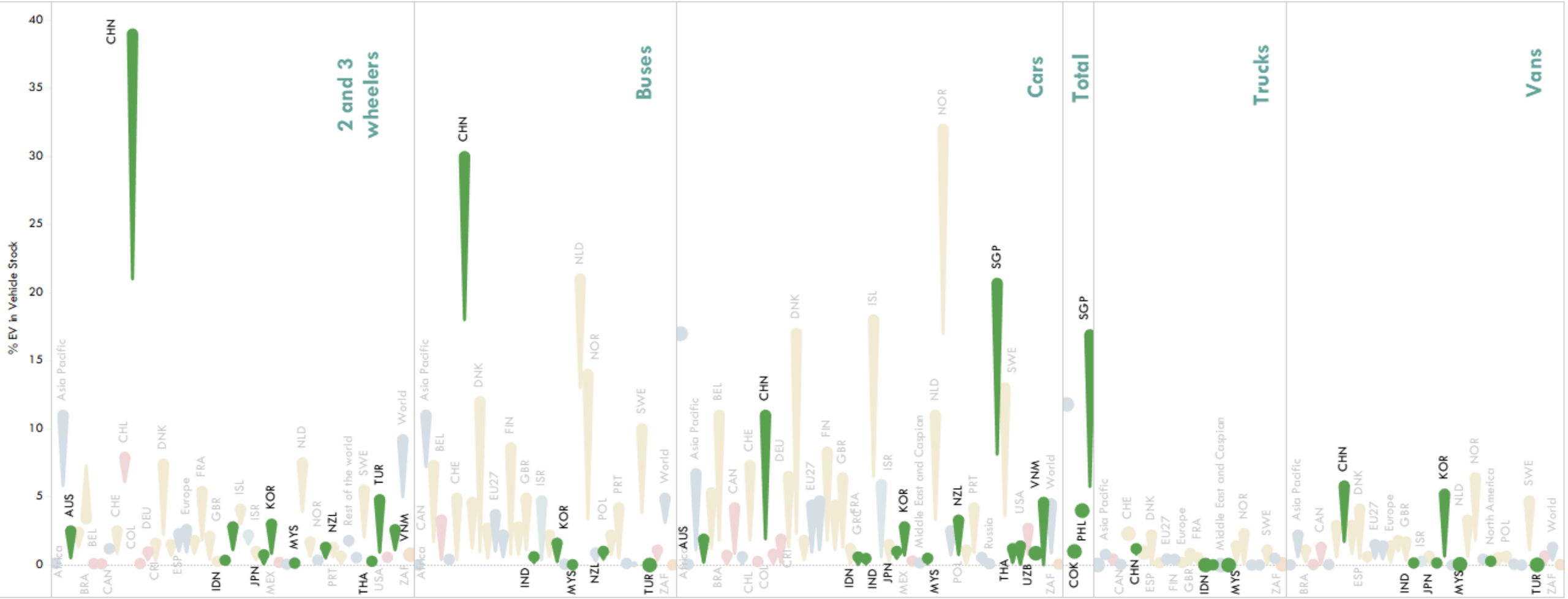
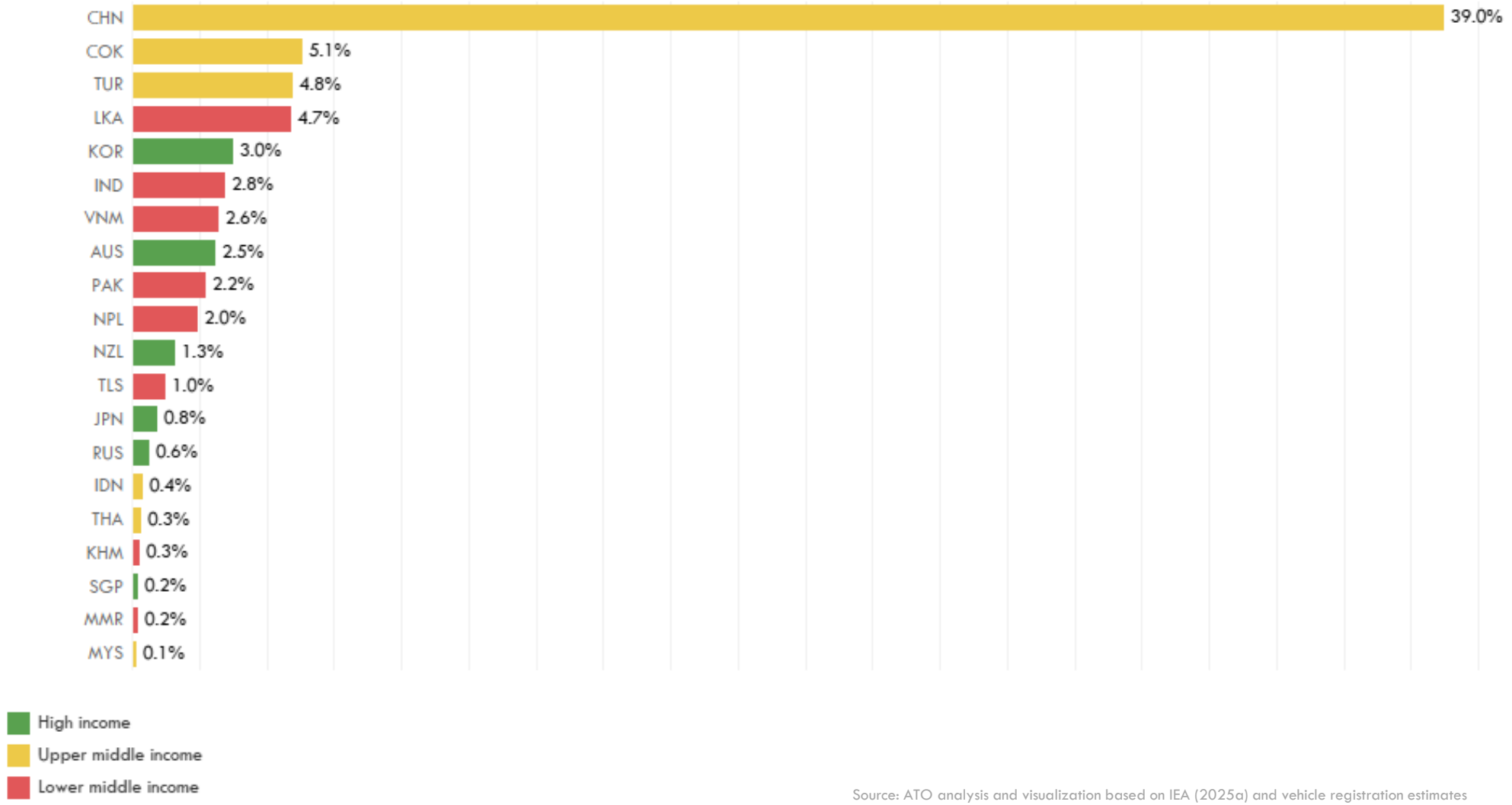
EV % in Vehicle Stock by Vehicle Type 2000 and 2024



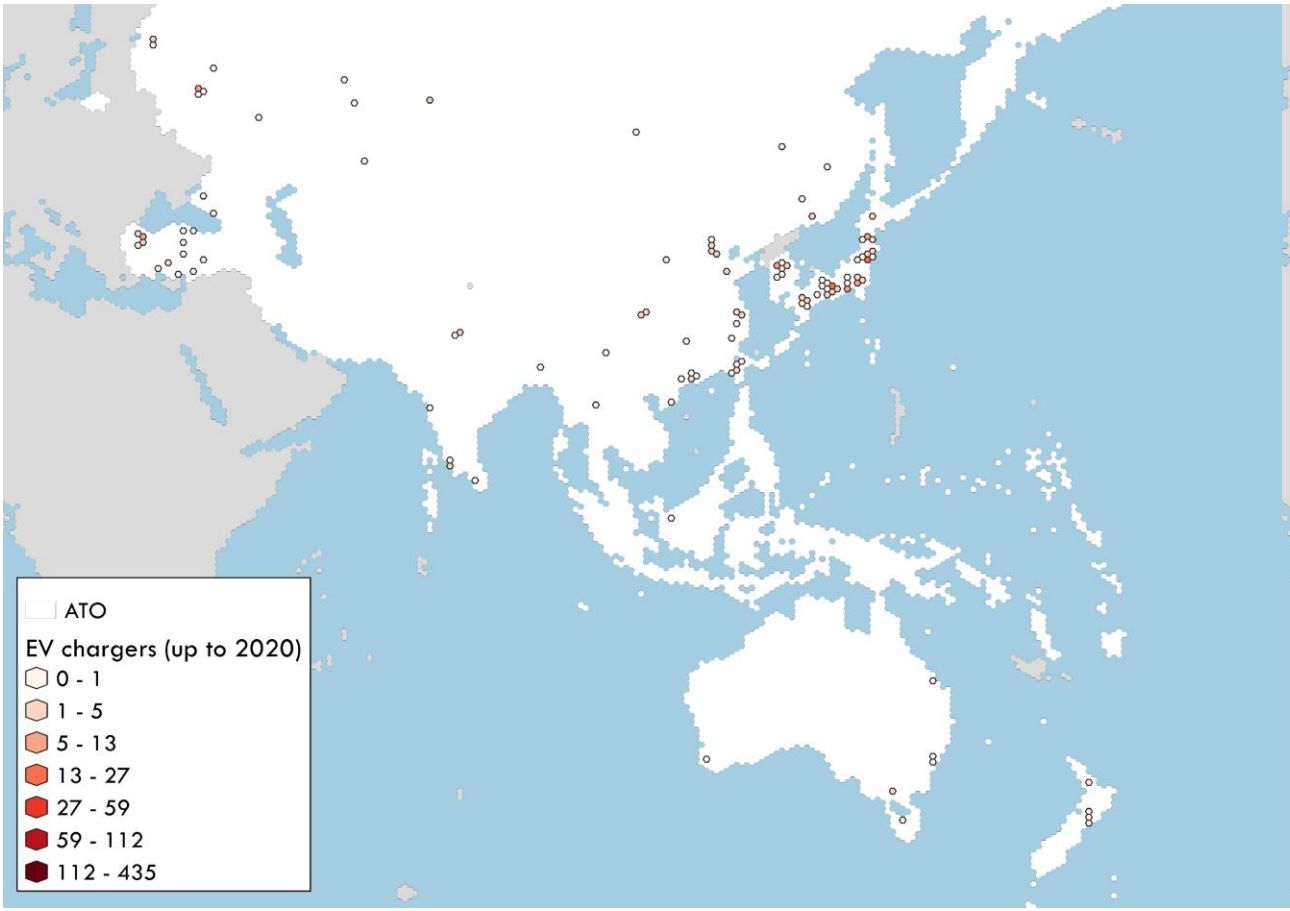
Source: ATO analysis and visualization based IEA's EV Data Explorer and other sources

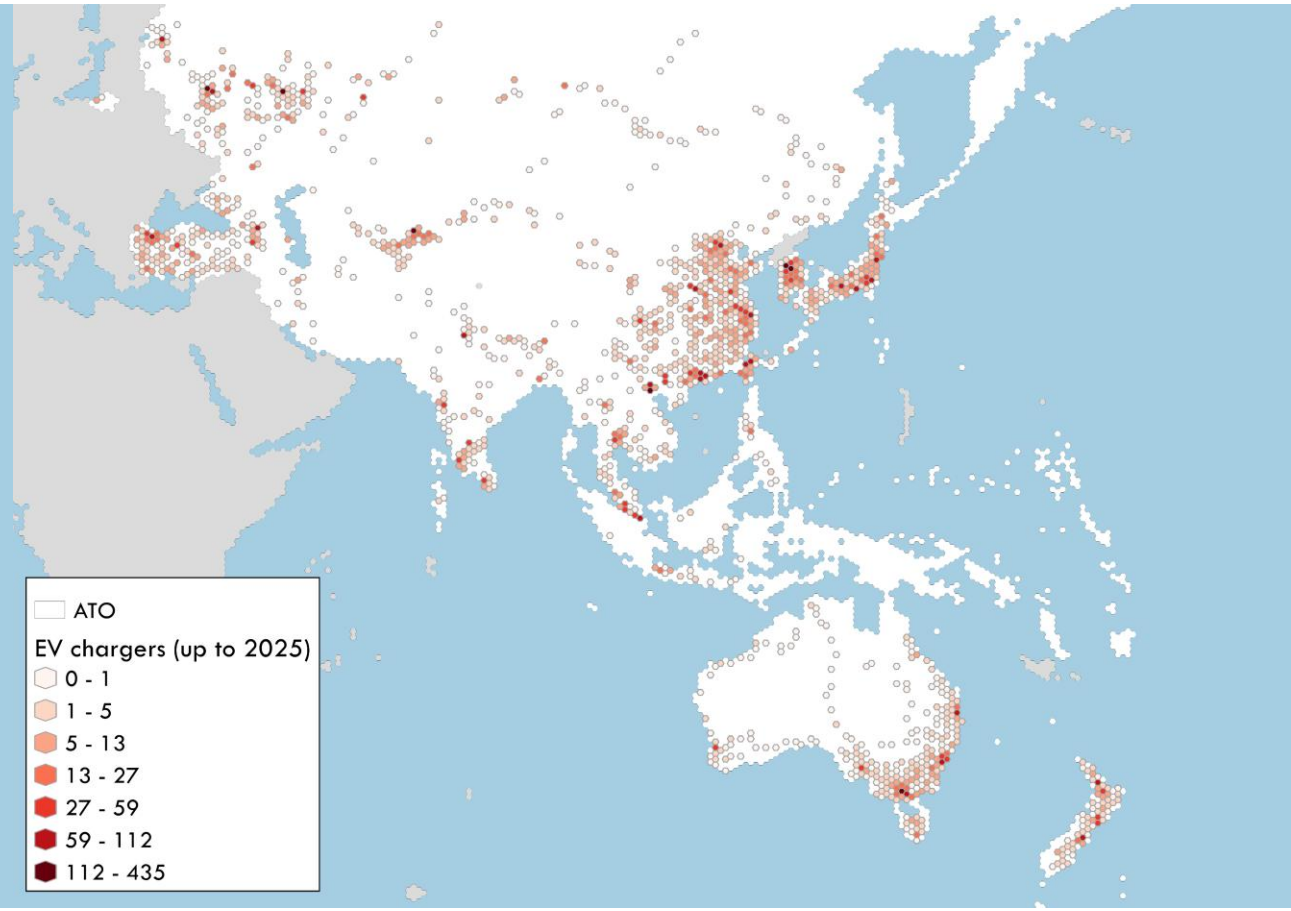
% of EV 2&3 Wheelers in Total stock



Source: ATO analysis and visualization based on IEA (2025a) and vehicle registration estimates

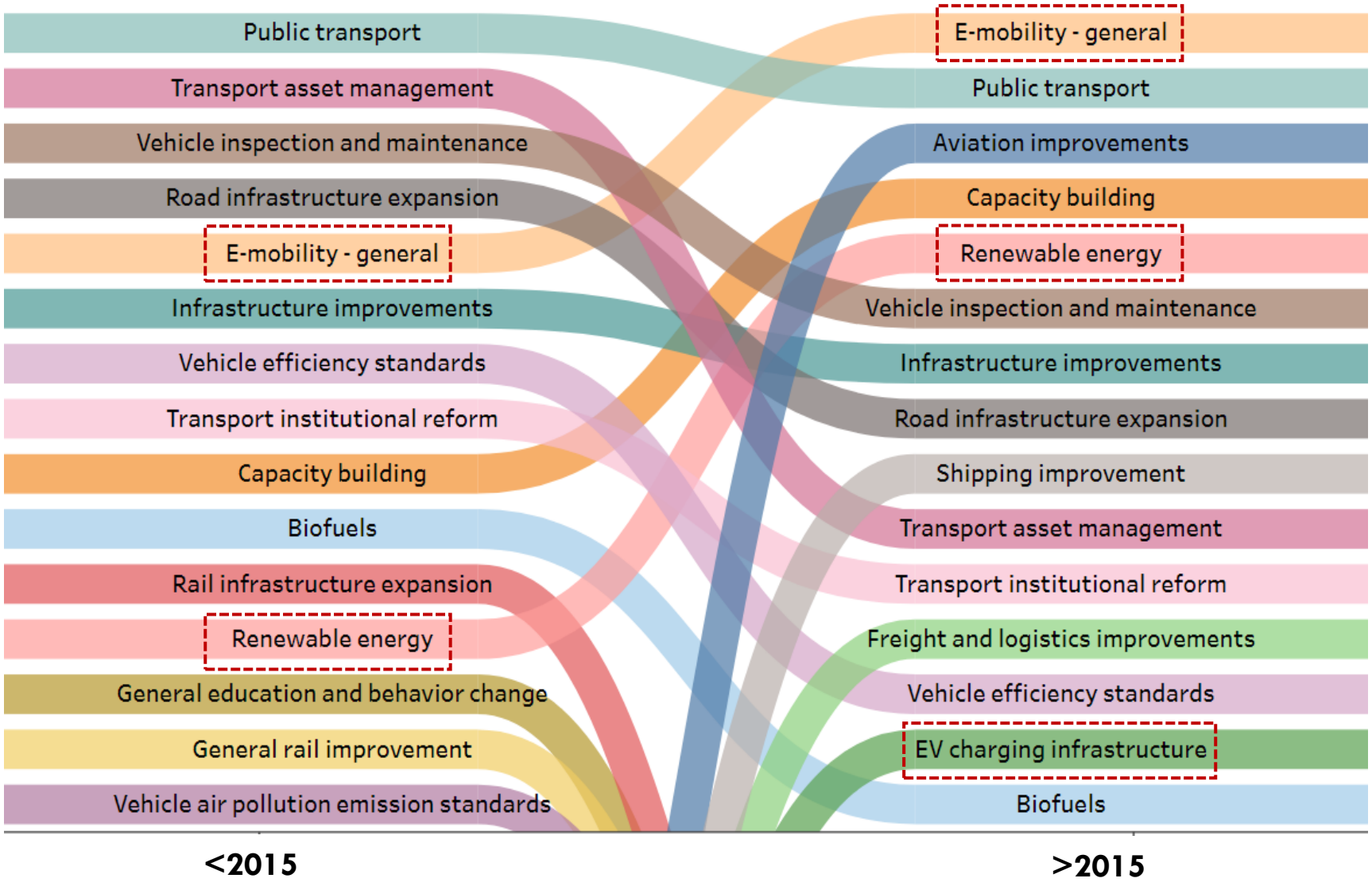
Charging infrastructure





Source: ATO visualization based on OSM data

Policy Measures in the ATO Policy Database



Source: ATO analysis and visualization based on ATO's policy tracker

asiantransportobservatory.org

"ATO translates data into insights, policies, and investments"

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