

Trajectory of urban mobility in Asia, climate change mitigation awareness

Insights from Asian Transport Outlook

- Transport Observatory for the Asia–Pacific region

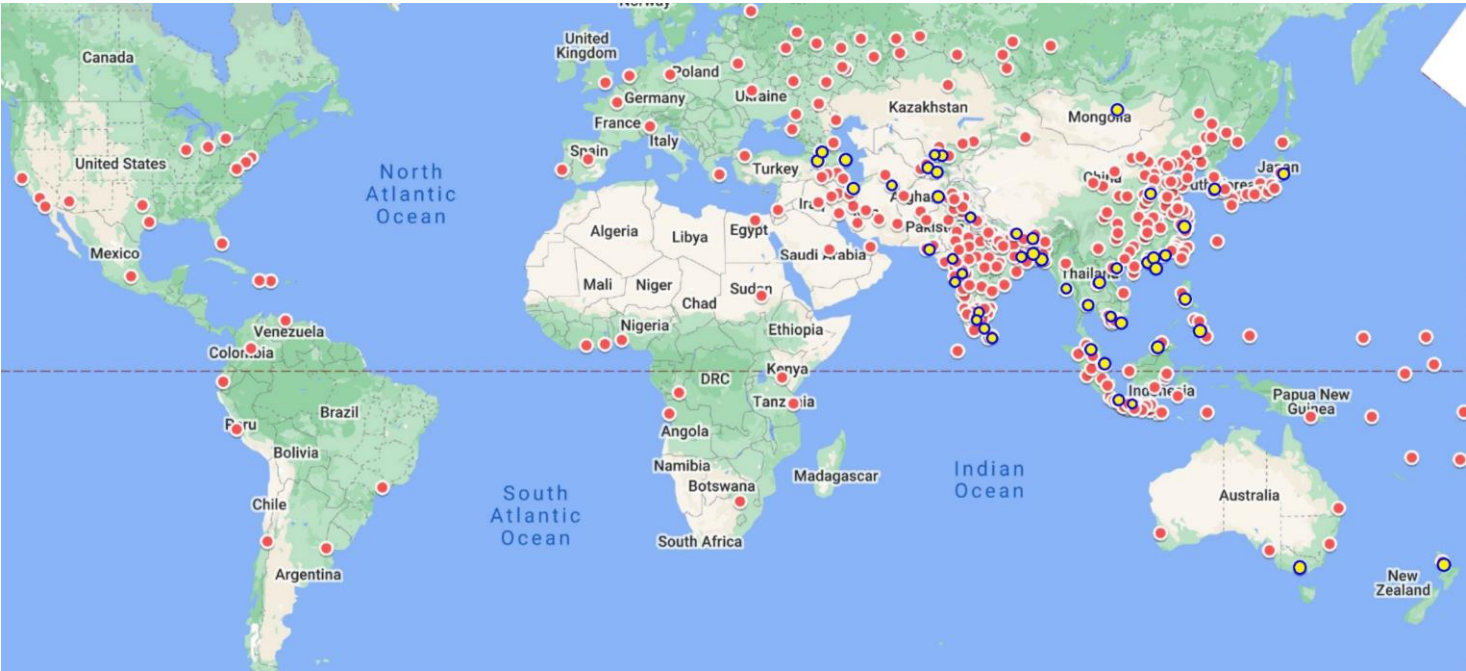
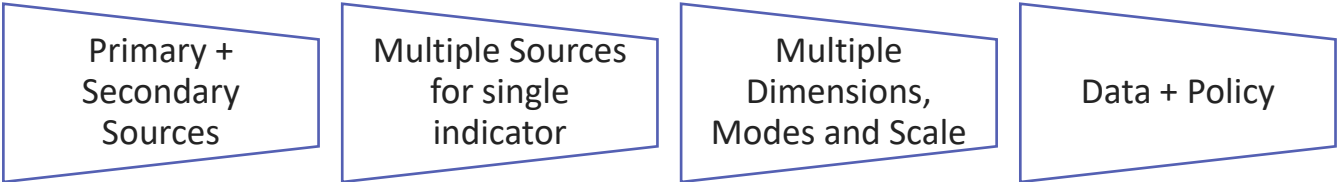
7 November 2023



Sudhir Gota (Asian Transport Outlook)



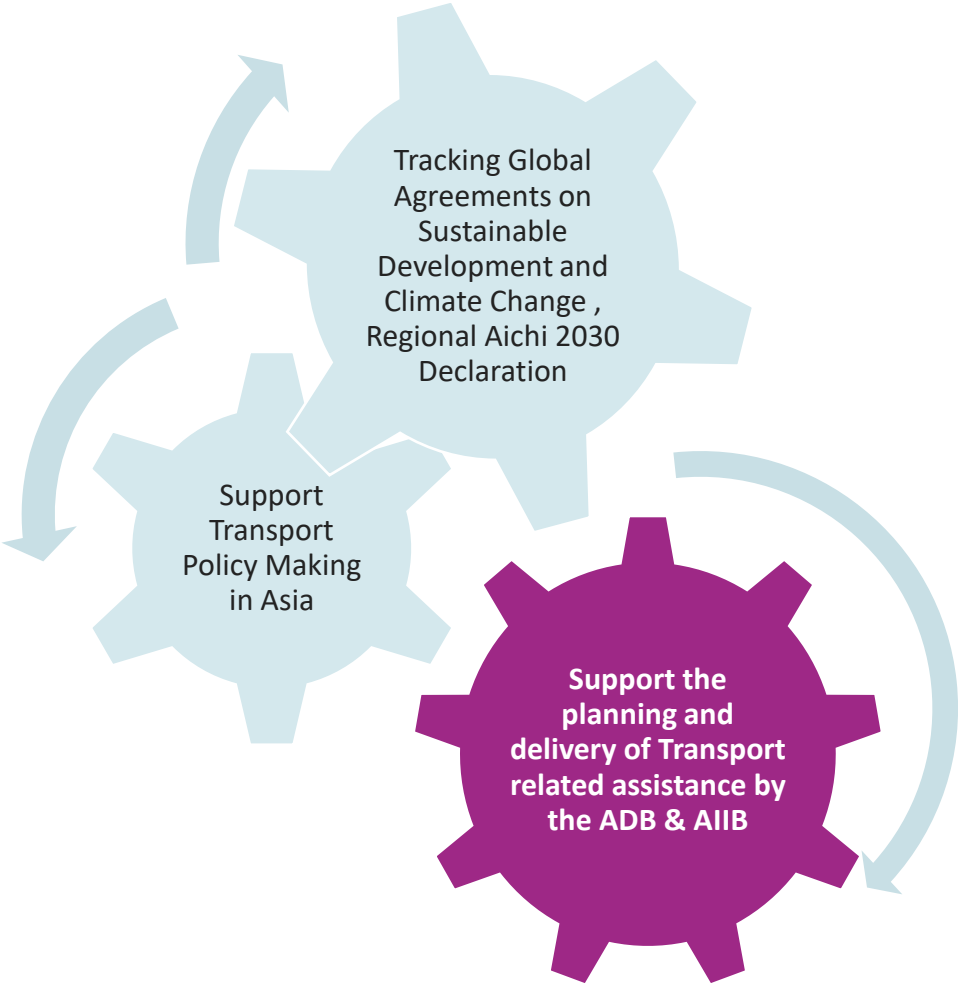
Asian Transport Outlook - Knowledge for Cities



460 Urban Centers
46* with more comprehensive primary data
** To be increased to 50*

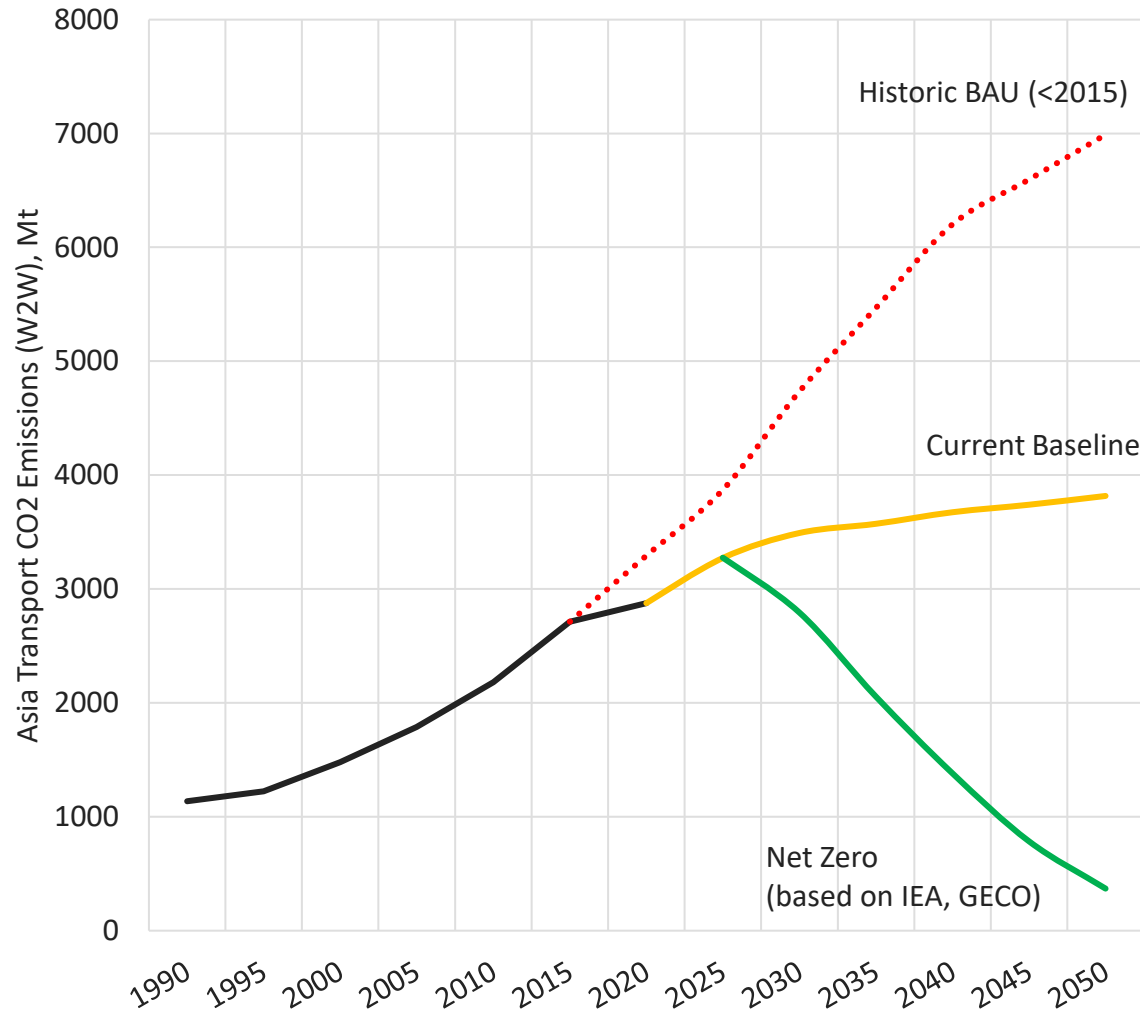
- Secondary
- Secondary + Primary

180 urban indicators

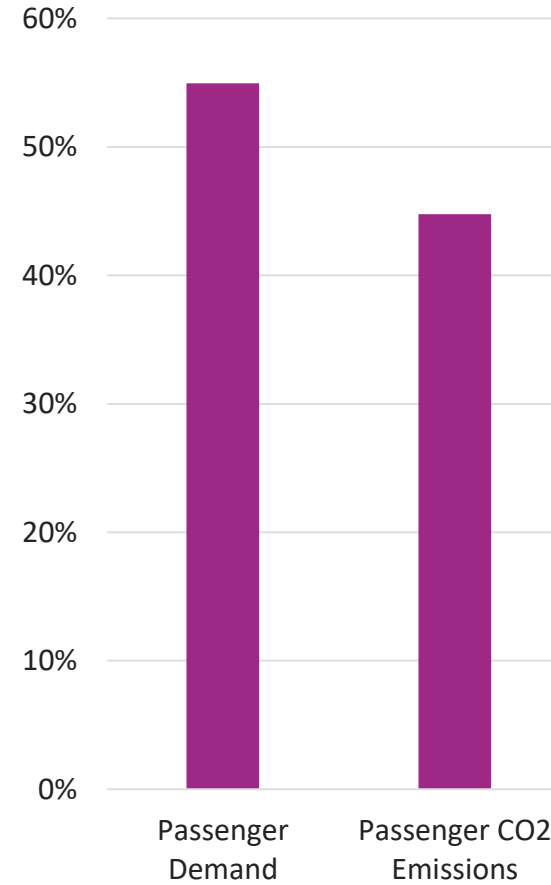


Urban Transport - Transport Sector's Climate Blind Spot

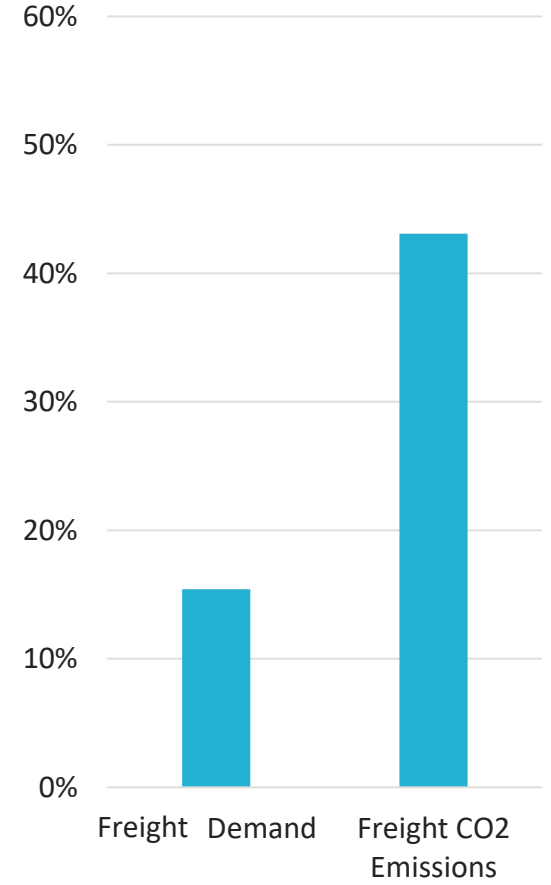
Asia Transport CO2 emissions projections



Urban Share in Passenger Transport



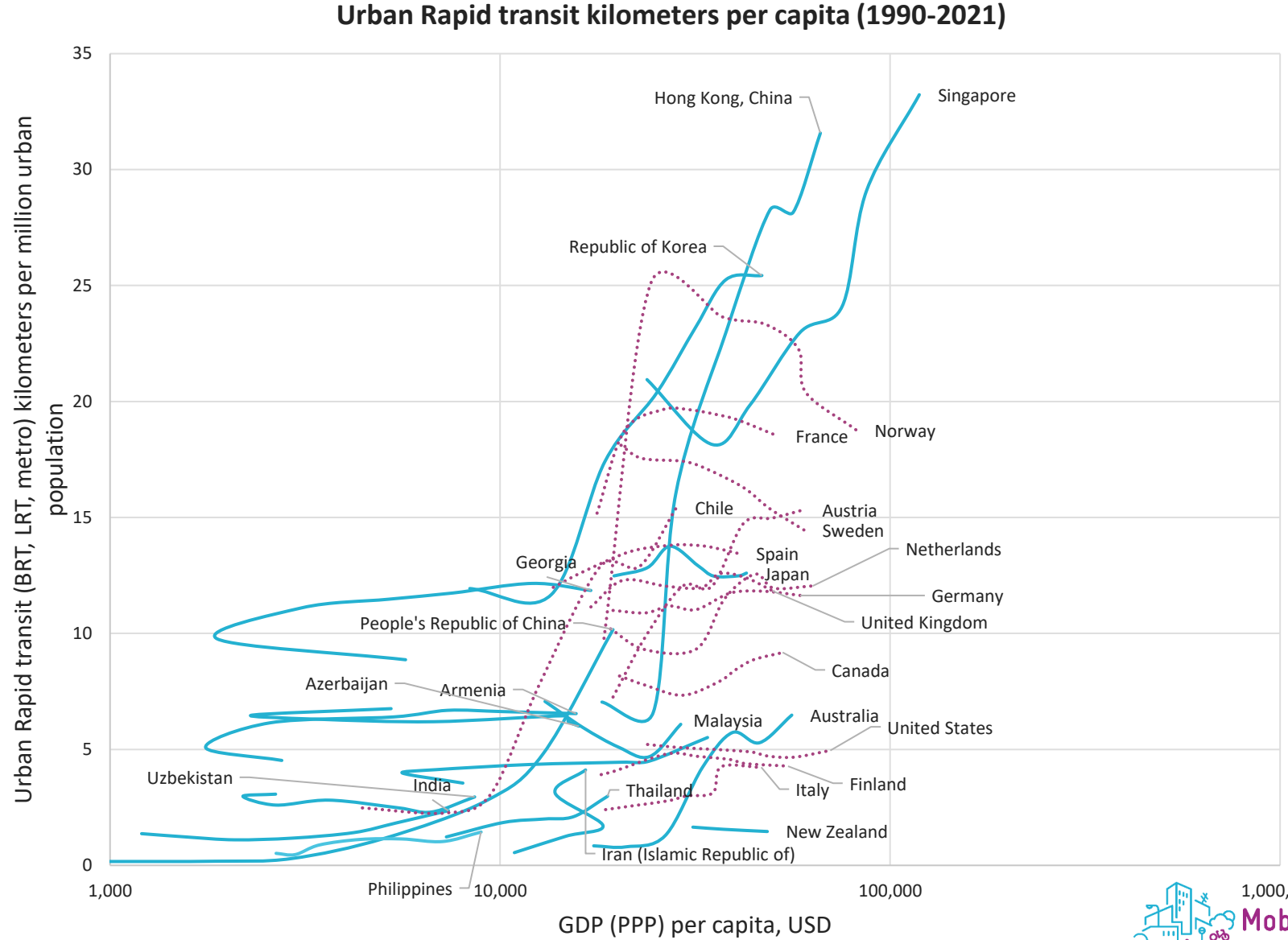
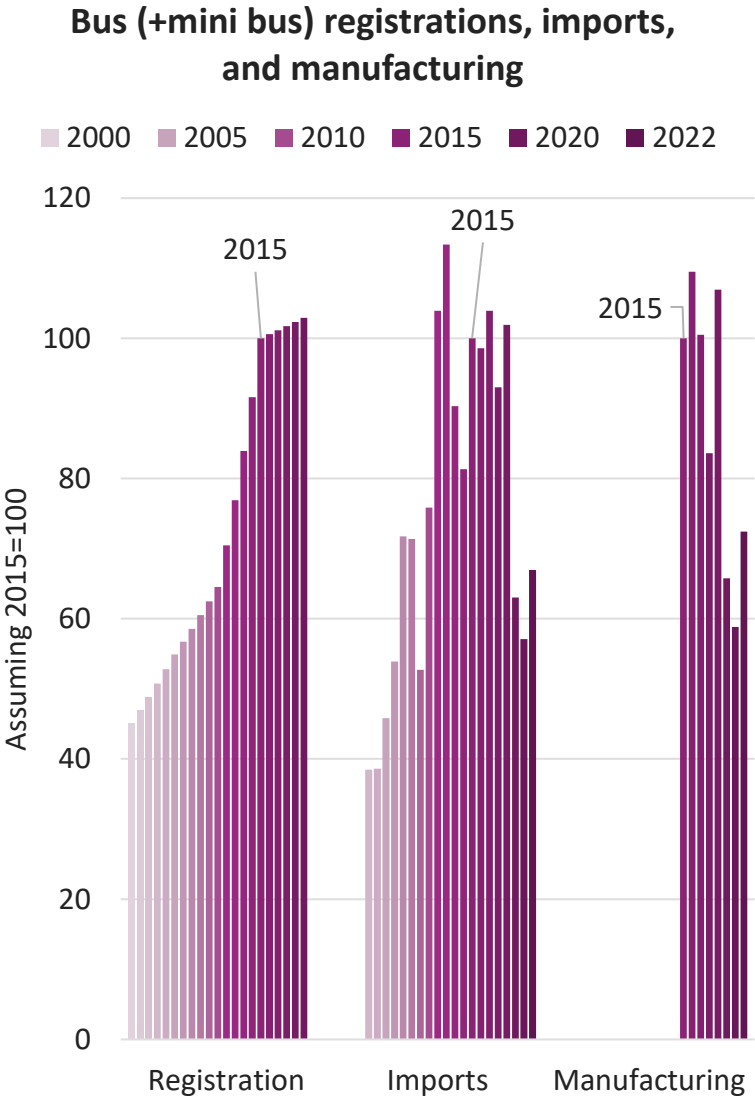
Urban Share in Freight Transport



44% of Domestic Transport CO2 emissions



Asia's Public Transport Story

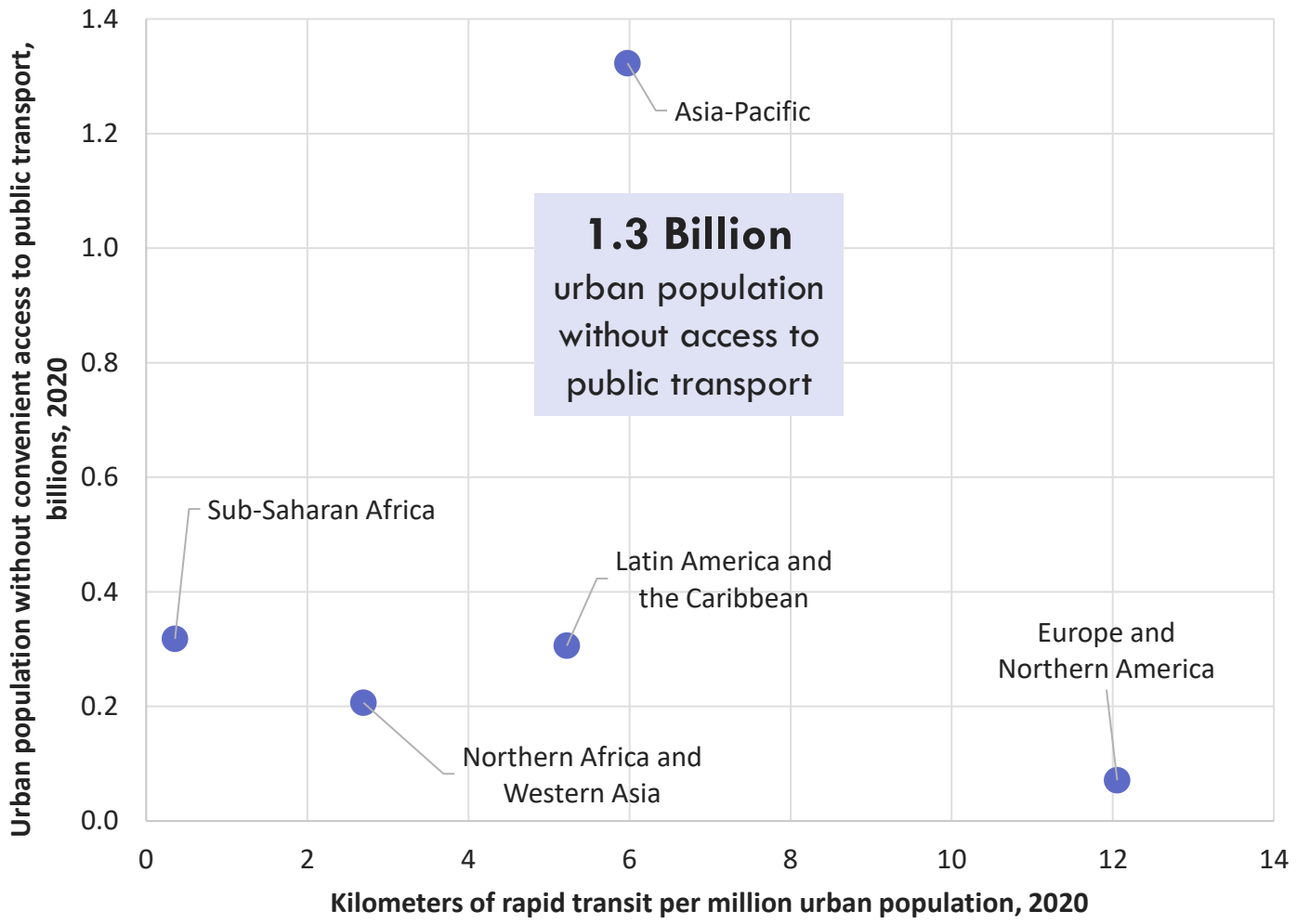


Source : Asian Transport Outlook, ITDP, OICA, TradeMap

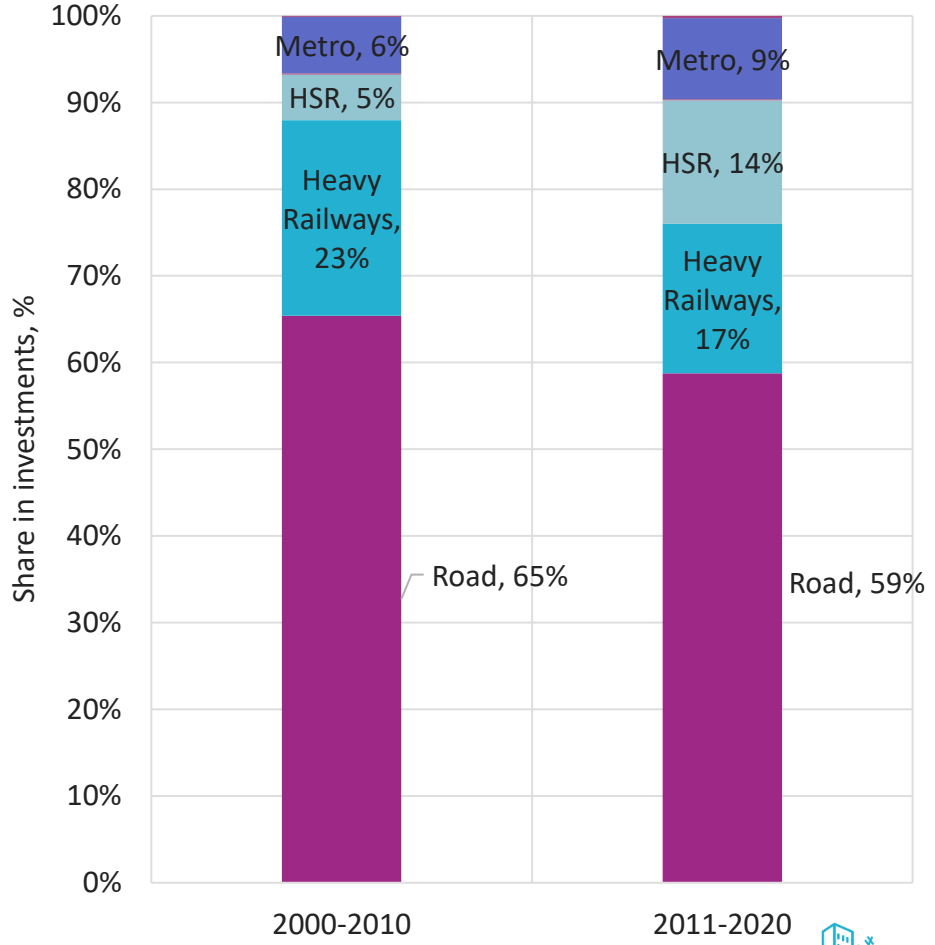


Asia's Billion Urban Access Challenge

Urban Transit Access



Transport infrastructure investment share in Asia-Pacific

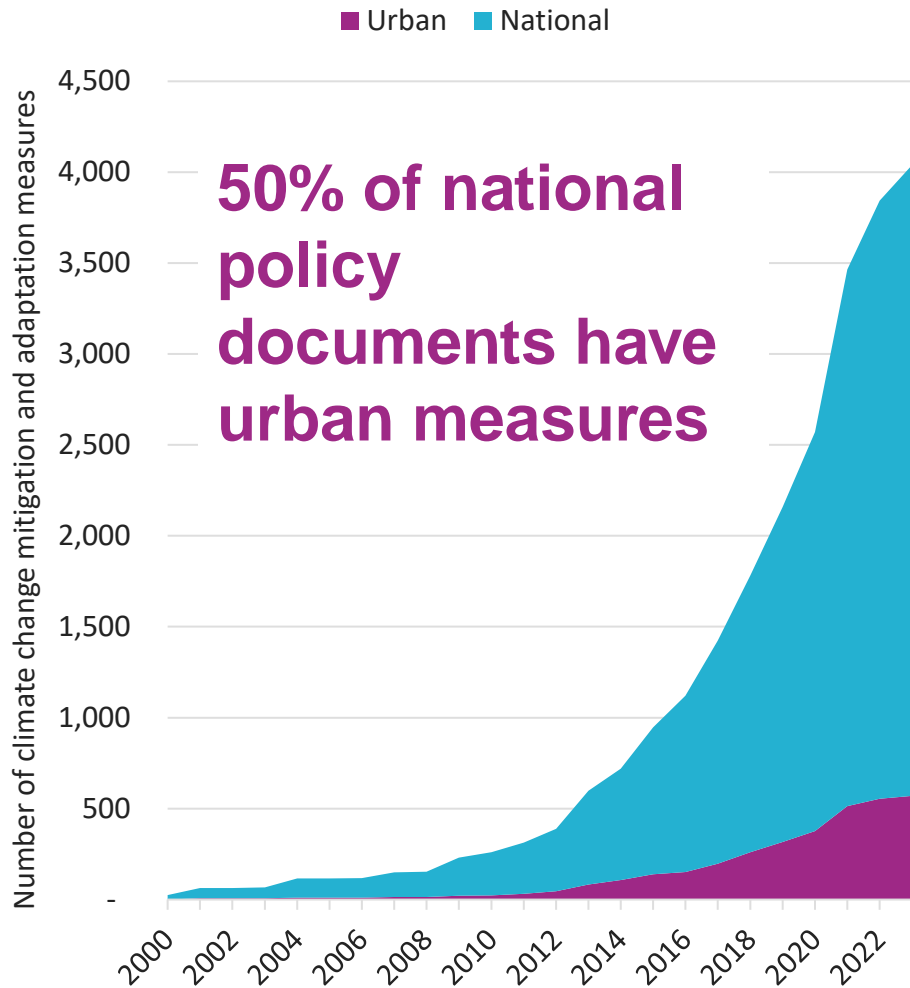


Source : Asian Transport Outlook, UN-Habitat

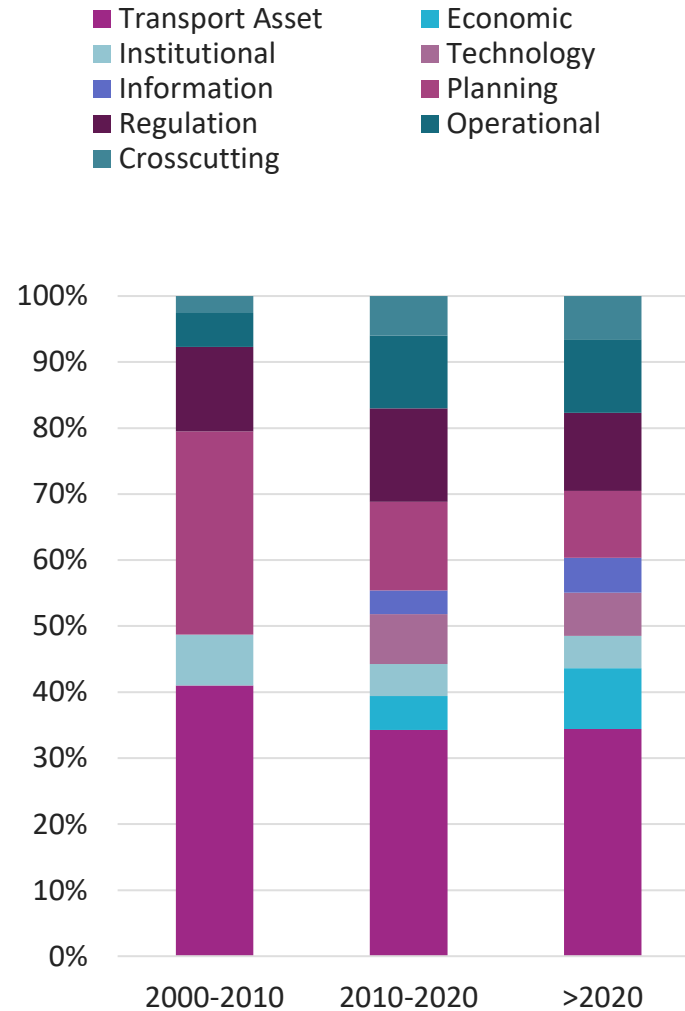


Evolution of Urban Transport Policies

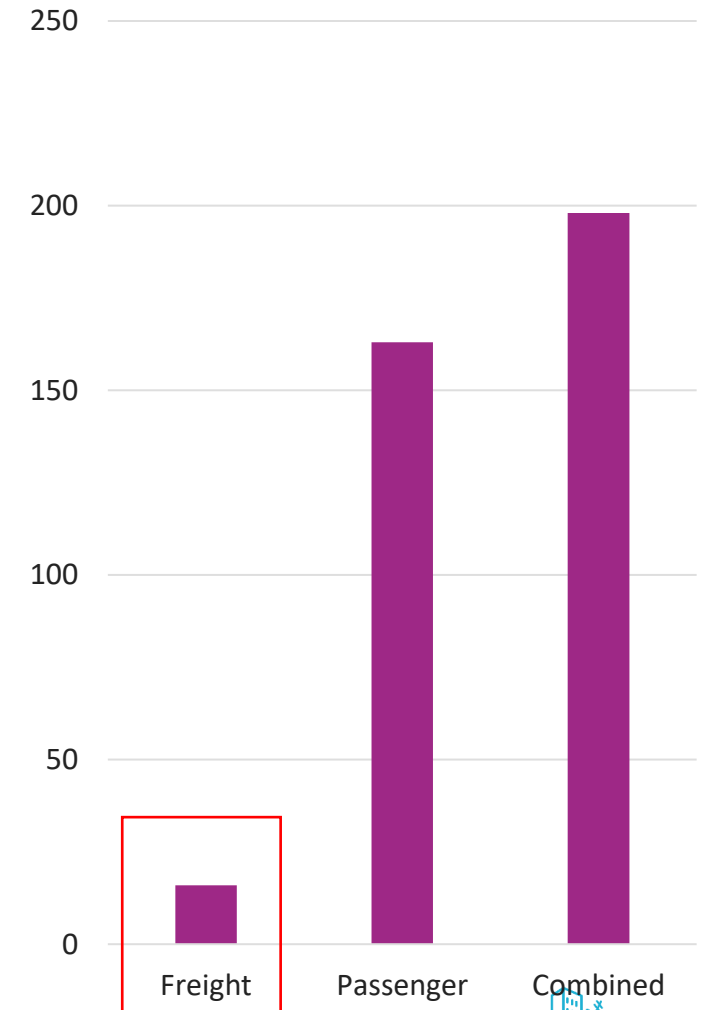
Cumulative number of policy measures



Typology of Urban Measures



Total Urban Transport Measures



Example of Urban Transport Targets

City/ Country	Transport Sector Measure	Text/Remarks	Document Name	Target year
Almaty	Bus fleet renewal	In 10 years, all buses in Almaty will be low or zero emission buses	City of Almaty Sustainable Transport Strategy	2023
Almaty	Walking measures	Our target is to increase pedestrian zones three fold by 2023.	City of Almaty Sustainable Transport Strategy	2023
Almaty	General Passenger urban access improvement	85% of the citizens will live within walking distance from their place of work or public stop	ALMATY DEVELOPMENT STRATEGY - 2050	2050
Almaty	Target - Road crash fatalities	Reduce road crash fatalities to 0.	ALMATY DEVELOPMENT STRATEGY - 2050	2050
Bandung	General road safety	Increasing Mobility Resident City and safety transport = 100% (2019 = 20%)	Strategic Plan for Bandung City Transportation	2023
Bandung	General Passenger urban access improvement	Increasing Mobility Resident City and safety transport = 100% (2019 = 20%)	Strategic Plan for Bandung City Transportation	2023
Bandung	General public transport	<ul style="list-style-type: none"> Vehicle user ratio public: private = 21:79 (2019 = 20:80) Percentage of reliable transportation service performance = 100% (2019 = 20%) 	Strategic Plan for Bandung City Transportation	2023
Bandung	General capacity building	Capacity Service Performance Relations - The city of Bandung is getting better (Public Satisfaction Index) = 78 (2019 = 70)	Strategic Plan for Bandung City Transportation	2023
Bhutan	Active transport infrastructure expansion	<ul style="list-style-type: none"> >75% of urban road should be covered with dedicated NMT tracks Construct min. 10 km of footpath every year 	(LEDS) - Surface Transport	2050
Sri Lanka	Road space repurpose to allow access for other modes	90-100% of relevant roads include bike lane.	Climate Prosperity Plan	2035
Bhutan	General active mobility	<ul style="list-style-type: none"> 18,515 public bicycles by 2050 1,850 docking stations by 2050 	Low Emission Development Strategy (LEDS) - Surface Transport	2050
Sri Lanka	General active mobility	Share of non-motorized transportation increases to 20% of all road trips.	Climate Prosperity Plan	2030
Sri Lanka	General active mobility	Share of non-motorized transportation increases to 30% of all road trips.	Climate Prosperity Plan	2035
Nepal	Ban of ICE sales	Remove all petroleum-powered vehicles from four urban centres (Kathmandu Valley, Chitwan, Hetauda and Kavre) by 2028. (Bagmati Province Periodic Plan)	Assessment of Electric Mobility Targets for Nepal's 2020 NDC	2028
Bhutan	EV charging infrastructure	1 public charging point for 6 Evs	(LEDS) - Surface Transport	2050
Indonesia	General infrastructure improvements	Number of cities with multi-level transport systems = 6 (Baseline 2019 = 3)	NMTDP 2020-2024	2024
Viet Nam	Bus fleet renewal	percentage of buses using clean energy in special urban centers is at least 15% of the total number of buses in operation and 10% of new buses in grade I cities	National Green Growth for 2021-2030	2030
Indonesia	Urban passenger rail infrastructure improvement	<ul style="list-style-type: none"> Number of metropolitan cities with urban mass public transport systems built and developed (cities) = 6 Number of cities where non-level crossings (cities) were built = 6 	Strategic Plan for the Railway Sector 2020-2024	2024
Bhutan	General public transport	<ul style="list-style-type: none"> Frequency of urban transport services during rush hours increased = 10 mins (15 mins - 2017) Increase in public transport ridership = 10% (1.07% - 2017) 	12th Five Year Plan 2018-23	2023
Malaysia	Target - Modal shift	40% rail based public transport in all cities	Green Technology Master Plan 2017-2030	2030
Philippines	Target - Modal shift	Passenger trips via rail in Metro Manila increased (% share to total passenger trips, cumulative) = 14 (from 1 in 2021)	Philippine Development Plan 2023-2028	2028
Bangladesh	Target - Modal shift	Unconditional: Modal shift from road to rail (10% modal shift of passenger-km) through BRT, MRT etc. in major cities, Multi-modal hub creation, Padma Bridge etc.	First NDC (Updated)	2030
Maldives	General transport demand management	By 2023, vehicle congestion in Greater Male' Region is reduced by 30% compared to 2018 levels	Strategic Action Plan 19-23	2023

Example of Urban Policy Measures - Bandung

Transport Sector Measure	Text/Remarks	Document Name
Vehicle Inspection and maintenance	Mandatory periodic testing of motor vehicles	Bandung City Transportation Work Plan
General transport asset management	Road rehabilitation and maintenance	Bandung City Transportation Work Plan
General capacity building	Education and employee training based on tasks and function	Bandung City Transportation Work Plan
Development of other transport-related plan/ policy	Preparation of implementation network master plan Regency/ City LLAJ	Bandung City Transportation Work Plan
Bike Sharing	Provision bike sharing system,	Strategic Plan for Bandung City Transportation
General public transport	<ul style="list-style-type: none"> • Increase use of public transportation • Improving the quality of roadworthy public transportation • Increasing the movement of transportation modes from vehicles private to public vehicles/transport, 	Strategic Plan for Bandung City Transportation
General public transport	Increasing urban infrastructure services by encouraging an increase in the number of metropolitan cities with built and developed urban mass public transportation systems (cities)	Bandung City Regional Government Work Plan (RKPD) 2022
Urban rail electrification	electrification of the Padalarang-Kiaracondong railway line	Bandung City Spatial Plan 2011-2031
Development density or intensiveness	develop a compact, intensive and urban space pattern	Bandung City Spatial Plan 2011-2031
Transit Oriented Development	development oriented towards transportation network patterns	Bandung City Spatial Plan 2011-2031
Bus fleet renewal	modal rejuvenation and increasing transport capacity	Bandung City Spatial Plan 2011-2031
Public transport pricing	optimizing tariff setting policies	Bandung City Spatial Plan 2011-2031
Congestion charging	development of a strategy for imposing tariffs on nearby roads of the city centre	Bandung City Spatial Plan 2011-2031
Traffic flow improvement	traffic engineering and management	Bandung City Spatial Plan 2011-2031
Public Private Partnership	<ul style="list-style-type: none"> • opening up investment and partnership opportunities for the private sector and the community in providing infrastructure and facilities • increasing private participation in development public transportation 	Bandung City Spatial Plan 2011-2031
General Institutional/ governance	<ul style="list-style-type: none"> • optimize system control and administration of city transportation • improving the transportation sector institutional system 	Bandung City Spatial Plan 2011-2031
General education and behavior change	encouraging alternative modal development movement to the city center using modes public transportation	Bandung City Spatial Plan 2011-2031

Example of Urban Policy Measures - Almaty

Transport Sector Measure	Text/Remarks	Document Name
Vehicle air pollution emission standards	City will replace old buses with new and modern trolley buses, CNG buses or diesel buses, complying with EURO 5 standards or higher	City of Almaty Sustainable Transport Strategy
Walking measures	Introduce several pedestrian-only zones in the city centre	City of Almaty Sustainable Transport Strategy
General innovations and digitalization	A metropolitan automatic traffic light management system will be introduced The system will provide real-time analysis of road conditions and congestion and will manage the smart traffic light system that will ensure the efficient usage of intersection space	City of Almaty Sustainable Transport Strategy
Development of other transport-related plan/ policy	A separate parking strategy document has been prepared during 2013	City of Almaty Sustainable Transport Strategy
Vehicle scrappage scheme/ centres	Akimat will gradually implement a scrapping plan that will provide incentives to owners of old polluting vehicles to replace them with newer less polluting vehicles .	City of Almaty Sustainable Transport Strategy
Express lanes / public transport priority	Along many main streets, special bus lanes will be allocated, and buses will be given priority at some traffic signals to minimize waiting time	City of Almaty Sustainable Transport Strategy
Public transit integration	Along many main streets, special bus lanes will be allocated, and buses will be given priority at some traffic signals to minimize waiting time	City of Almaty Sustainable Transport Strategy
General commuter trip reduction	Avoid unnecessary high pollution emission trips within the city	City of Almaty Sustainable Transport Strategy
General road safety	design additional zebra crossings at streets with high volume of pedestrian activities, such as Abbay St.	City of Almaty Sustainable Transport Strategy
Bus fleet renewal	introduce modern and attractive bus service, operating with standard or articulated buses, bringing passengers to the city centre quickly	City of Almaty Sustainable Transport Strategy
Access restriction by corridor/ road	Heavy trucks (including ones with hazardous materials), will be diverted onto bypassing roads, and will be completely prohibited from entering the city centre during peak hours	City of Almaty Sustainable Transport Strategy
Development density or intensiveness	intensification of land uses in the city centre and will try to minimize suburbanization .	City of Almaty Sustainable Transport Strategy
Low-emission vehicle zones	Introduce a low emission zone in the city centre	City of Almaty Sustainable Transport Strategy
Road geometry improvement	introduce traffic circles instead of a standard at-grade intersection	City of Almaty Sustainable Transport Strategy
Integrated ticketing	Need only one electronic ticket to transfer between all modes (Metro, LRT, BRT and Bus)	City of Almaty Sustainable Transport Strategy
Disability access planning/ Barrier free design	New buses will be more client-oriented: low floor	City of Almaty Sustainable Transport Strategy
Car sharing	promote a carpooling program	City of Almaty Sustainable Transport Strategy
General e-mobility	promote the use of zero emission vehicles (like electric vehicles)	City of Almaty Sustainable Transport Strategy
EV charging infrastructure	reserving spaces for the use vehicles with charging options	City of Almaty Sustainable Transport Strategy
Parking Reservations	<ul style="list-style-type: none"> Residents will enjoy free parking upon purchasing a relatively cheap annual permit . zero emission vehicles (like electric vehicles) by giving these vehicles priority for on-street parking 	City of Almaty Sustainable Transport Strategy
General education and behavior change	A large role will be given to educating the public on travel planning and stimulating nonmotorized movements.	ALMATY DEVELOPMENT STRATEGY - 2050
Ban of ICE sales	phased indicators for the phase-out of diesel vehicles.	ALMATY DEVELOPMENT STRATEGY - 2050

Bending the Curve: Urban Transport in Asia

Urban Transport Demand and CO2 Emissions



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

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