

Transport in the Philippines

- State of Play

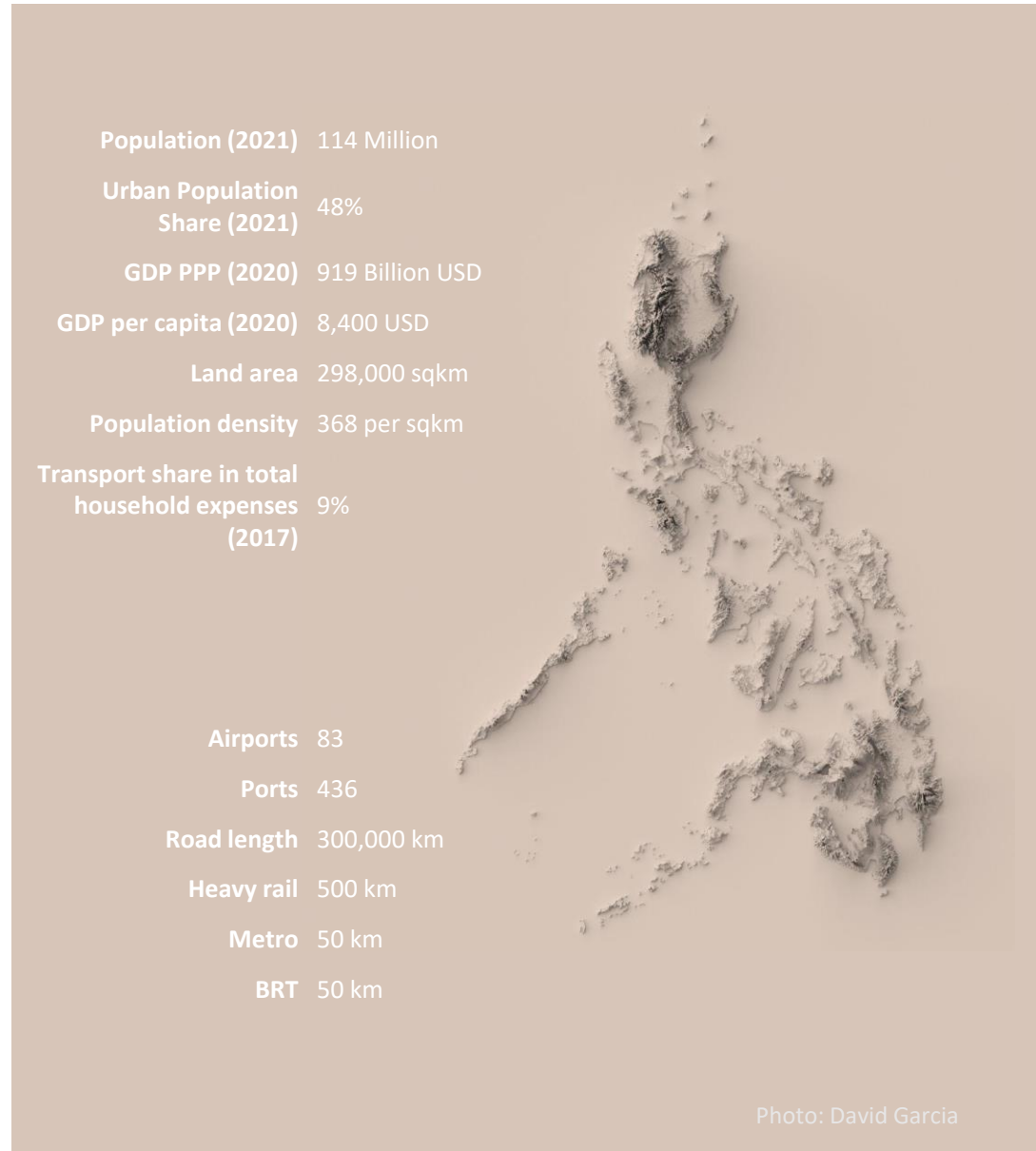


Country Profile

The Philippines is a Southeast Asian country located in the western Pacific Ocean. It is an archipelago consisting of more than 7,000 islands.

As an archipelago, the Philippines relies primarily on maritime transport for inter-island connectivity, economic development, tourism, and logistics.

The Philippines' unique circumstances present opportunities and challenges that require effective infrastructure, safety measures, and sustainable practices to support the country's transportation needs.

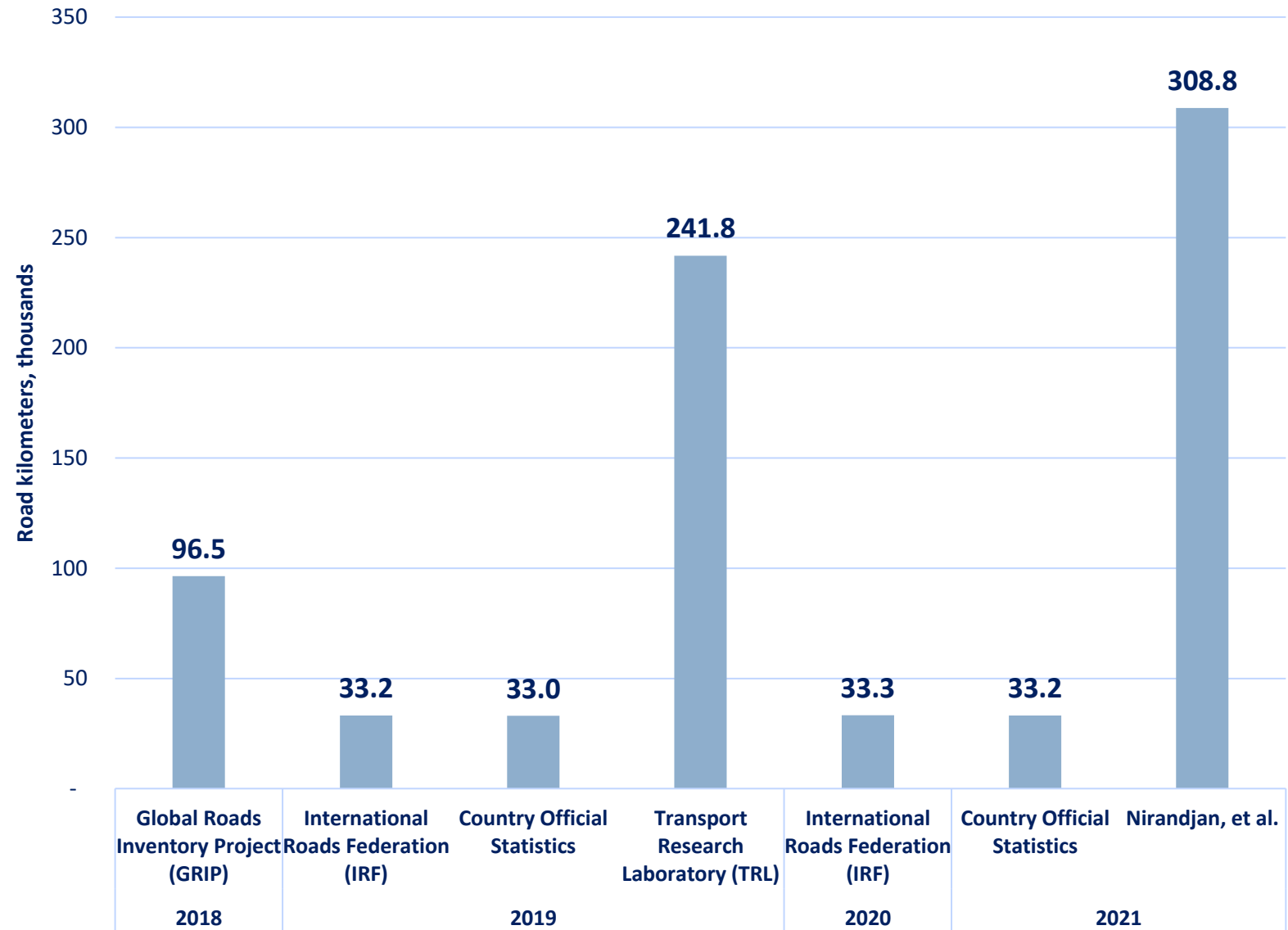


Infrastructure



Data officially reported by the Philippines is only limited to highways and motorways managed by the Department of Public Works and Highways.

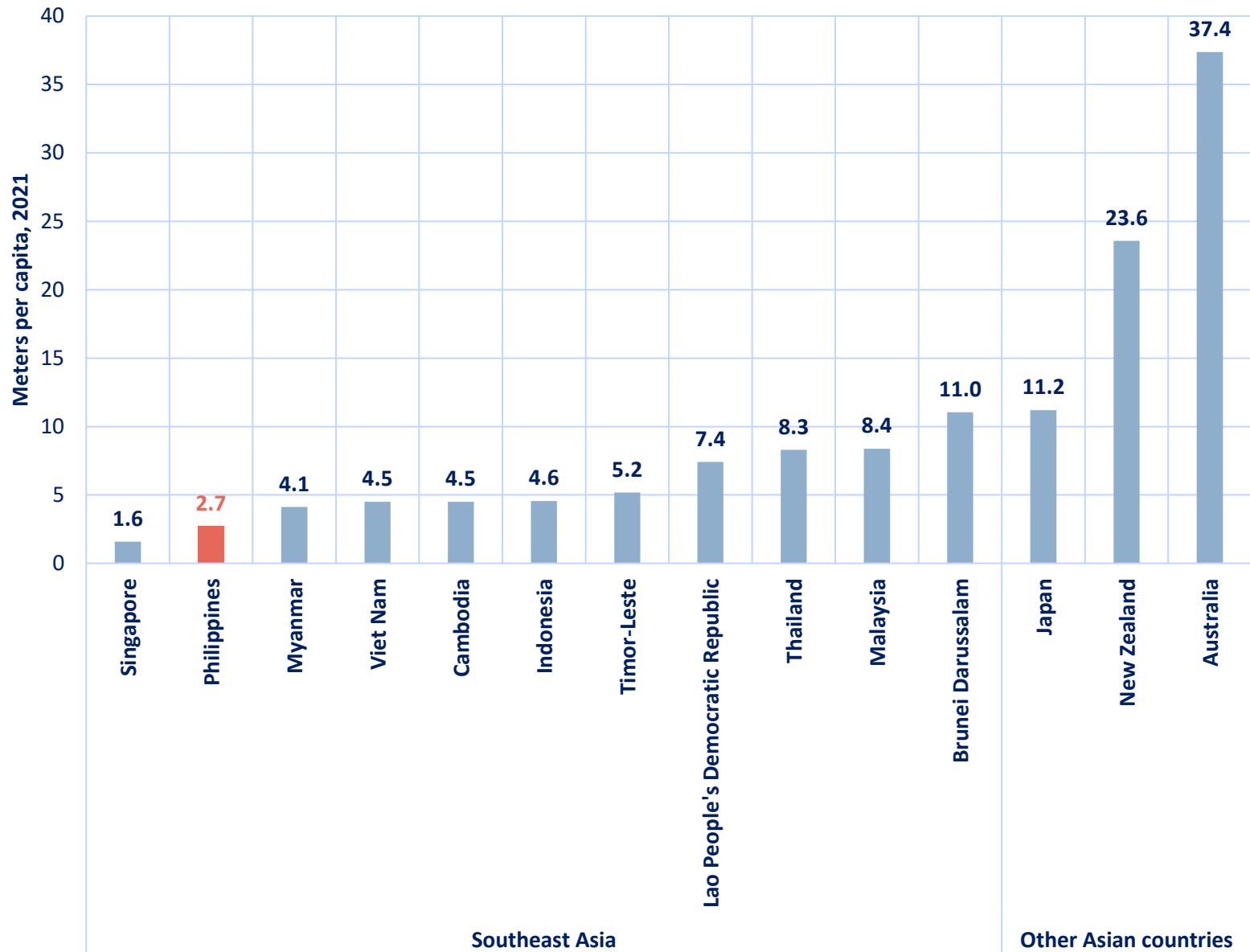
Total Road Kilometers



Source: ATO, GRIP, IRF, Country Official Statistics, TRL, Nirandjan, et al.

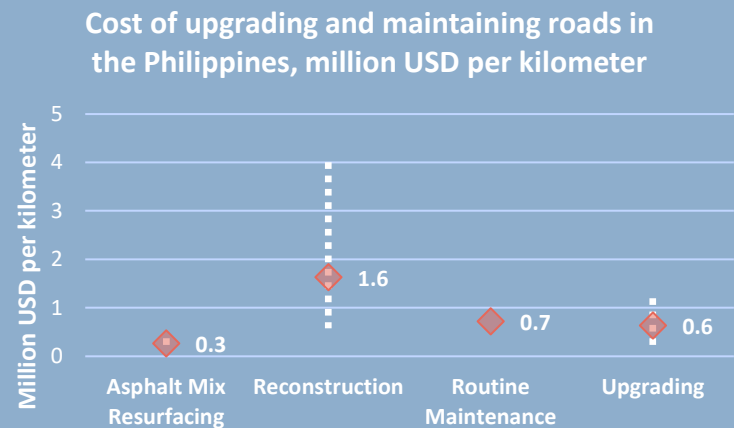
Road Infrastructure per capita

Road length per capita in Philippines (2.7m) is significantly lower than rest of Asia (3.2m) and rest of the world (10.5m)



Almost all highways (by DPWH) of the Philippines are paved

Upgrading roads in the Philippines cost from 300 thousand USD to 1.6 million USD per kilometer.



Share of Paved Roads

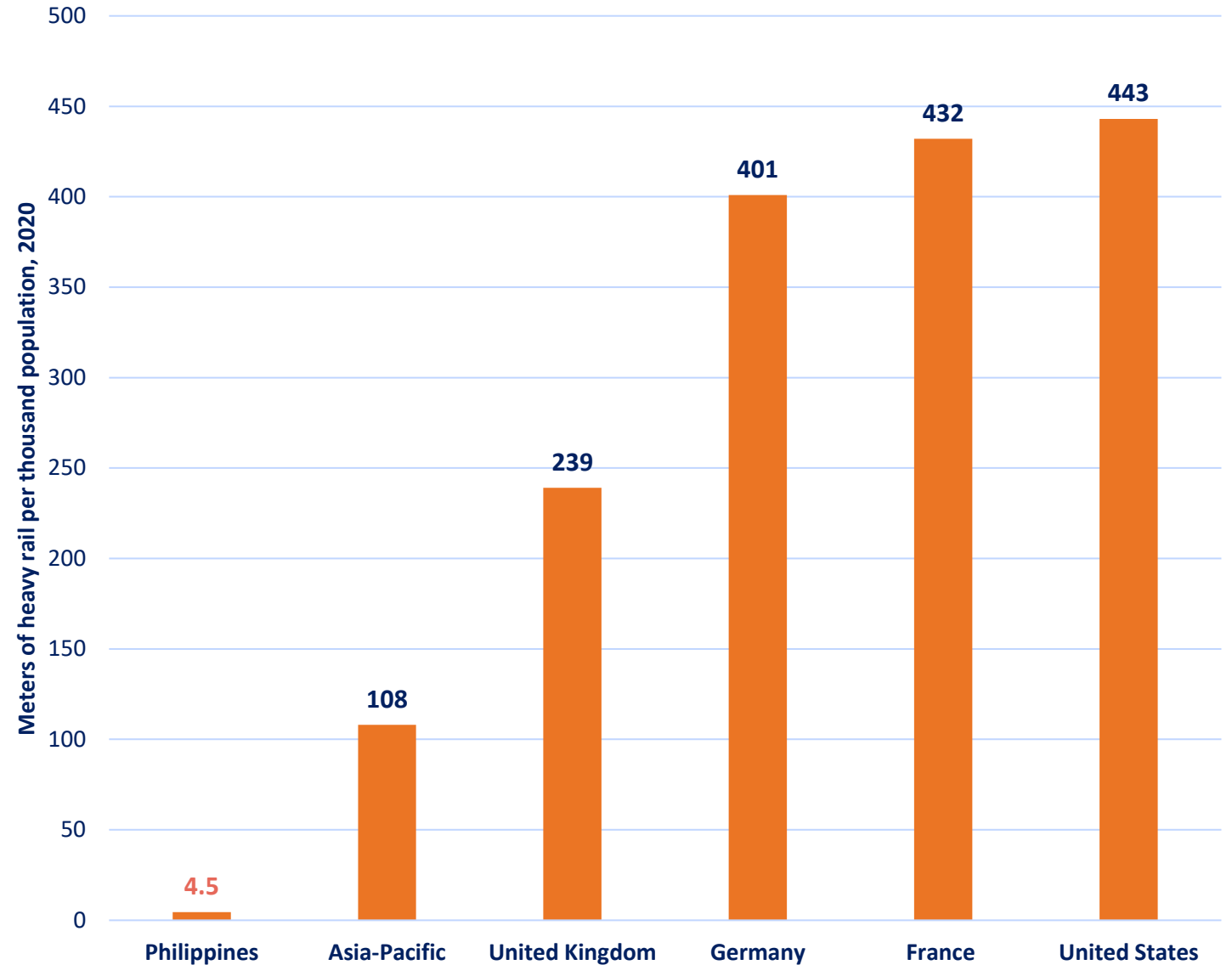


*Paved ratio is for highways only

Source: ATO, Country Official Statistics, World Bank, UN DESA

Only 500 kilometers of heavy rail infrastructure is present in the country providing 4.5 meters per thousand population in the Philippines, far from Asia average and global countries.

Heavy Railway Infrastructure

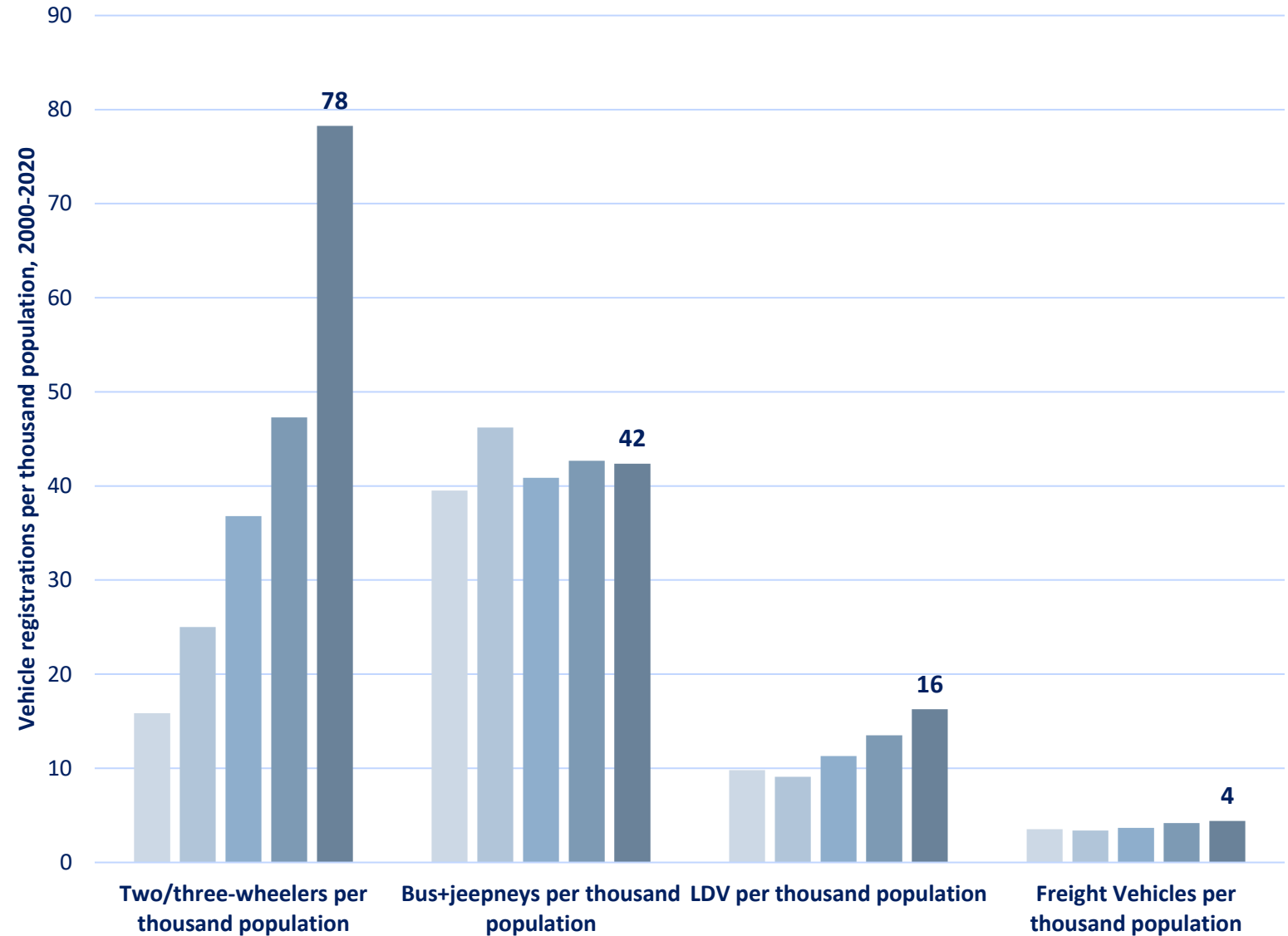


Transport Demand



Vehicle Ownership in the Philippines

■ 2000 ■ 2005 ■ 2010 ■ 2015 ■ 2020



Vehicle motorization per thousand population in the Philippines continue to grow, particularly in 2/3-wheelers.

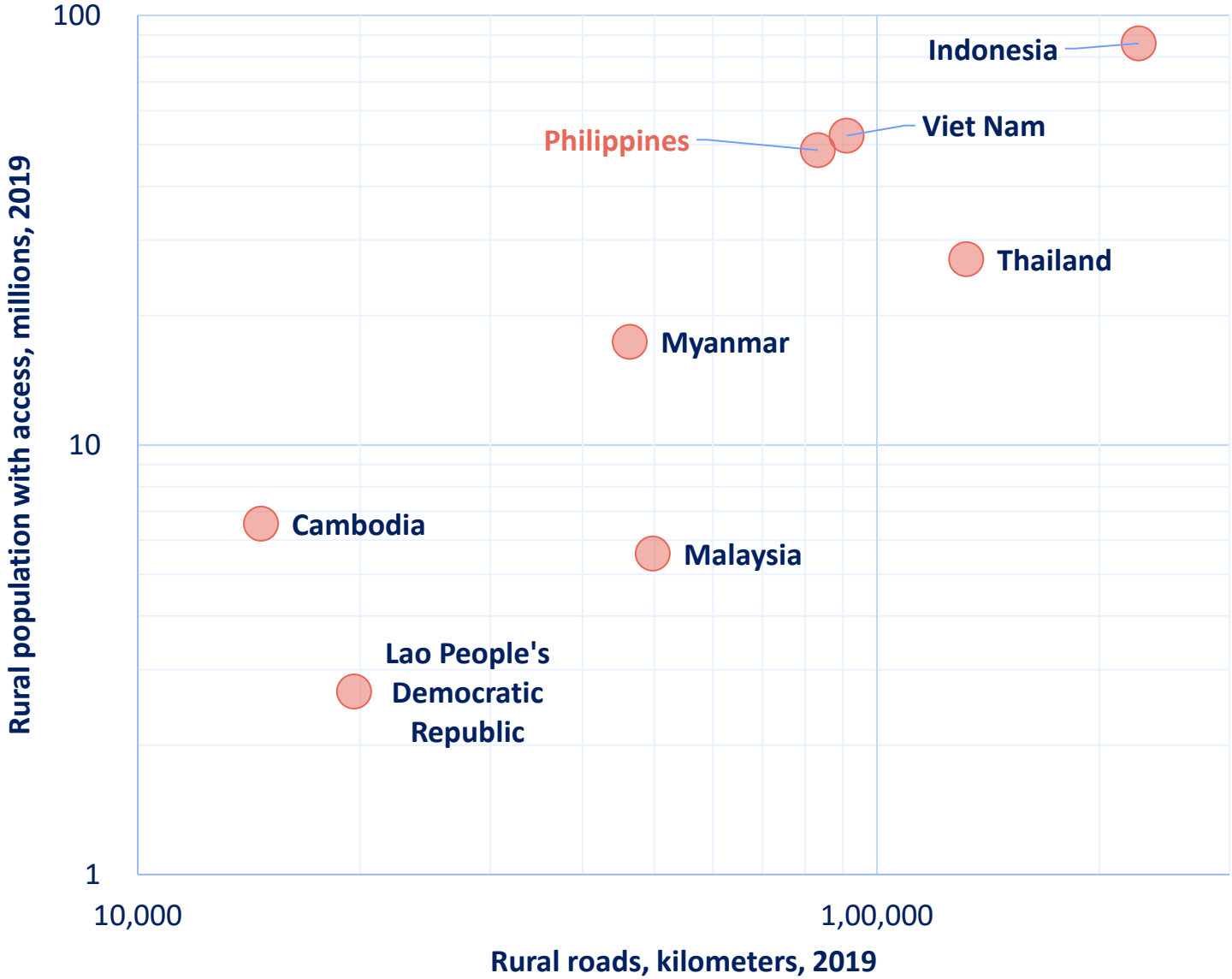
Asian
Transport
Outlook

Access &
Connectivity



Access to all-season roads

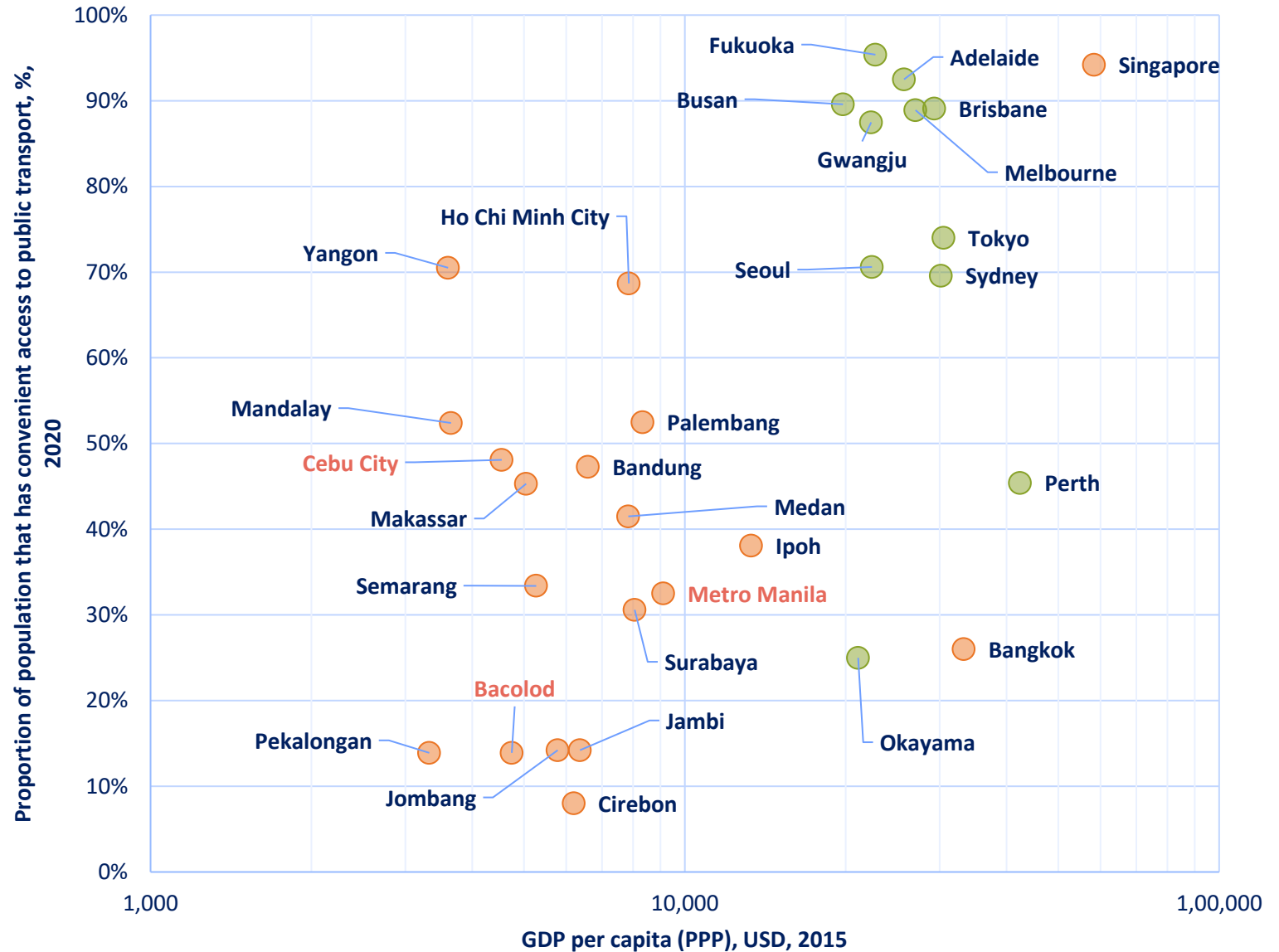
Currently, there are 83,000 km of rural roads serving 49 million rural population in the Philippines.



Access to public transport

In Metro Manila, only 33% of residents live close to 500m from a public transport stop (SDG*)

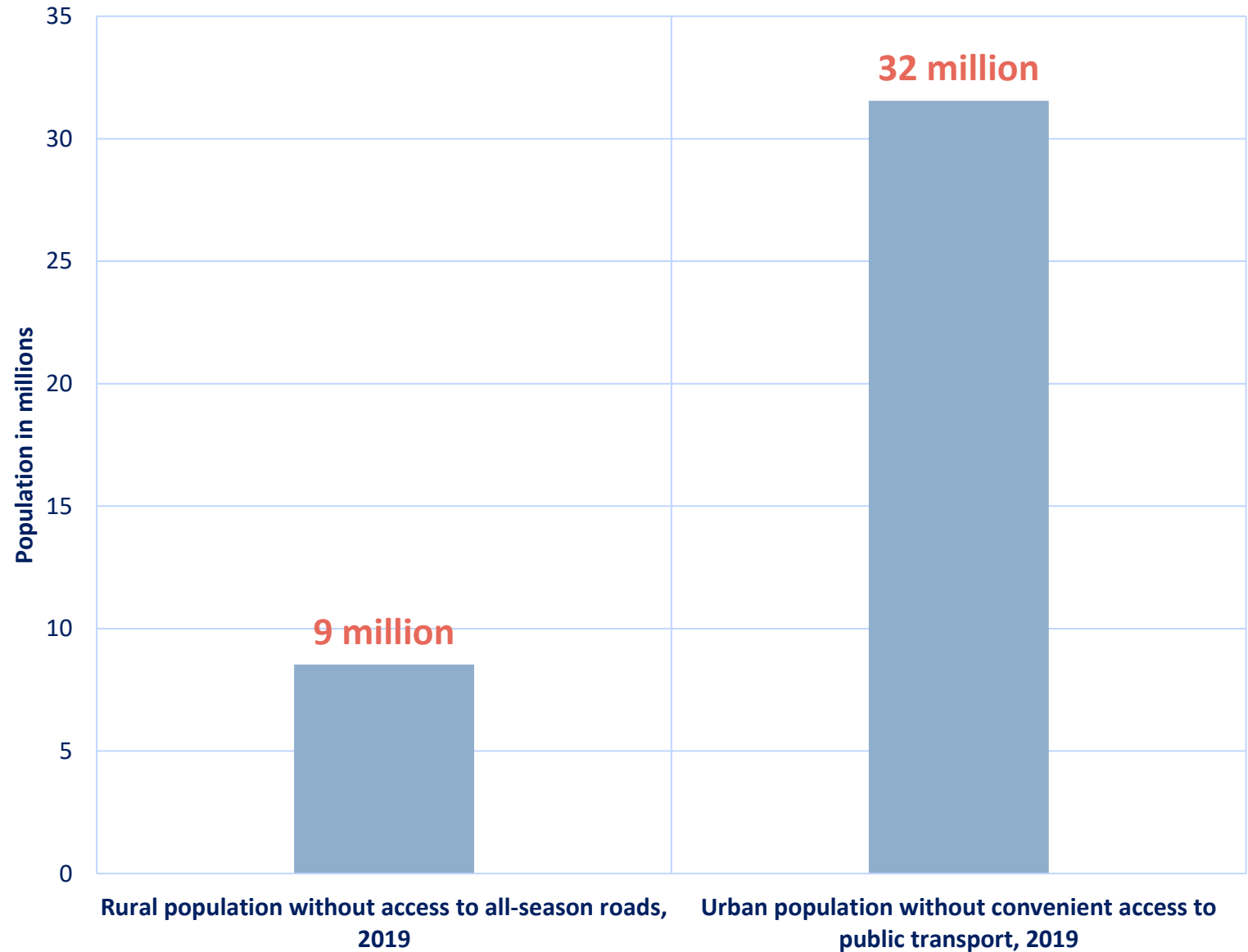
* Distance of 500m walking access based on road network / 1000m to high-capacity modes



Rural and urban access

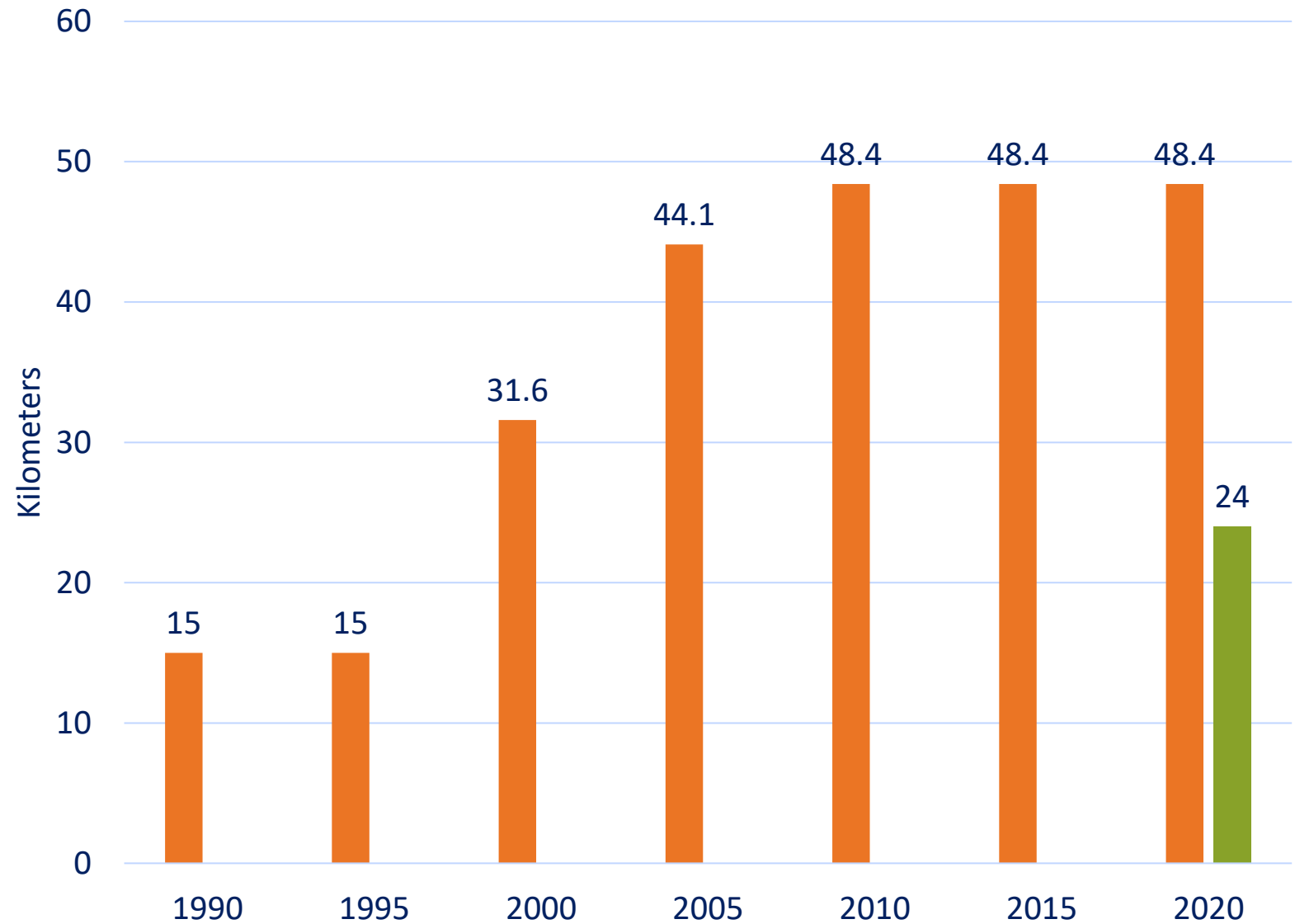
In the Philippines, the rural population without access to all-season roads within 2 km (SDG) is 9 million i.e. roughly two-thirds of the entire population of Metro Manila.

The urban population without convenient access to public transport (SDG) is 32 Million i.e. more than twice the size of Metro Manila's population.



Metro and BRT in the Philippines

■ Metro ■ BRT

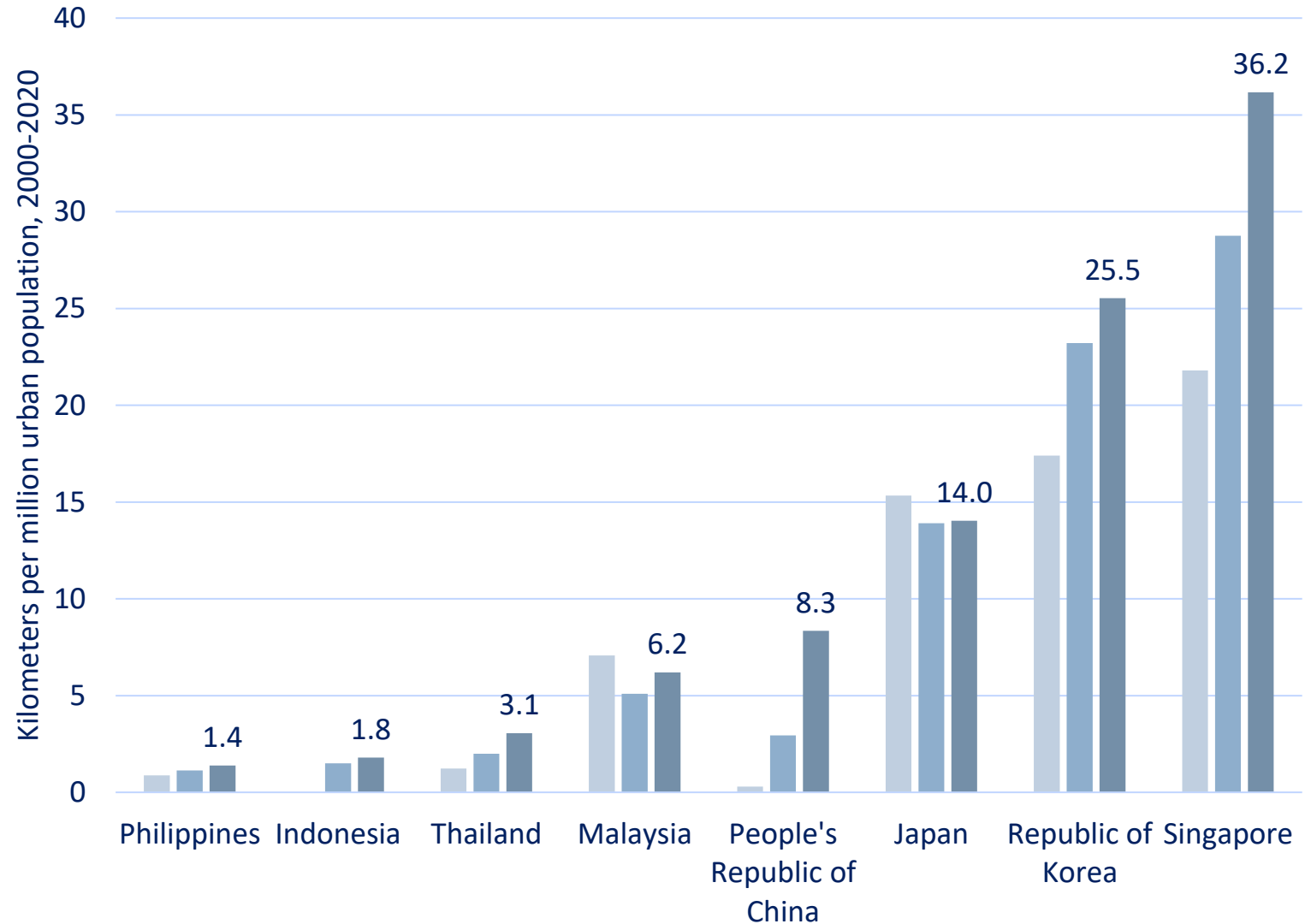


The growth of metro kilometers in the Philippines is almost stagnant over the last 2 decades.

The first BRT in the country only became operational in 2020 in Metro Manila.

Rapid urban transit access

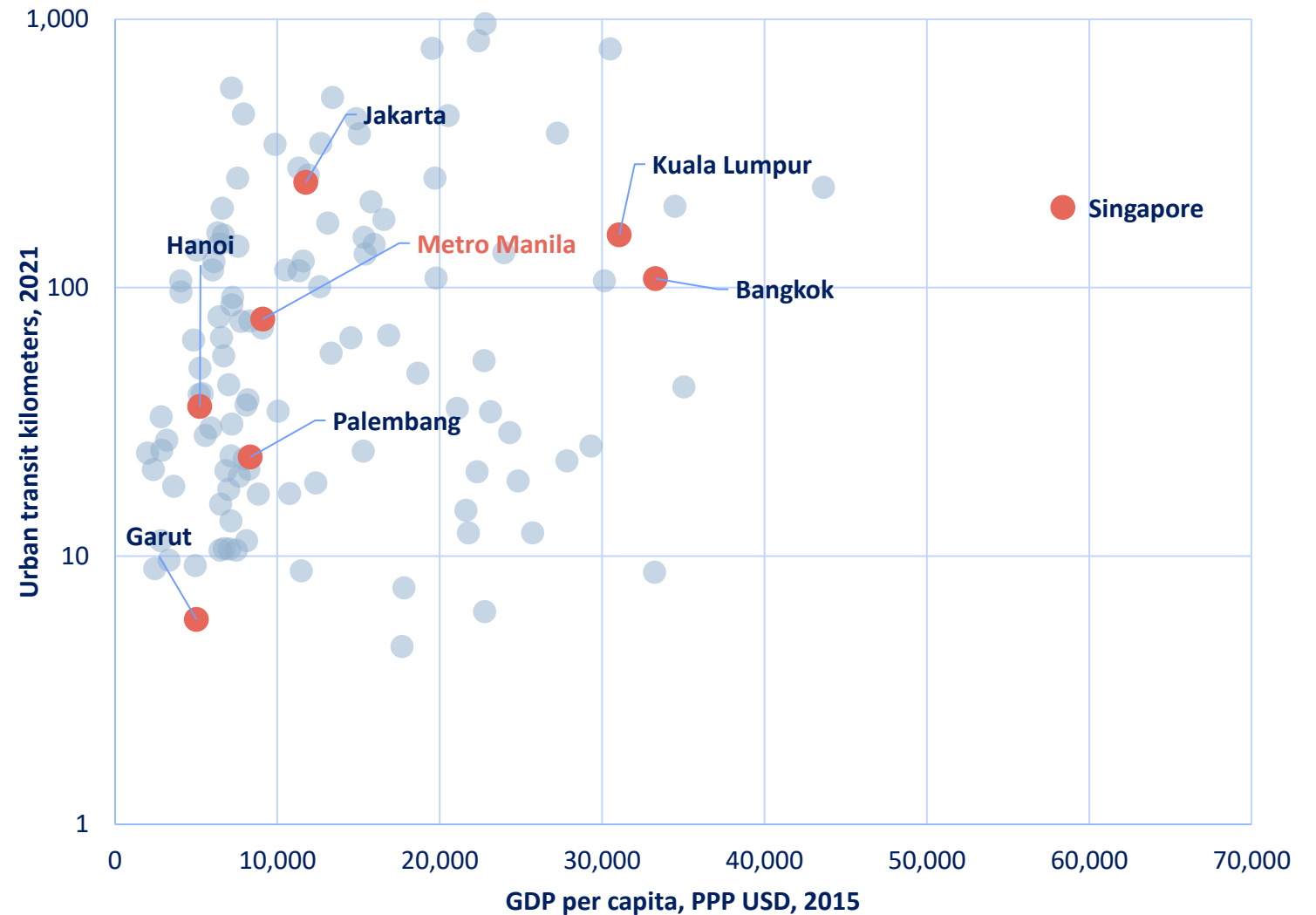
■ 2000 ■ 2010 ■ 2020



The Philippines only has 1.4 km of BRT and Metro per million urban residents. In comparison, Asia has about 6 km of rapid transit per million urban residents

Urban transit kilometers in cities

● Rest of Asia ● Southeast Asia



Metro Manila's urban transit infrastructure is limited compared to most other Southeast Asian capital cities.

Urban street sprawl and urban transit

Street sprawl is strongly associated with increased vehicle travel, energy use and CO2 emissions.

Cities with better access to public transit, generally have lower street sprawl.



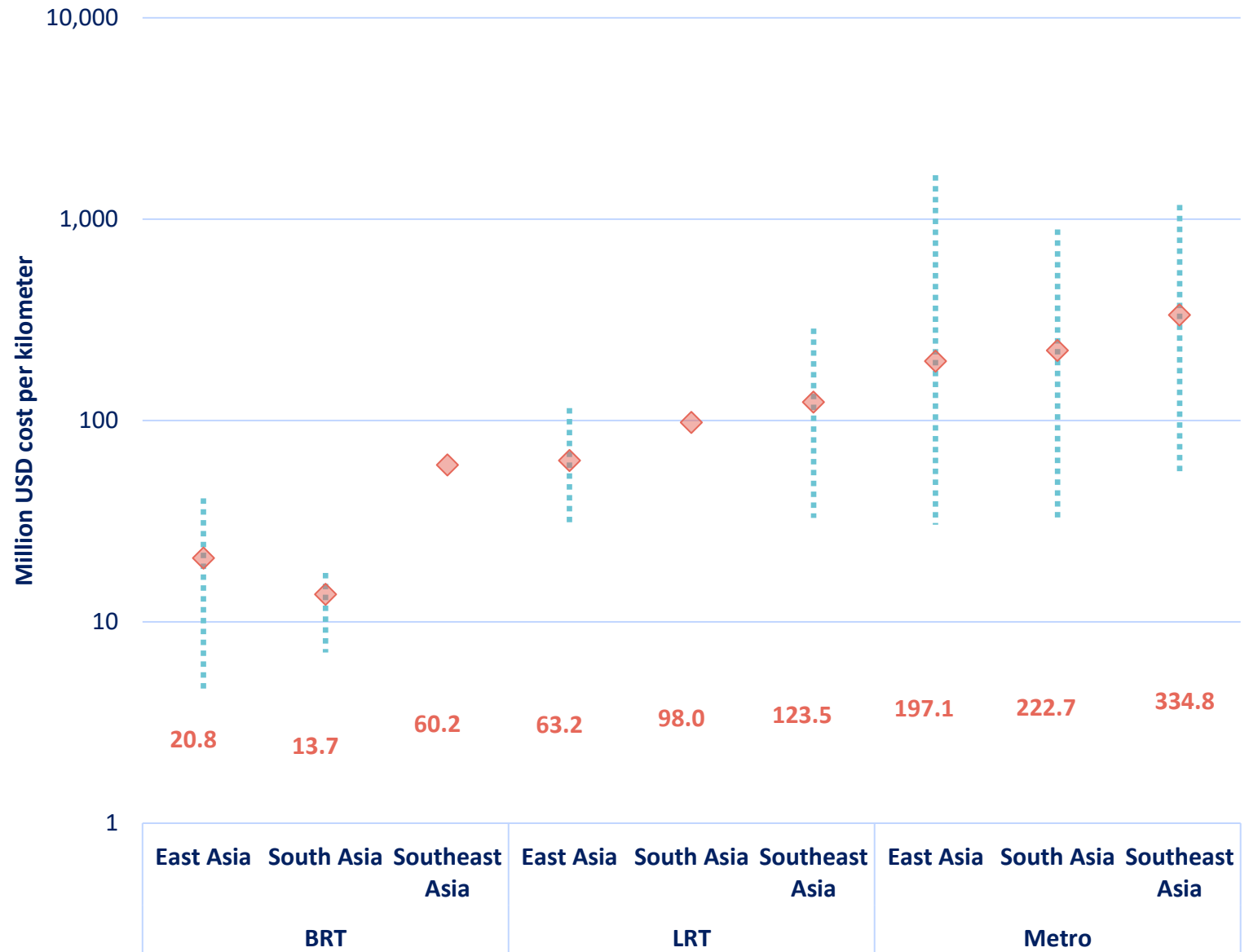
*Urban transit includes BRT, LRT, metro

Source: ATO, Leigh, et al., ITDP

The cost of developing rapid transit systems vary in Asia.

For Southeast Asia, data indicates it costs 60 million, 120 million, and 330 million per kilometer of BRT, LRT, and Metro, respectively.

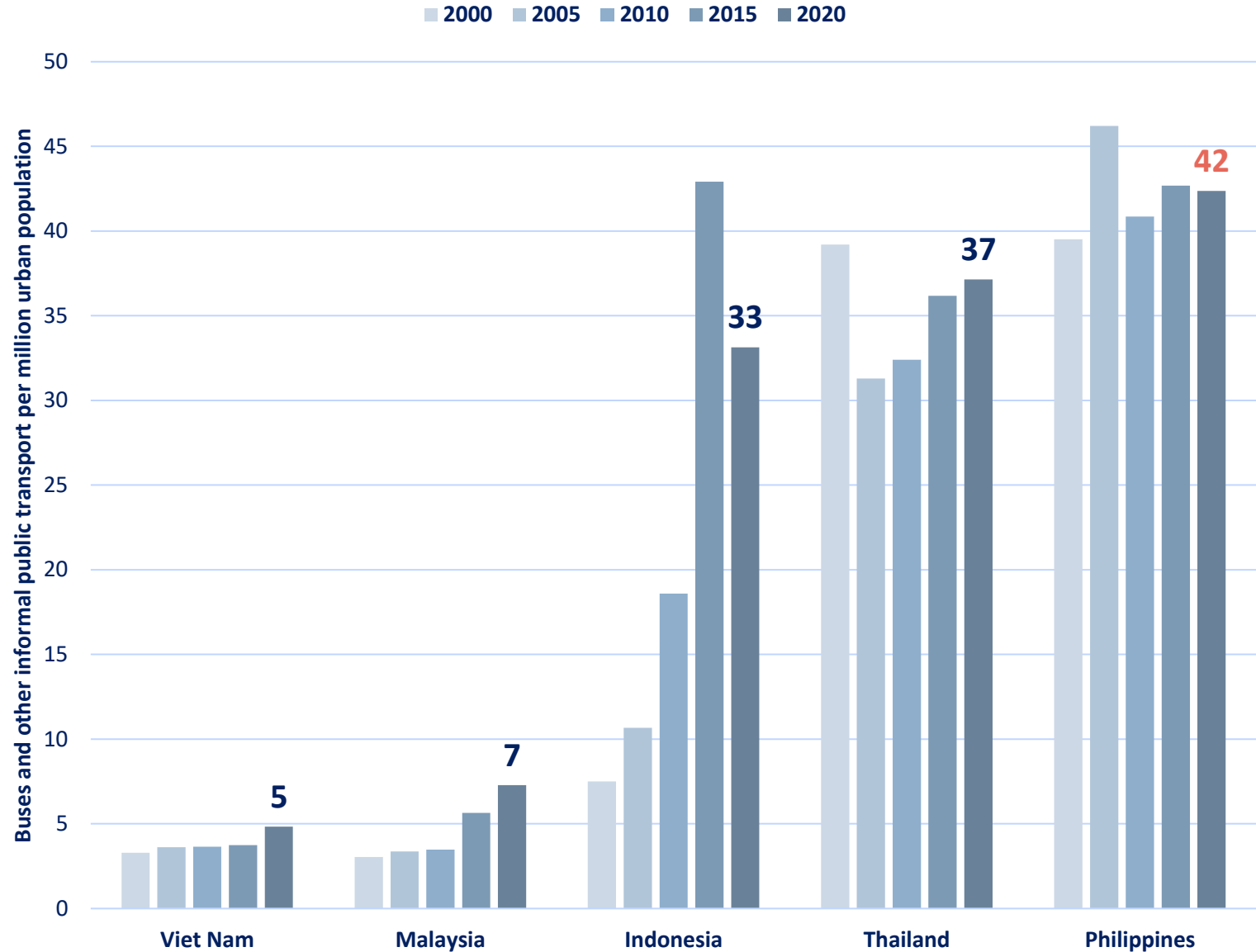
Cost of developing rapid transit



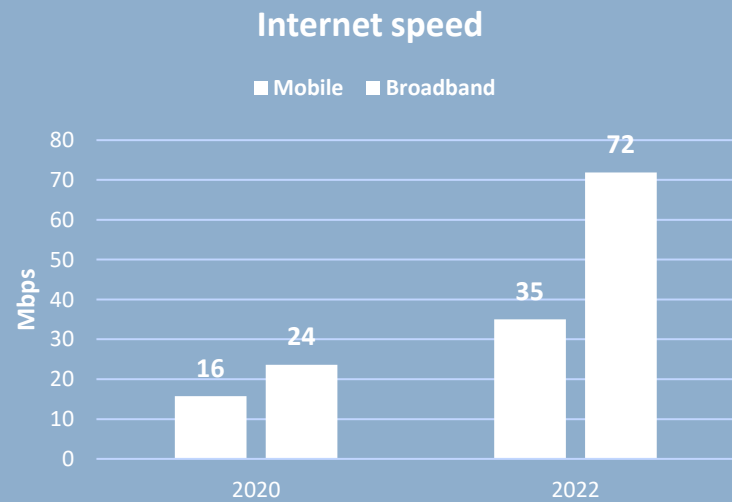
Despite the lack of rapid transit, the Philippines has buses and other informal public transport services such as jeepneys and UV express services to support its passenger demand.

Philippines has the highest public transport registrations (formal, informal) per capita in Asia.

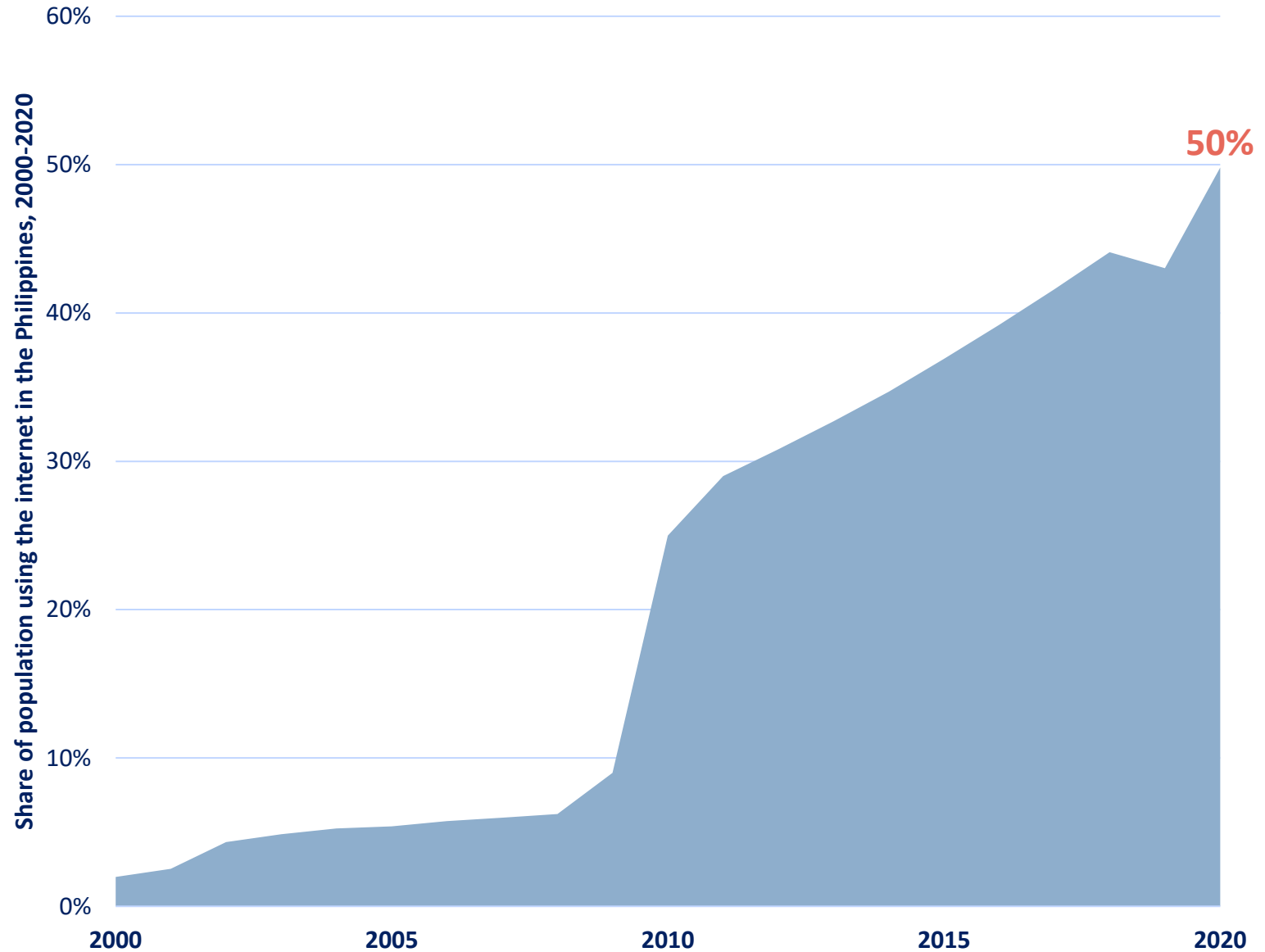
Buses and informal public transport



Internet access in the Philippines has improved significantly since 2008. However, only half of the population is using the internet in the country.



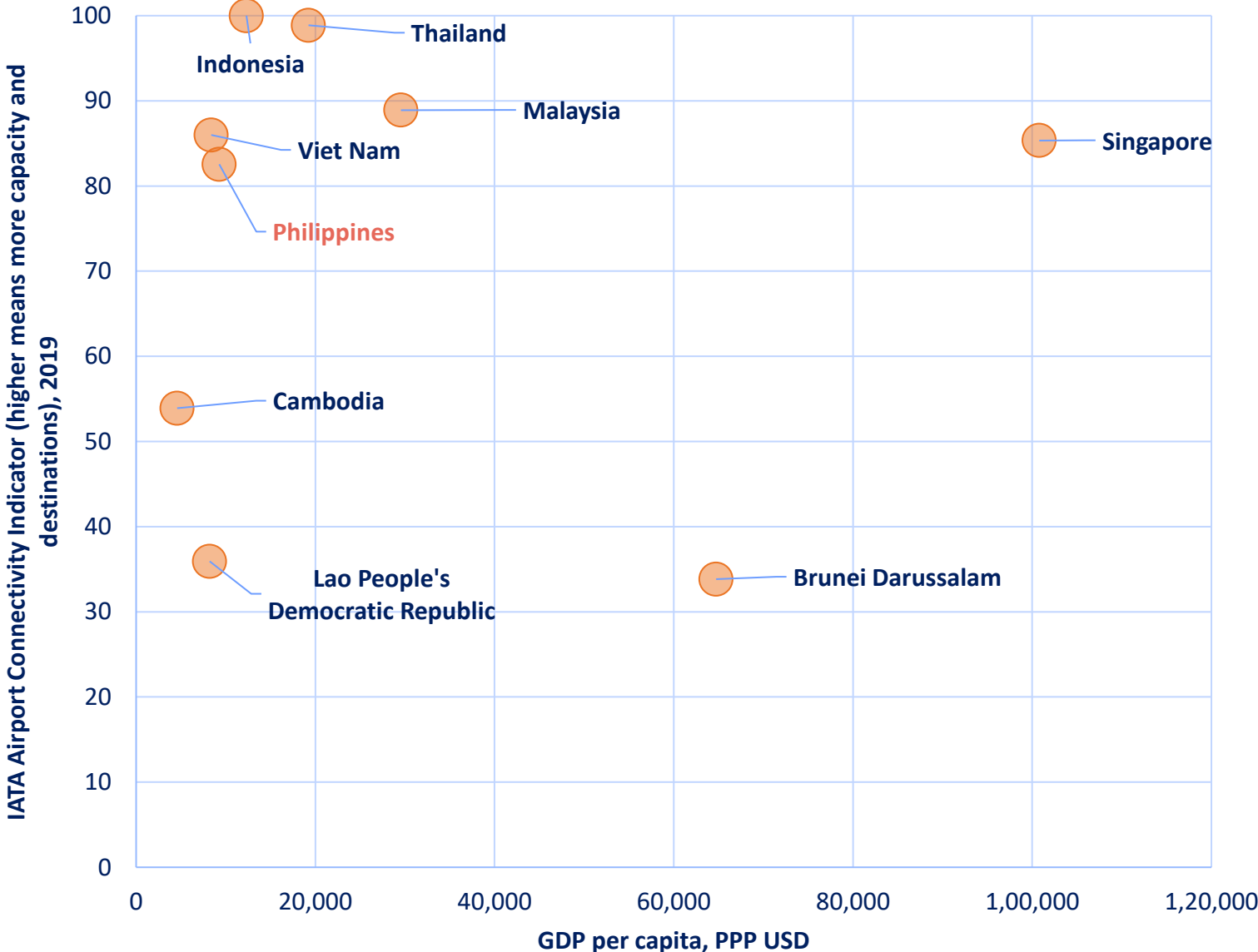
Population using the internet



Air Connectivity

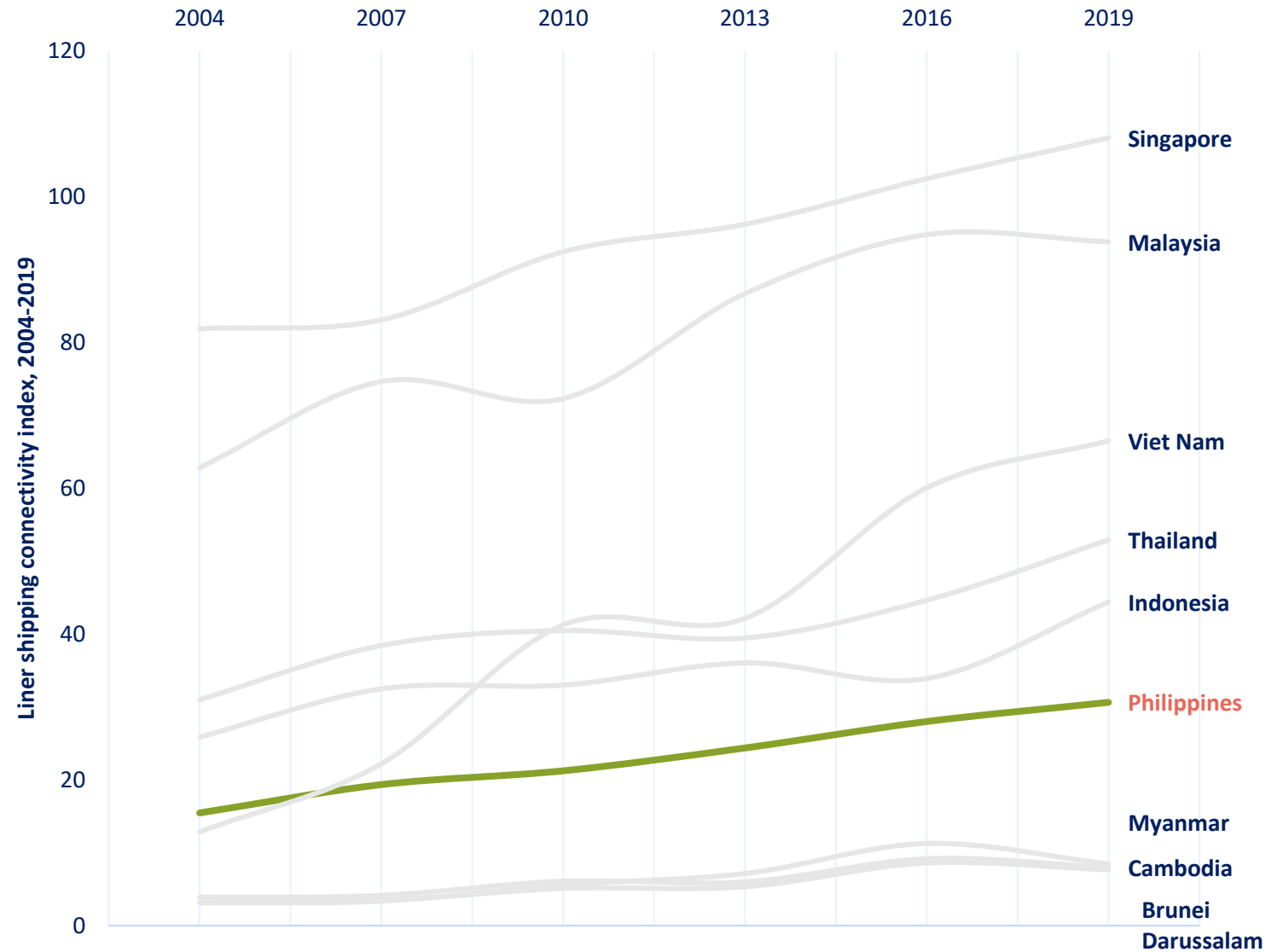
The IATA air connectivity index measures the degree to which air transport connections support a country's economic development and productivity levels. It is based on the number of available seats offered in flights originating from a country.

Assessment shows that Philippines connection to the air transportation network, global or regional can be improved marginally.



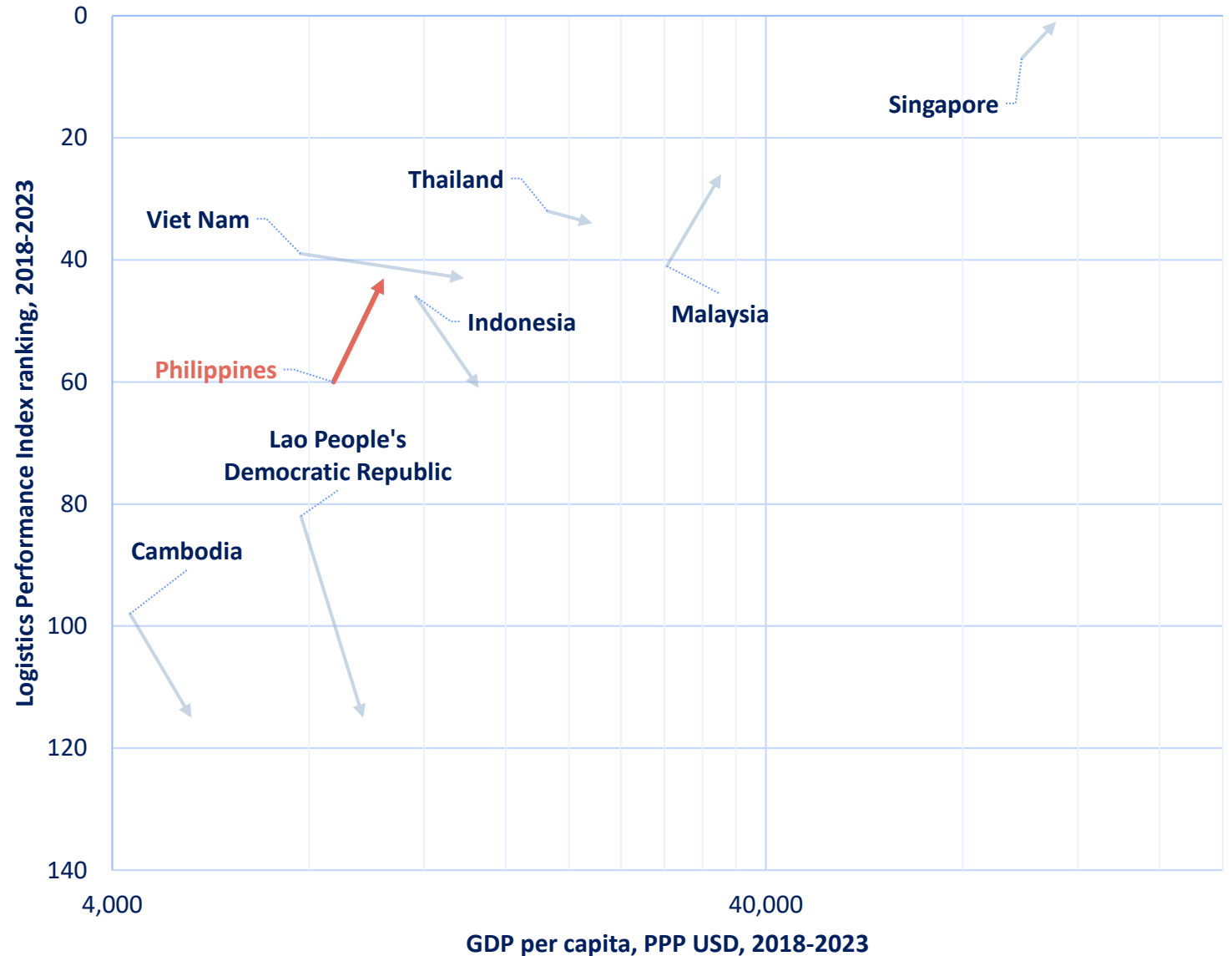
Liner shipping connectivity index

The liner shipping connectivity has improved marginally over the years. The connectivity is significantly lower than other comparable economies.



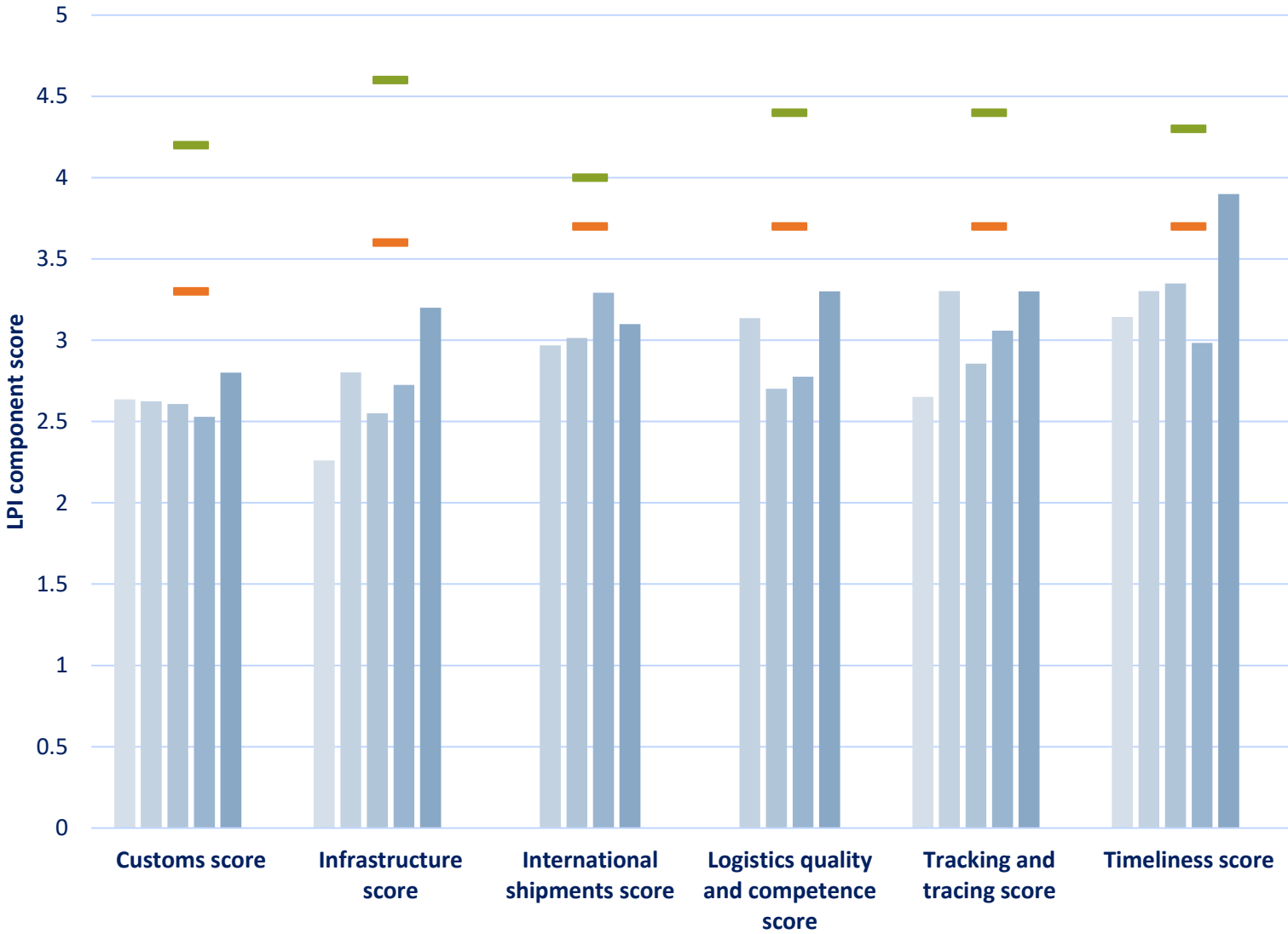
Logistics performance index

Over the past few years, the Philippines' LPI ranking has improved significantly, indicating improved timeliness and services of logistics supply chain in the country.



Logistics performance score

■ 2007 ■ 2012 ■ 2016 ■ 2018 ■ 2023 — Malaysia — Singapore



The World Bank's Logistics Performance Index (LPI) includes parameters such as: customs, infrastructure, international shipments, logistics quality and competence, tracking and tracing and timeliness to explain how efficiently supply chains connect firms to domestic and international opportunities.

Since 2018, Philippines has improved its performance across all segments except in the ease of arranging competitively priced shipments

Asian Transport Outlook

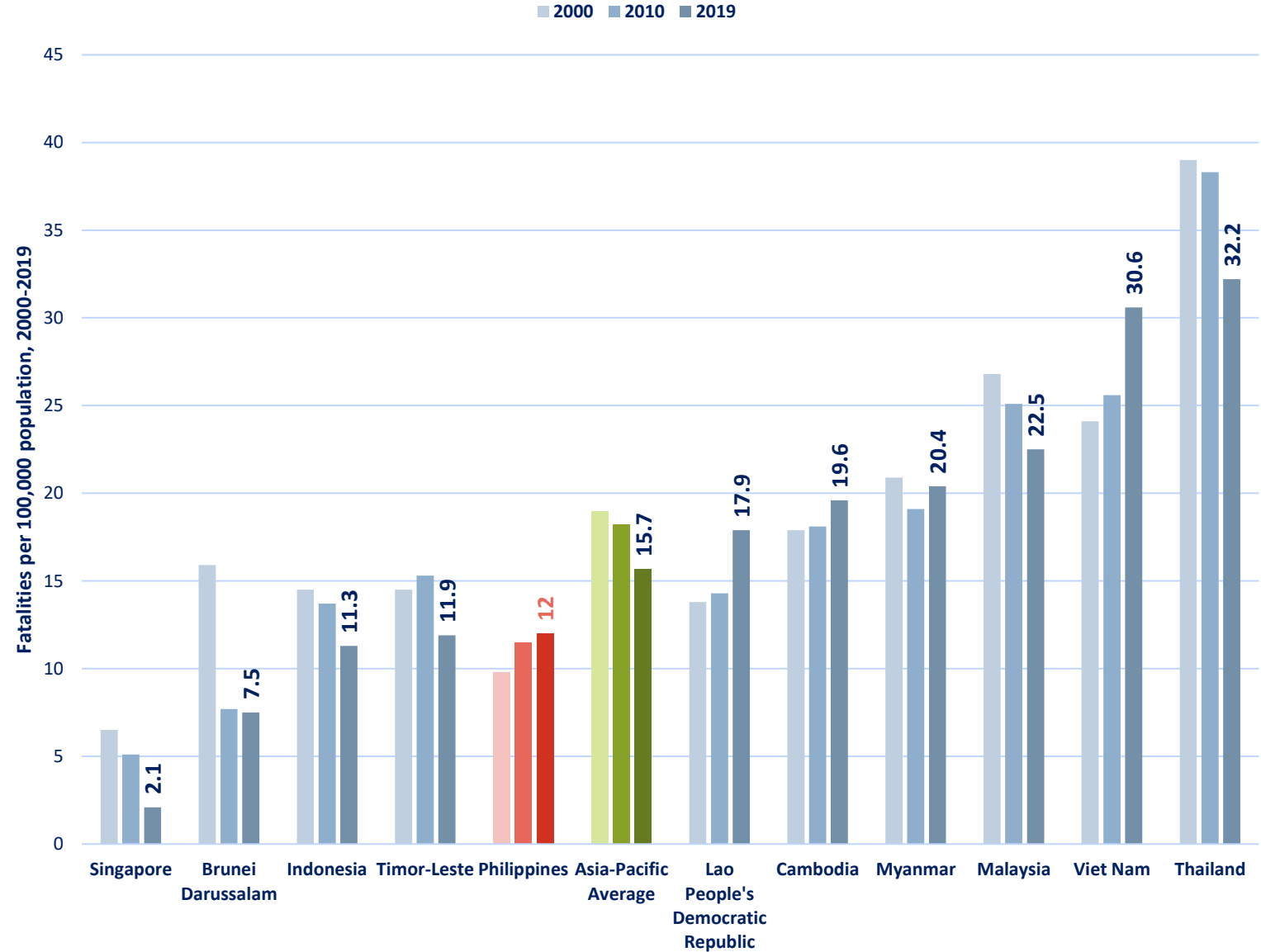
Road Safety



Road crash fatality rate

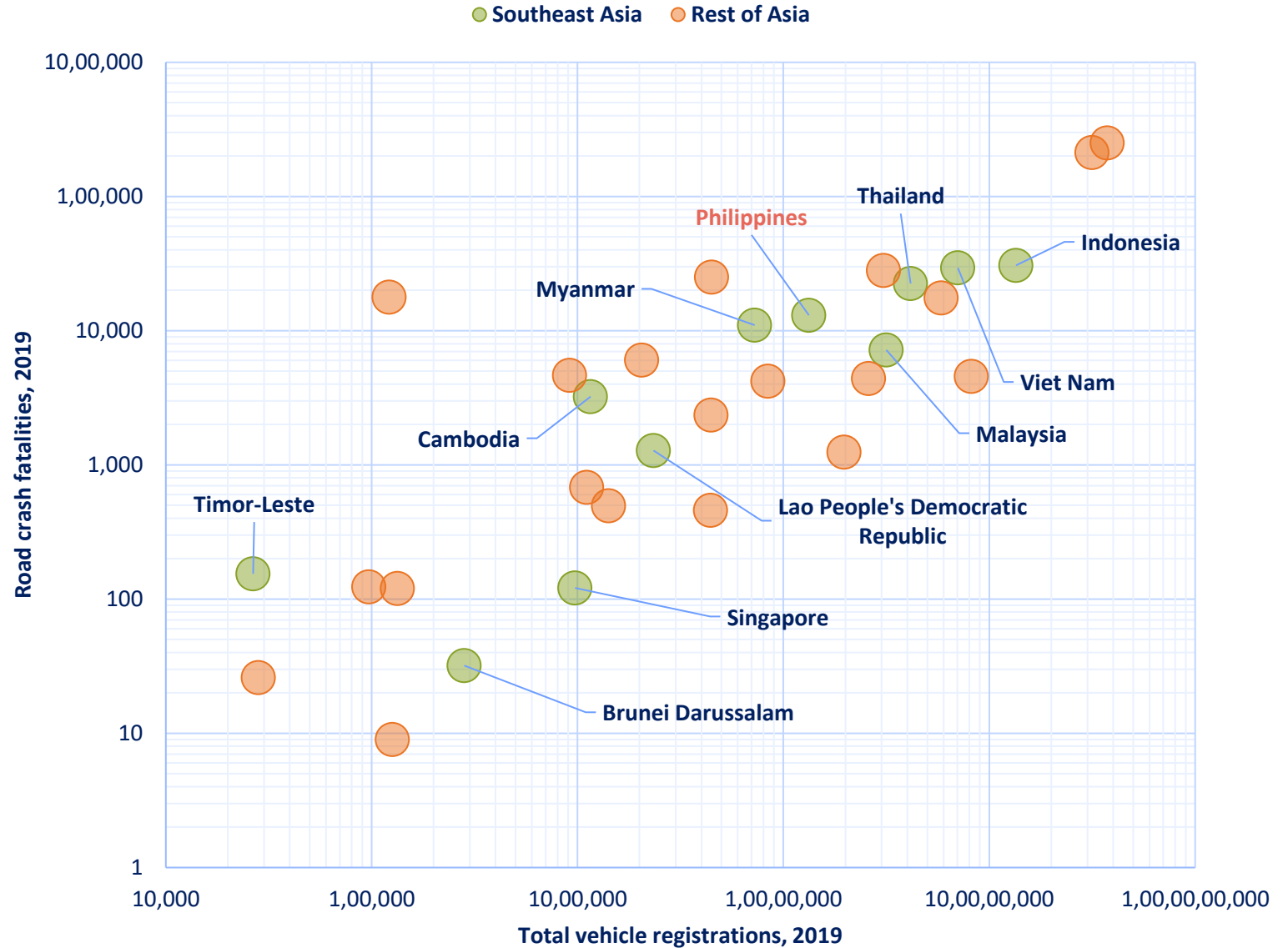
Road crash fatality rates in the Philippines is lower than the Asia-Pacific average. However, the fatality rate in the country is increasing.

Currently, the cost of road crash fatalities in the Philippines is as much as it is spending on healthcare (4% of GDP)



One of the contributing factors to increased road crash fatalities is the rapid increase in motorized vehicles. The Philippines currently has about 13 million vehicles registered.

Road crash fatalities

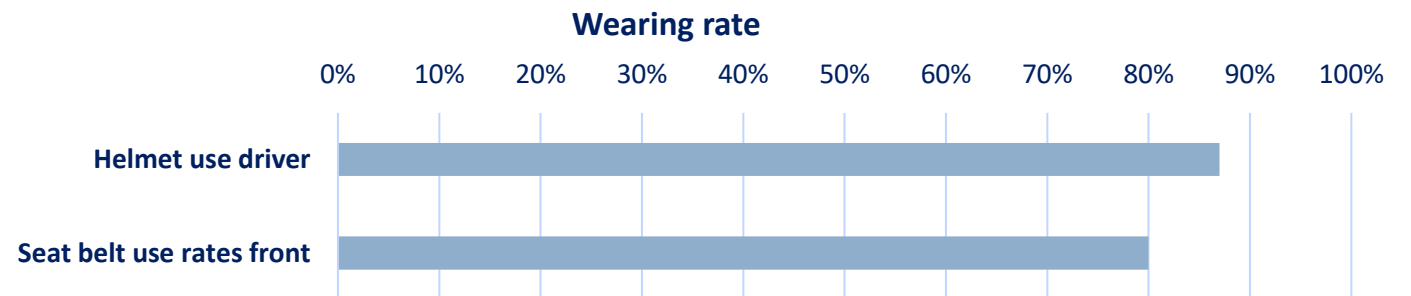
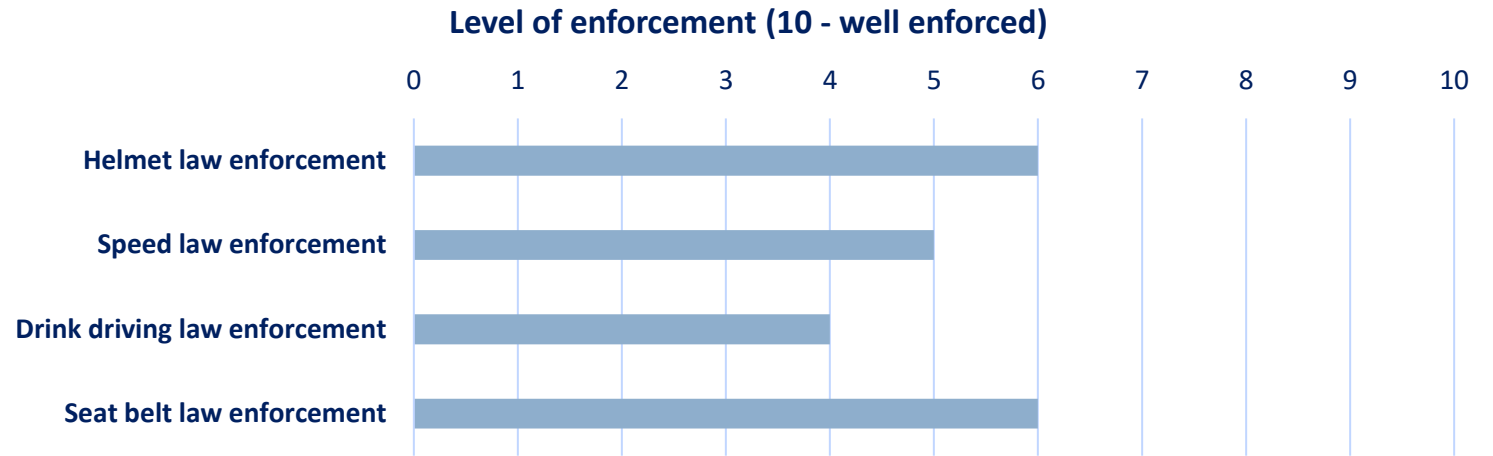


Road Safety Policy

National Road Safety Action Plan 2023-2028 is still under development.

Targets within the newly released Philippine Development Plan 2023-2028 include:

- Decrease road crash fatality rate per 100,000 population from 8.0 in 2020 to 1.68 in 2028 (80% reduction)

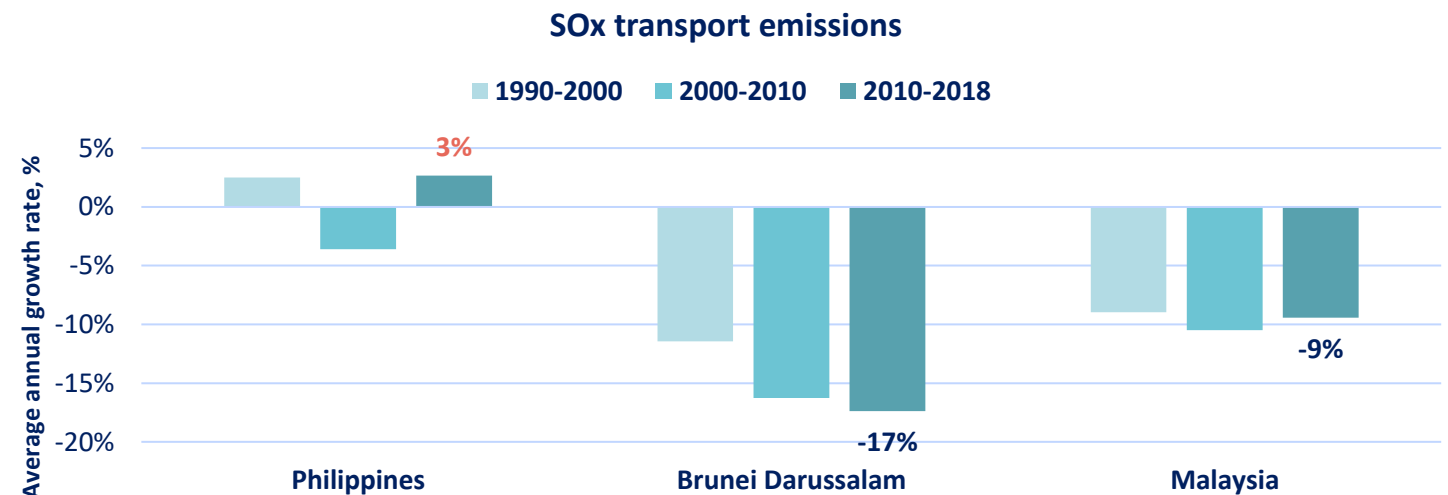
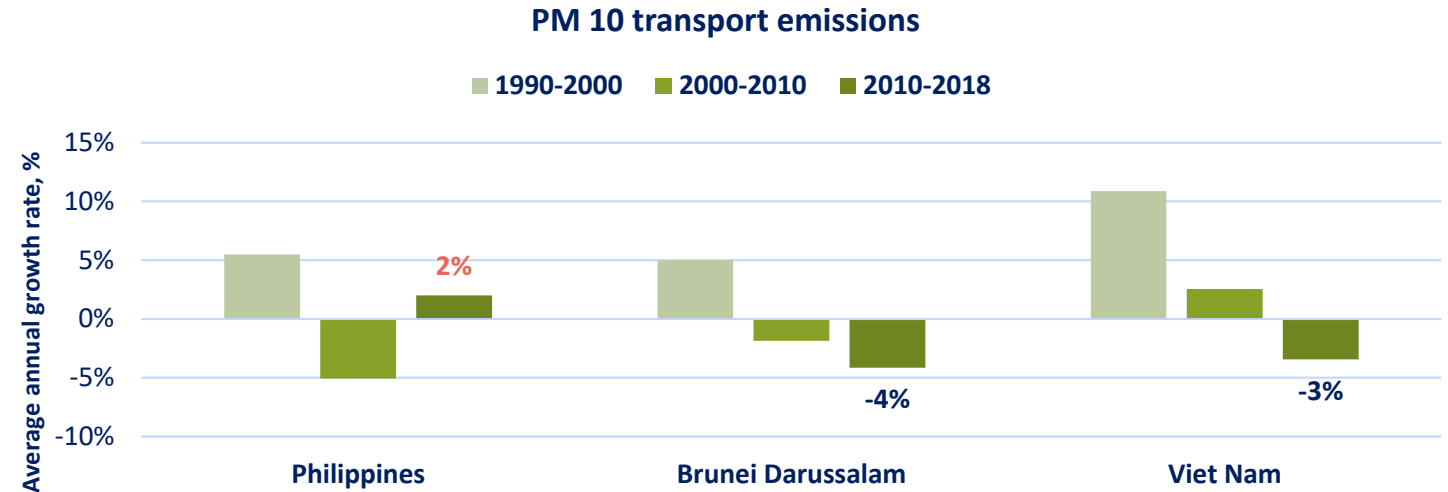


Air Pollution



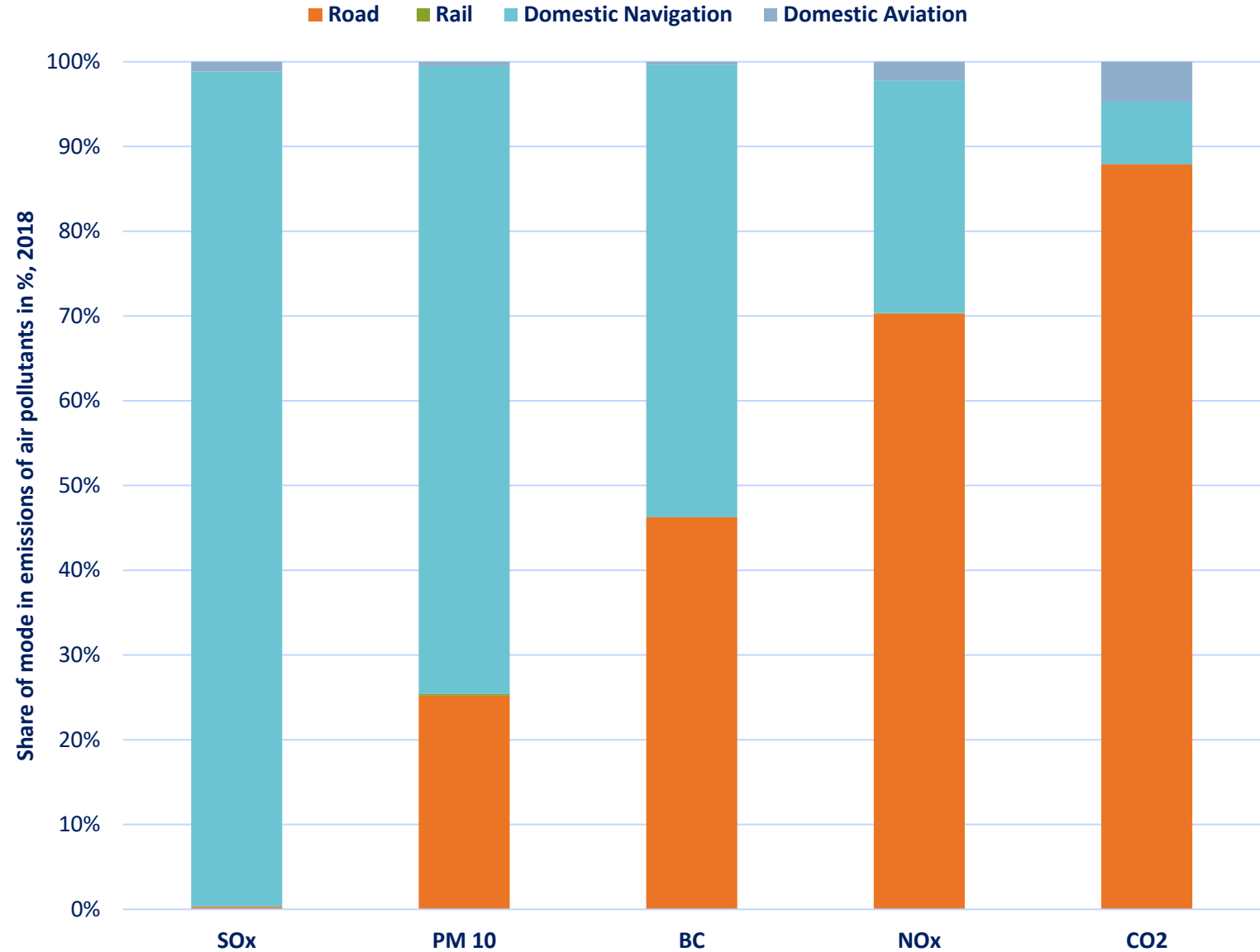
Due to stagnant vehicle emission standards and fuel quality, the air pollution from transport in Philippines has grown in the last decade. In other comparative countries, it has reduced.

Transport PM 10 and SOx emissions



Air pollutants from transport

In Philippines, domestic navigation emissions plays an important role in transport air pollution.

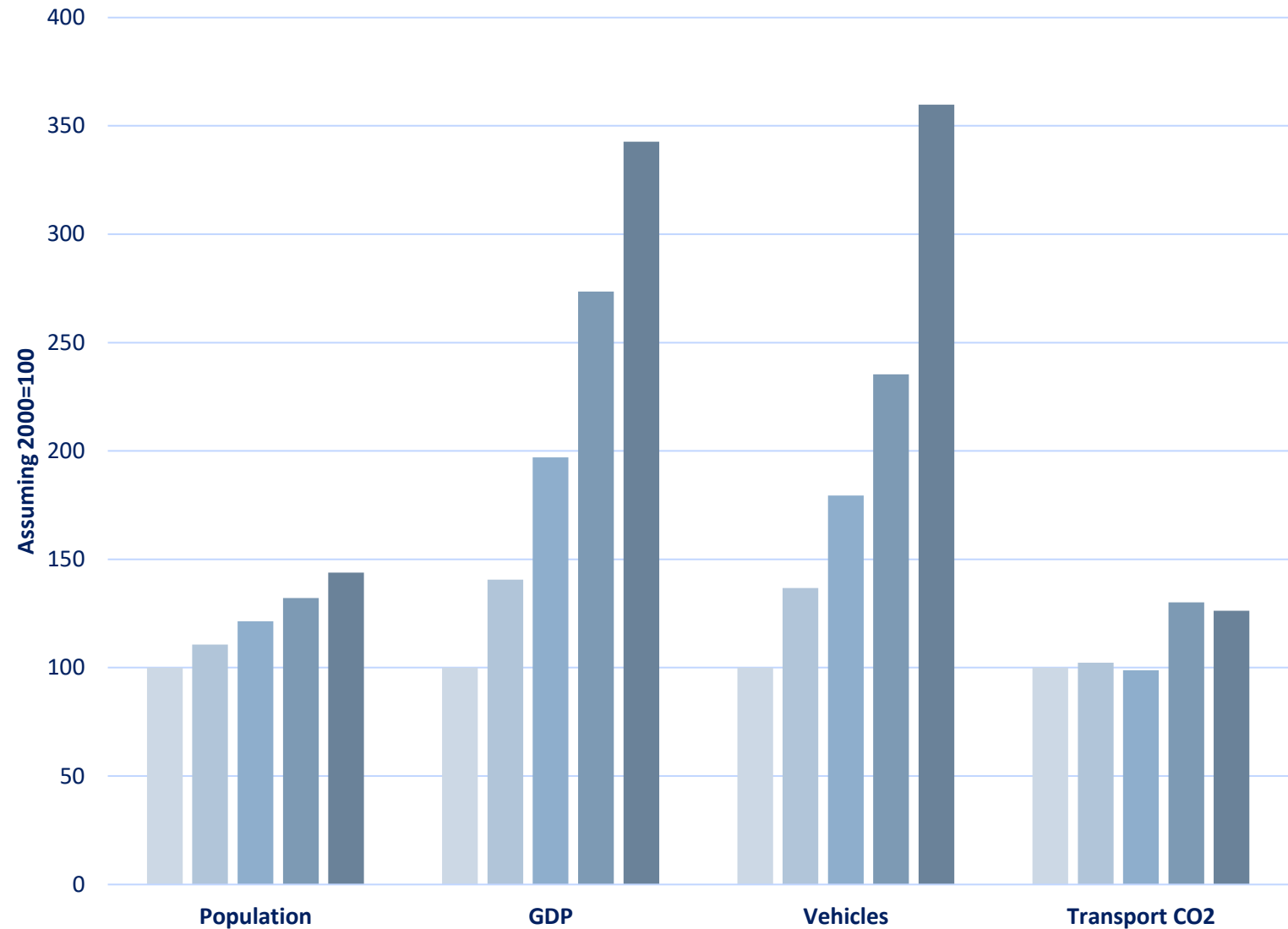


Climate Change



Philippines Transport CO2

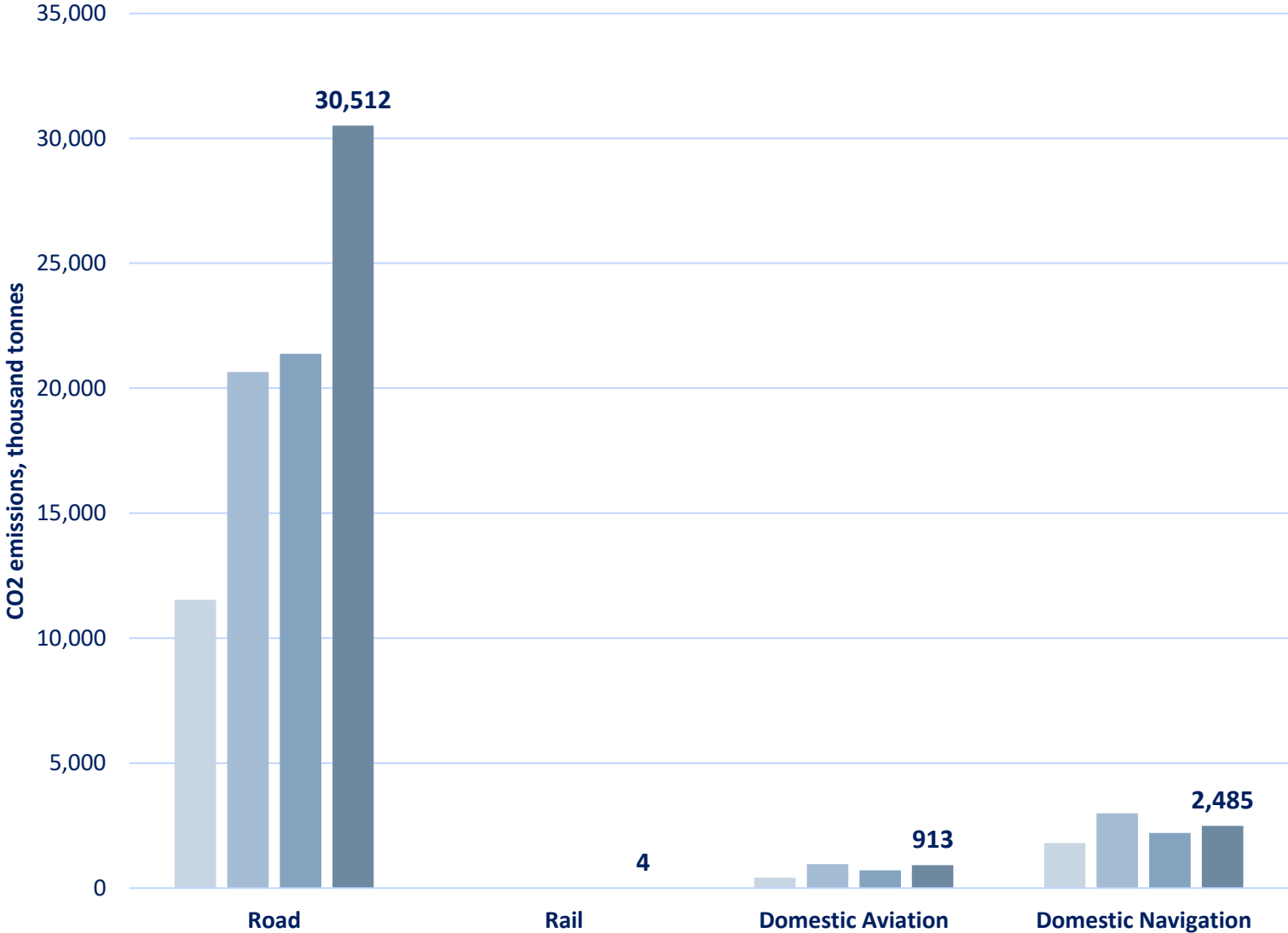
■ 2000 ■ 2005 ■ 2010 ■ 2015 ■ 2020



Transport CO2 emissions in the Philippines has grown slower than GDP and the volume of registered vehicles (relative decoupling).

Transport CO2 emissions by mode

■ 1990 ■ 2000 ■ 2010 ■ 2021



CO2 emissions in the country is primarily coming from road transport which increased significantly in the last decade.

In the Philippines, up to 25,000 kilometers of roads is exposed to increased flooding by 2050 if global emissions continue to rise.

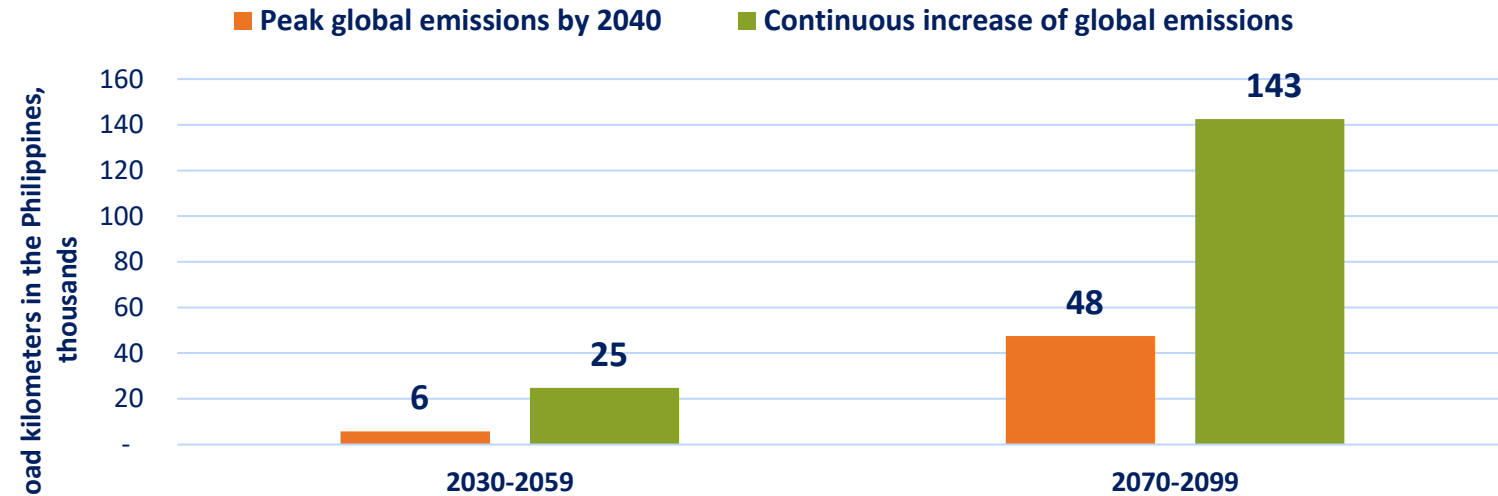
The expected annual damages to both road and rail is as high as 410 million USD per year.

Average unit cost of upgrading roads in Asia, in million USD per kilometer

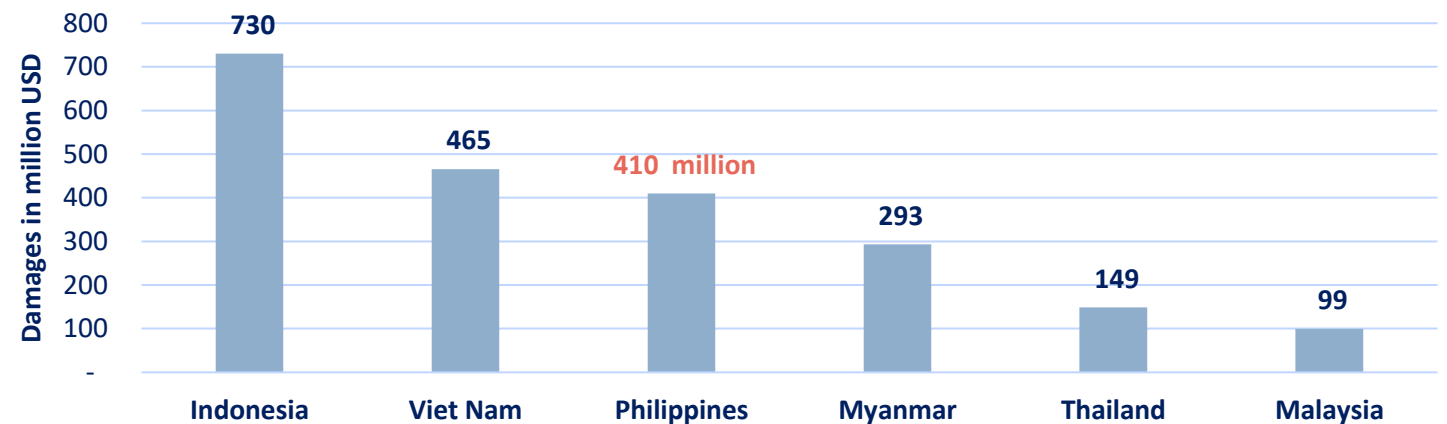


Exposure and risk of road and rail

Kilometers of roads exposed to increased precipitation in different climate scenarios



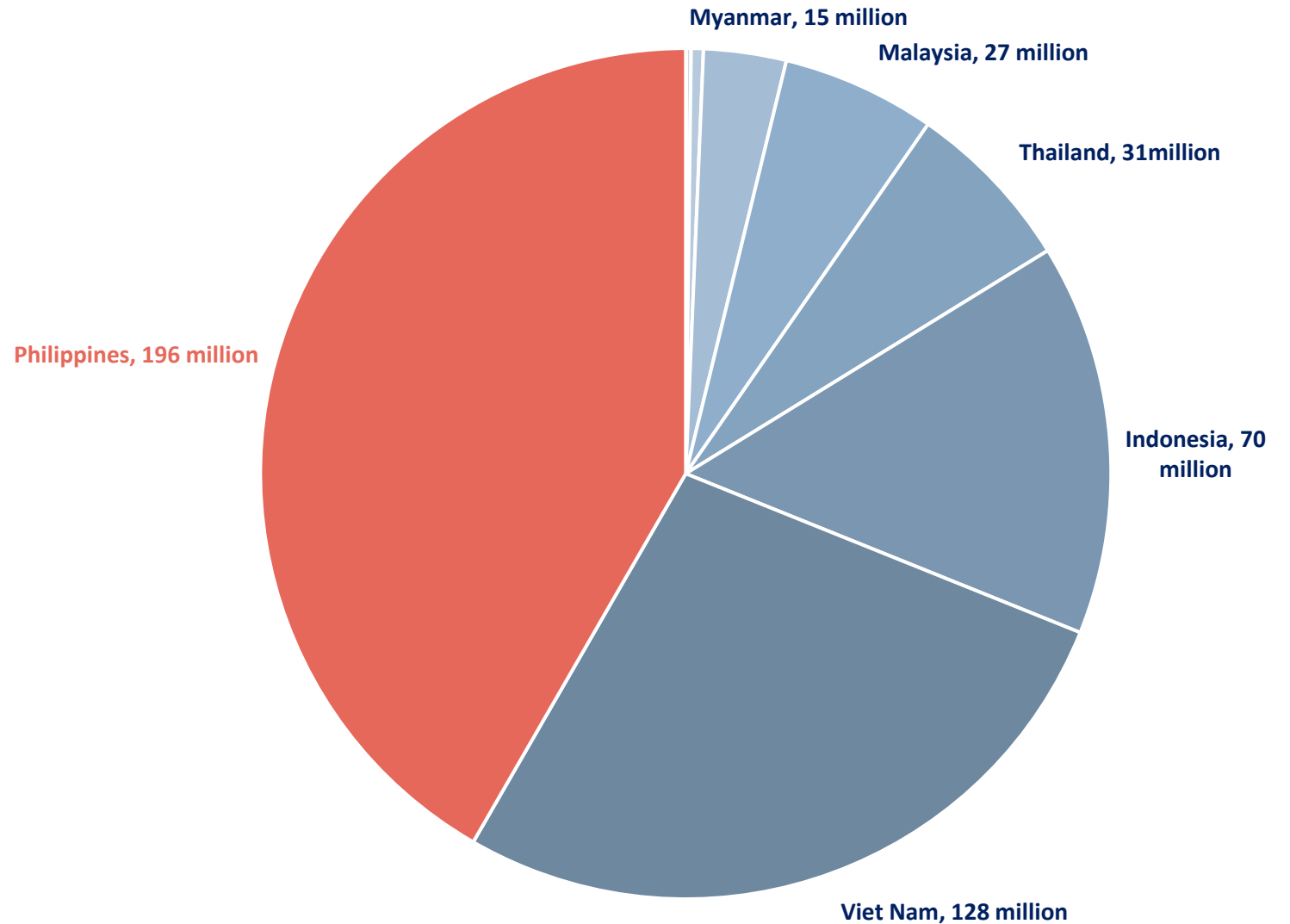
Multihazard expected annual damages to road and rail infrastructure



Annual damages to ports

Hazards can cause significant damages to the port facilities, surrounding transport infrastructure, and can cause disruptions to service providers.

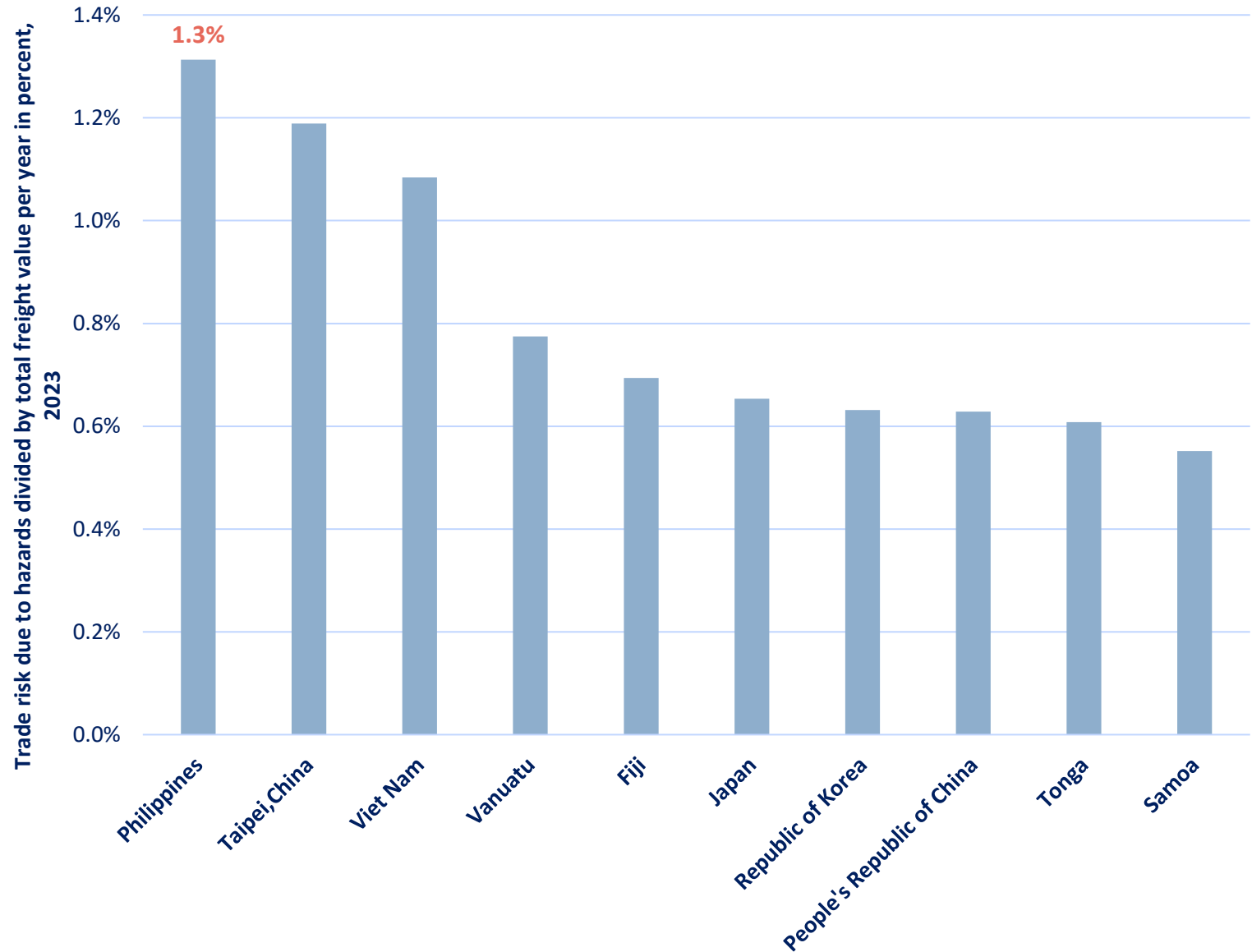
Based on estimates, the Philippines account for 42% of potential damages due to hazards in Southeast Asia and is the highest among its peers.



Disruptions due to hazards can also lead to downtime in ports that throttles the flow of goods.

Amongst all the countries in Asia, the Philippines has the highest share of trades at risk due to these hazards at 1.3%. Globally, the Philippines is ranking 4th.

Share of trade value at risk



Climate Change Policy

The country's Updated NDC did not specify transport sector mitigation targets and measures but the latest national development policy has indicated a transport target.

Targets on renewable energy and electrification is also available.

Document	Target
Philippines' Updated Nationally Determined Contributions	2.71% unconditional economy-wide emissions reduction (72.29% conditional)
Philippine Development Plan 2023-2028	26.04 MtCO₂e GHG emissions in Transport by 2028
Press release	Renewable energy 50% power generation by 2040
Comprehensive Roadmap for the Electric Vehicle Industry	311,700 electric vehicles by 2028 7,400 EV charging stations by 2028

Policies and projections

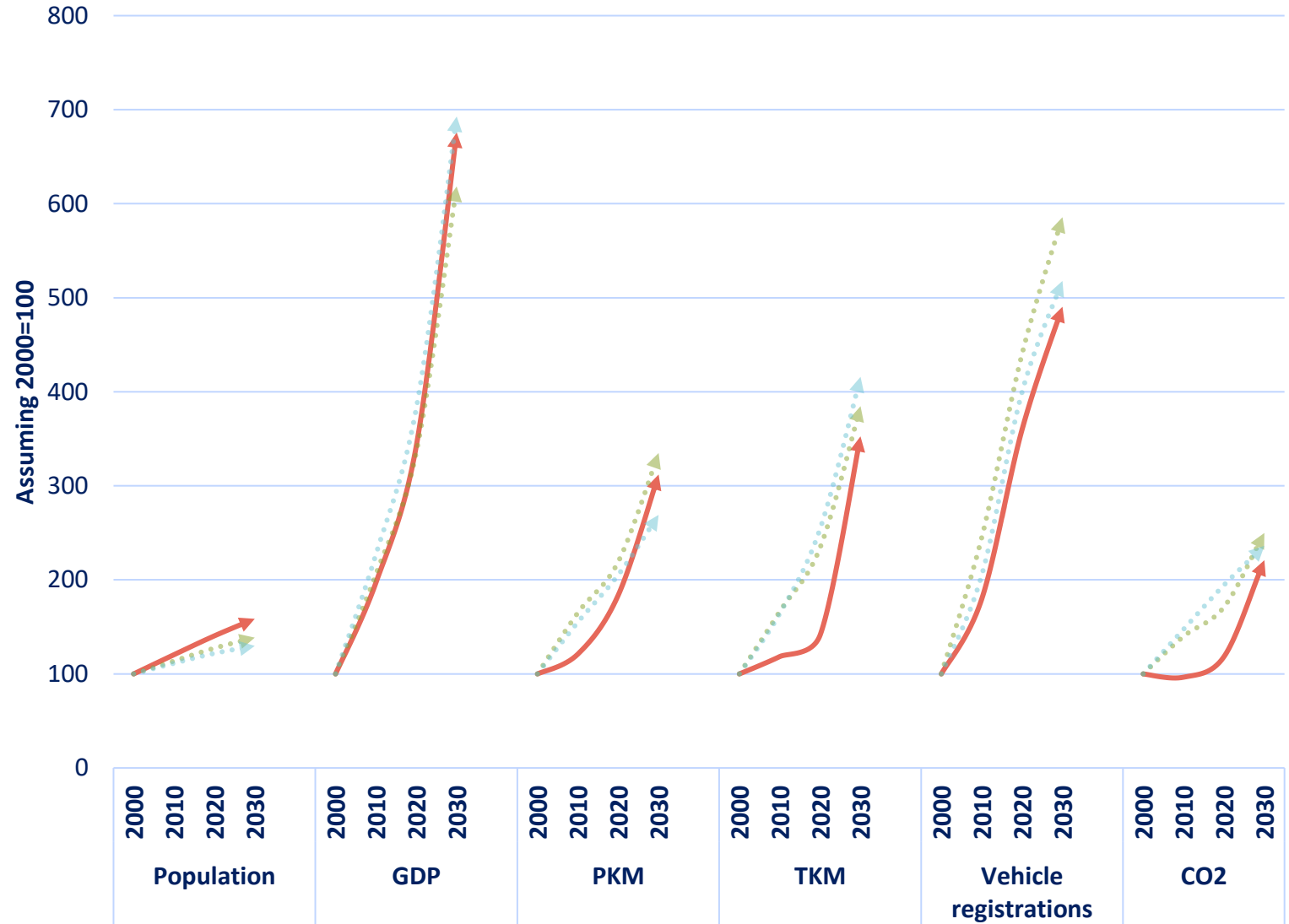


Available transport-related policy documents in the Philippines

Policy Document	Year
Philippine Development Plan 2023-2028	2023
Comprehensive Roadmap for the Electric Vehicle Industry	2022
Road Safety Action Plan	2019
Philippines Action Plan on CO2 Reduction	2018
National Logistics Master Plan 2017-2022	2017
National Transport Policy and its Implementing Rules and Regulations	2017
National Urban Development and Housing Framework	2017
Philippines Energy Efficiency and Conservation Roadmap 2017-2040	2017
Vision 2040	2017
Philippine Energy Plan 2012-2030 Update	2016
Intended Nationally Determined Contribution	2015
National Climate Change Action Plan 2011-2028	2011
Clean Air Act	1999

Philippines in 2000-2030

→ Philippines ●●● Southeast Asia ●●● Asia-Pacific



Between 2020 to 2030, projections with existing policies indicate

- Transport demand growing faster than previous decade. However, transport demand will continue to relatively decoupling with GDP.
- Transport CO2 emissions will continue to grow albeit slowly when compared with growth in demand and income.

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

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