



YANGON, MYANMAR

URBAN TRANSPORT PROFILE

December 2024

Summary

Yangon, the largest city in Myanmar with a population of 5.7 million, faces a critical juncture in its urban transport development. Despite experiencing significant economic growth, with GDP per capita increasing from \$900 in 2000 to \$5,000 in 2015, Yangon's transport infrastructure is lagging. Road infrastructure is limited. Furthermore, the city lacks a rapid transit system, heavily relying on buses and private vehicles. This has led to increasing traffic congestion, which poses a significant challenge to the city's continued growth and economic development.

While Yangon has a relatively large bus fleet with 6,580 buses operational in 2020, the lack of a dedicated right-of-way system and increasing car ownership contribute to congestion and inefficient public transport. Although 44% of the population has convenient access to public transport, exceeding the South East Asia average of 21%, there is a need for significant improvement in the overall system. While popular modes of transport, walking and cycling are hampered by the lack of dedicated infrastructure and safe spaces. Only 8% of the population can access car-free areas, highlighting the need for more pedestrian-friendly zones and protected bike lanes.

Recognizing these challenges, Yangon has embarked on initiatives to improve its urban transport landscape. The establishment of the Yangon Regional Transport Authority (YRTA) in 2016 and the subsequent launch of the Yangon Bus Services (YBS) in 2017 signify a commitment to reforming the public transport system. However, further strengthening of the institutional framework and investment in infrastructure are crucial. The establishment of a Yangon Urban Mobility Board could enhance strategic planning and coordination. Additionally, the modernization of the Yangon Circular Railway, with a focus on transit-oriented development, presents a significant opportunity to create a more efficient and integrated transport network.

About the Urban Transport Profiles

The Asian Transport Observatory (ATO) Urban Transport Profiles provide a comprehensive snapshot of urban transport dynamics for 40 cities in the Asia-Pacific region. These profiles compile data from official city reports, relevant sources from reputable research organizations, multilateral development institutions, international experts' reports, secondary studies, and all other research endorsed or guided by city governments. Featured cities are benchmarked against other cities, where data is available, in the region, subregional averages — and in some cases, global cities — offering valuable comparative insights. In cases where data is not available, placeholders for the graphs are retained. Each profile also includes a curated list of relevant urban transport policies and documents, presenting a concise overview of the city's policy framework. By covering a wide range of transport-related indicators, these profiles serve as a critical resource for understanding and improving urban transport systems.

Disclaimer

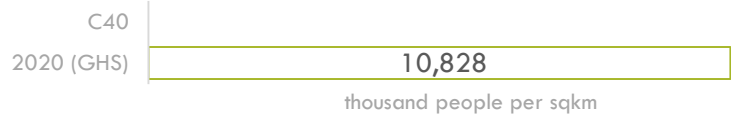
The Asian Transport Observatory (ATO) project collects, collates, and organizes data from publicly available official, as well as reputable and peer-reviewed secondary sources, which may contain incomplete or inconsistent data. It is important to note that the ATO does not generate data. Moreover, while the ATO carries out quality control and assurance of whether the data are truthfully reflected in the ATO, the ATO does not make any warranties or representations as to the appropriateness, quality, accuracy, or completeness of the data in the ATO databases, and in the knowledge products that are produced from such. Users are encouraged to scrutinize, verify, interpret, and judge the data before utilizing them.

General

Population 5.7 million
(2020) (GHS)

Population density

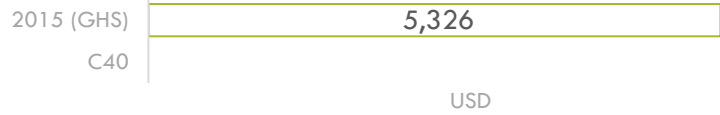
Land area 524 sqkm
(2015) (GHS)



Population density 11 thousand per sqkm
(2020) (GHS)

GDP per capita

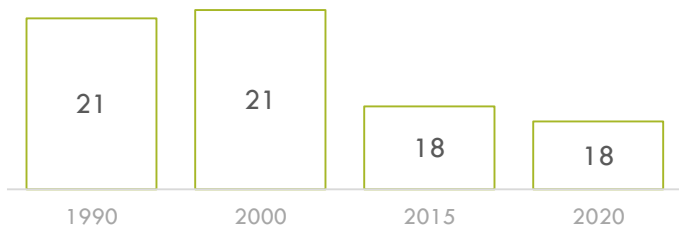
GDP per capita 5 thousand USD
(2015) (GHS)



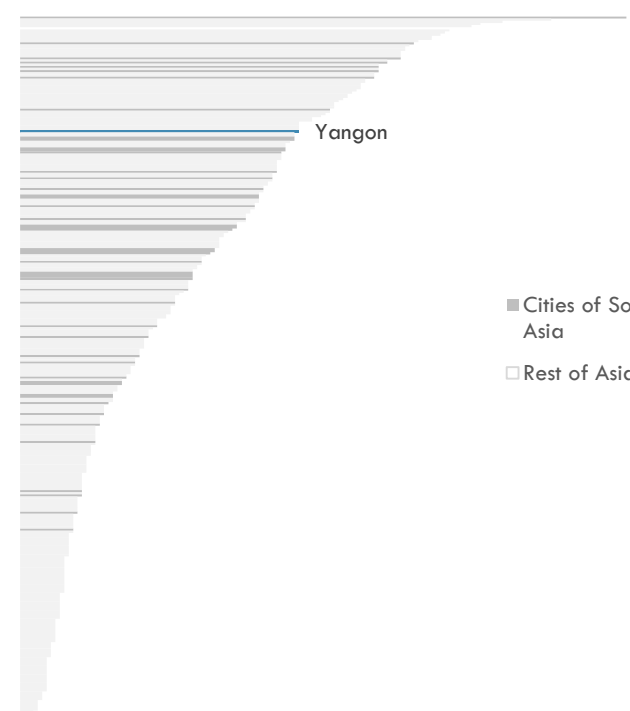
Urban Form and Structure

Builtup area per capita
sqm per capita (GHS)

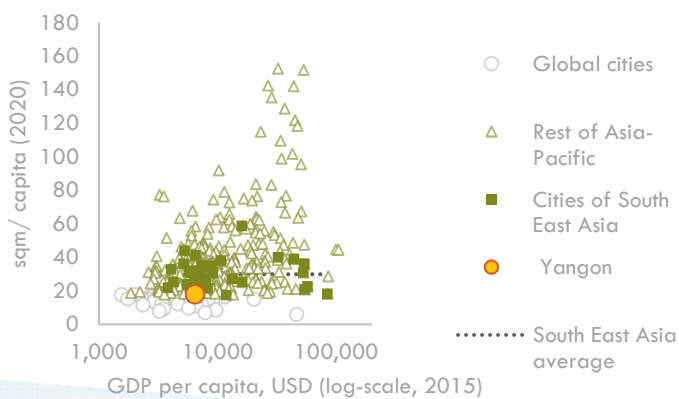
Mean block density
blocks per sqkm (2020) (ITDP)



0 50 100 150

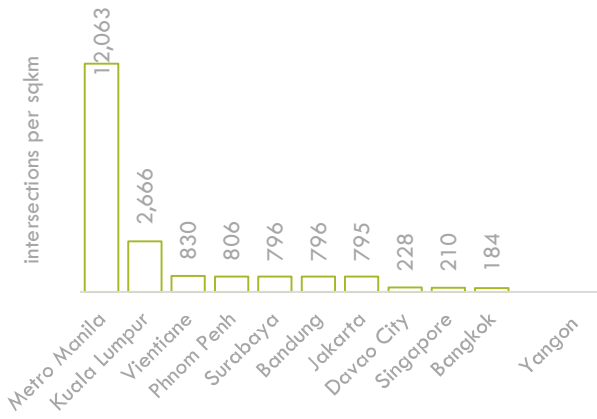


Builtup area per capita
(GHS)



Intersection density

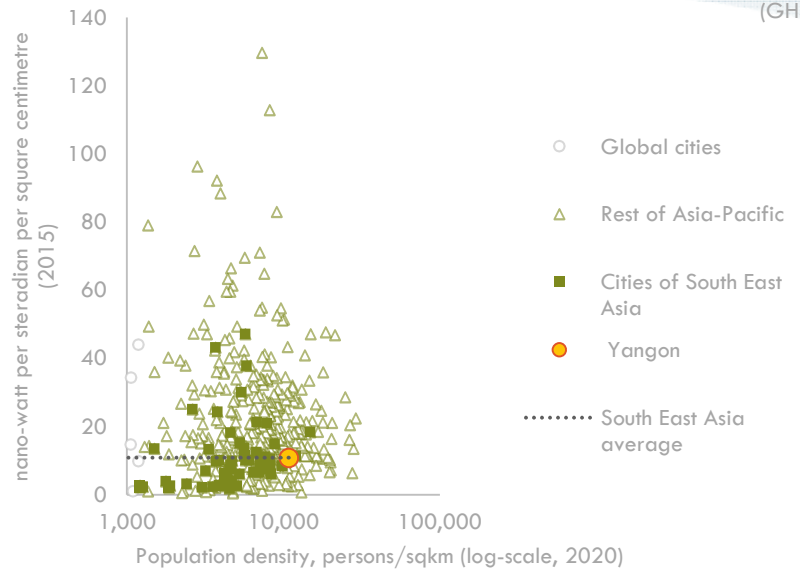
(Oke et.al. (2019) (OSM))



(a) Night time light intensity studies illustrate urban forms and patterns by mapping human activity, infrastructure, and connectivity, offering insights into urban sprawl, density variations, and transport network

Night time light intensity (a)

(GHS)



Urban Transport Infrastructure

Road availability

kilometers per thousand population (2019) (Oke et.al. (OSM) and GHS)



Road kilometers 4,184 kilometers

(2019) (Primary data)

Rapid transit infrastructure

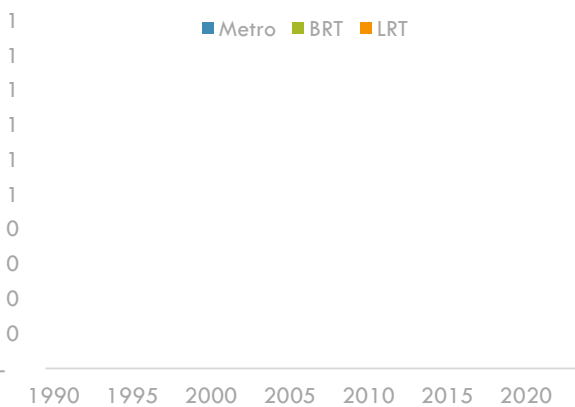
(2024) (TE)

■ Under construction ■ Planned

BRT LRT Metro

Rapid transit infrastructure

kilometers (ITDP, Primary data)



BRT none

LRT none

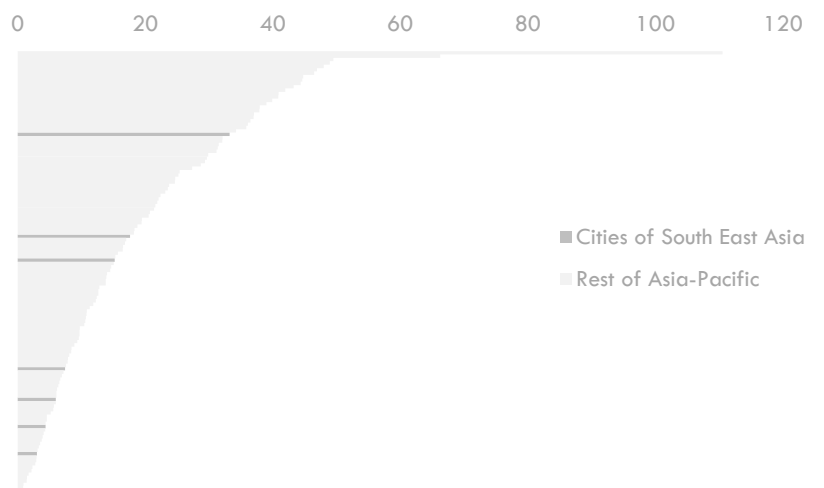
Metro none

Total none

(2023) (ITDP)

Rapid transit availability

kilometers per million urban population (2021) (ITDP, Primary data)



Approximate transit coverage n.d.

Transport Activity and Services

VKT per capita

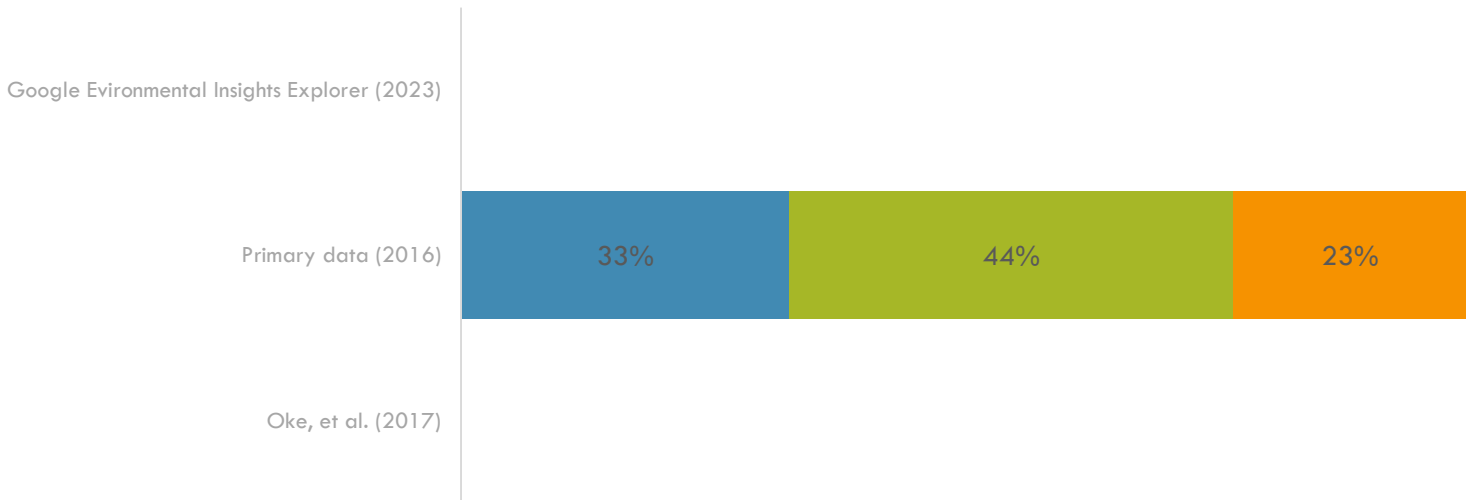
Vehicle-kilometer per capita (2022) (ClimateTrace)



Trips Mode share (b)

Share, %

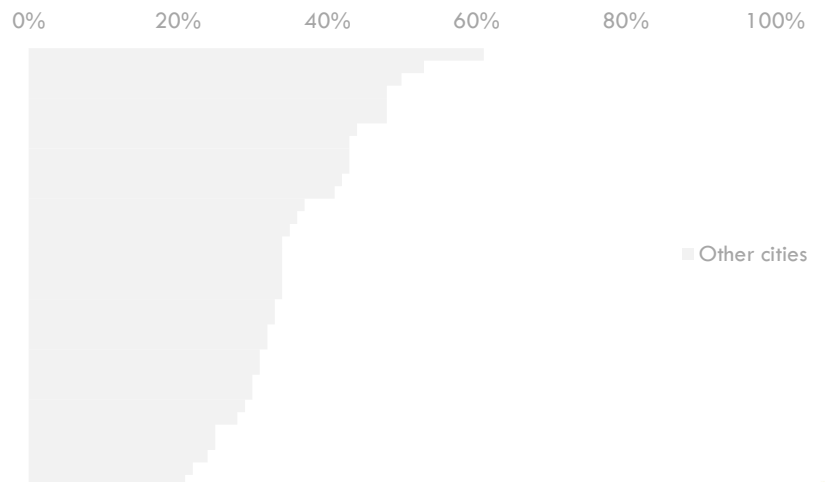
■ Walking and cycling ■ Private ■ Public transport (bus, ferry, informal public transit, etc)



(b) The methodologies used for mode share assessments vary across different studies, making direct comparison of results inadvisable. Specifically, the Google Environmental Insights Explorer derives its assessments from mobile data analysis, while primary data studies typically rely on survey-based approaches. In contrast, the study by Oke et al. utilizes a combination of secondary data sources.

Congestion level

Percent increased travel time vs. uncongested conditions (2021) (TomTom)

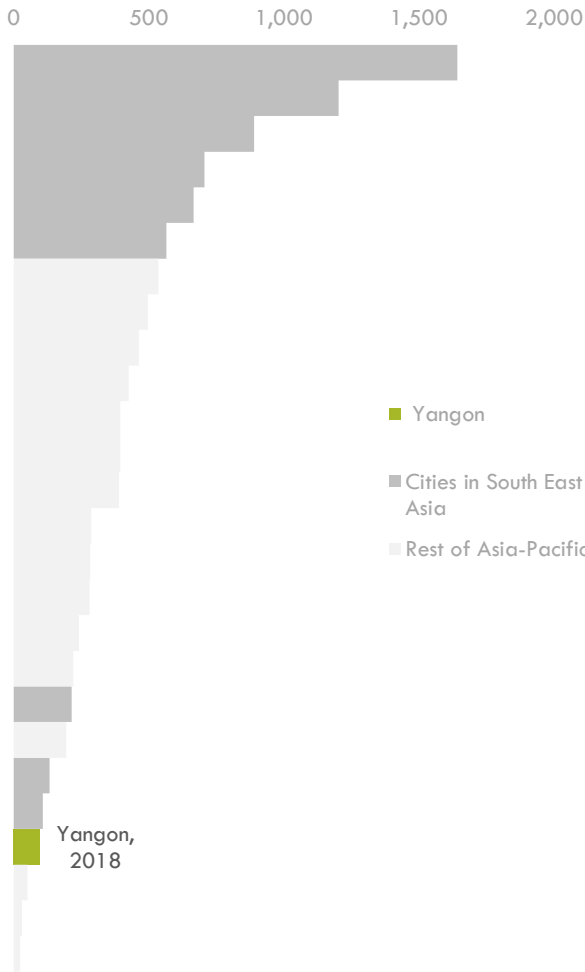


Metro ridership n.d.

Congestion ranking n.d.

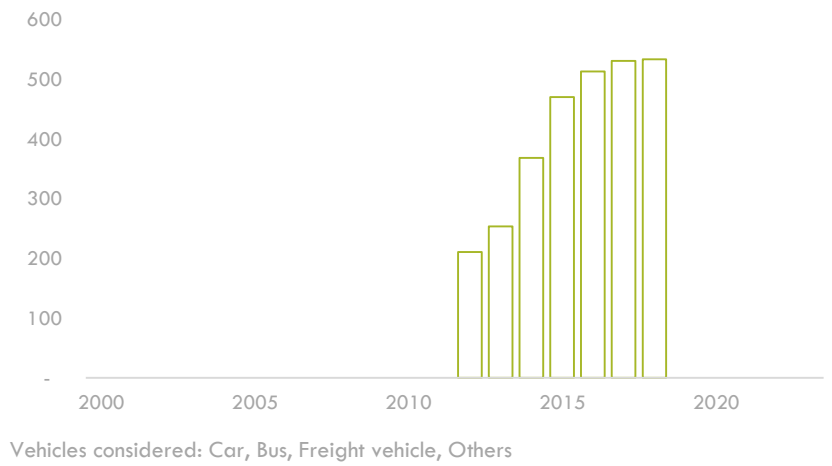
Vehicle motorization

Vehicles per thousand population (Primary data)



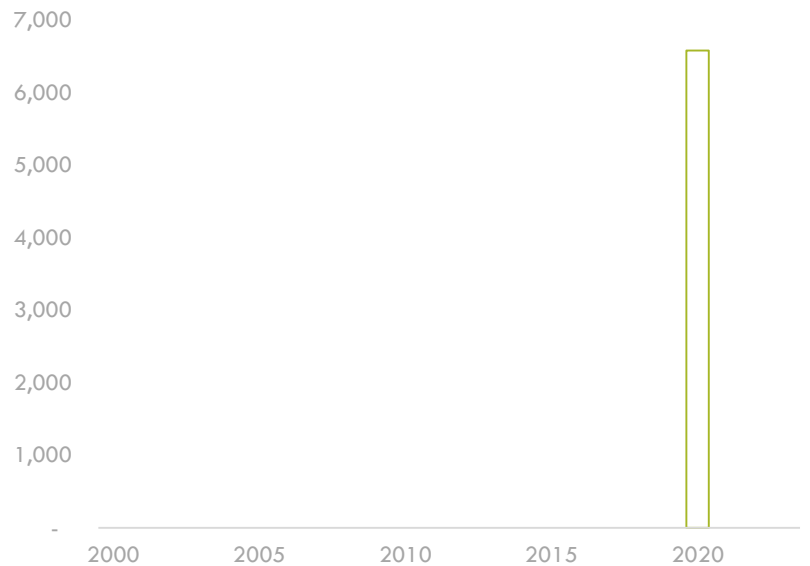
Vehicles registered (c)

Thousand vehicles (Primary data)



Bus fleet (operational)

Bus (and other public transport) fleet (Primary data)

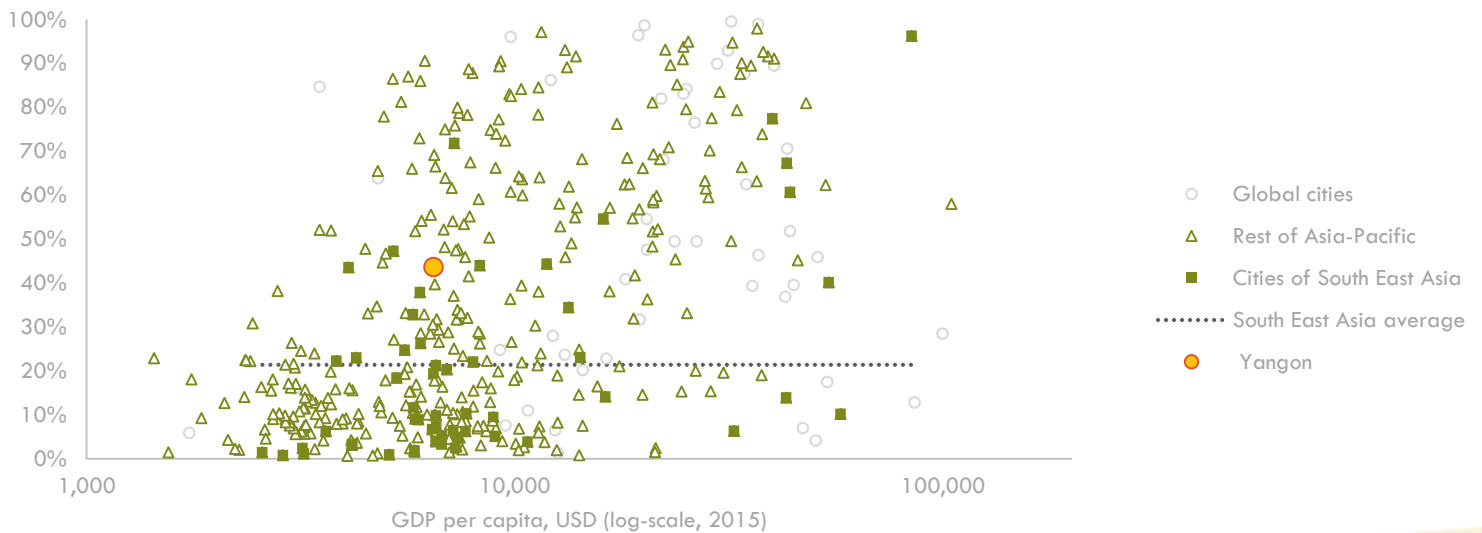


(c) It should be noted that, in most cases, scrapped vehicles are not de-registered, which may result in slightly inflated numbers.

Urban Access

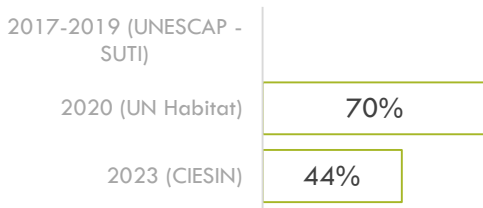
Access to urban public transport

Share of population with convenient access to public transport (2023) (CIESIN)



Access to urban public transport (d) - by source

Share of population with convenient access to public transport



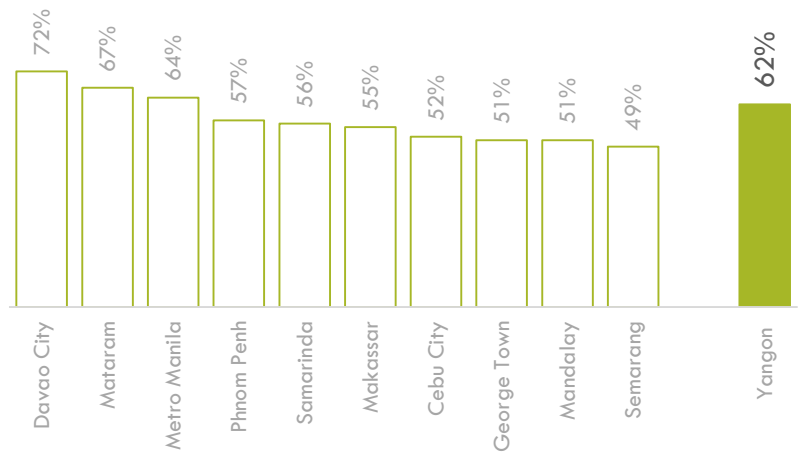
(d) "Access to urban public transport" is computed as share of population who live within a walking distance (along a street network) of 500m to a low capacity public transport system (eg bus, tram) and 1000m to a high capacity public transport system (eg trains, ferries, etc). Only public transport stops which are mapped are included in the analysis which may include both formal and informal stops. Many cities (mostly in the developing countries) have informal public transport systems which are not fully mapped - meaning that they may record higher levels of access to public transport than reported in this dataset.

(e) People Near Services measures the percentage of the city's population living within a 1km walk of both healthcare and education. These services are especially vital for babies, toddlers, and their caregivers, who should be able to reach them on foot.

(f) Percentage of the city's population that lives within 100m of a car-free place. These car-free places include pedestrian-only alleyways, nature trails, playgrounds, pedestrianized squares, and anywhere else that is not used by cars and trucks (except, in some cases, emergency vehicles).

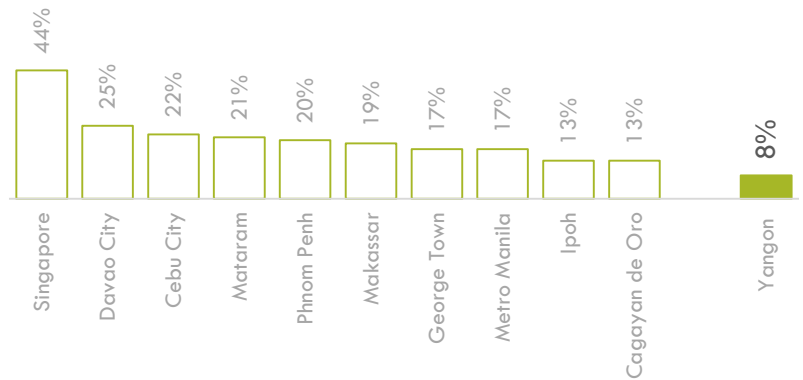
People near services (both healthcare and schools) (e)

(Share of population) vs. highest 10 cities in South East Asia (2020) (ITDP)



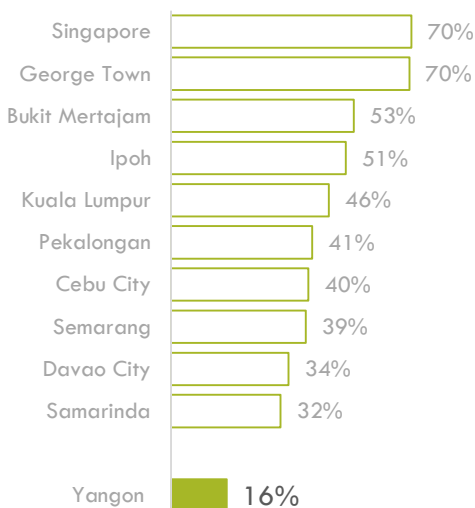
People near car-free places (f)

(Share of population) vs. highest 10 cities in South East Asia (2020) (ITDP)



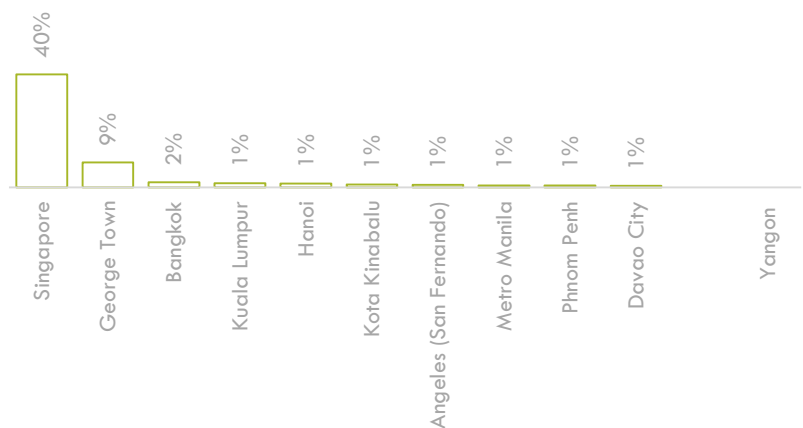
People near open public space

(Share of population) vs. highest 10 cities in South East Asia (2020) (UN Habitat)



People near protected bikelines

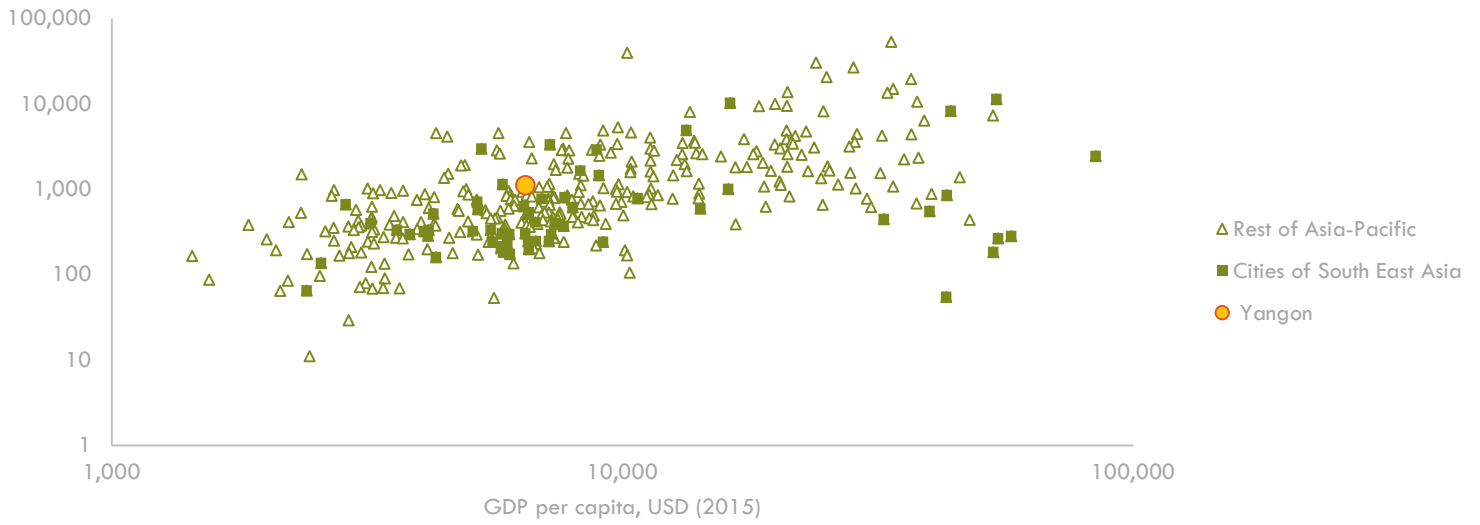
(Share of population) vs. highest 10 cities in South East Asia (2020) (ITDP)



Transport externalities

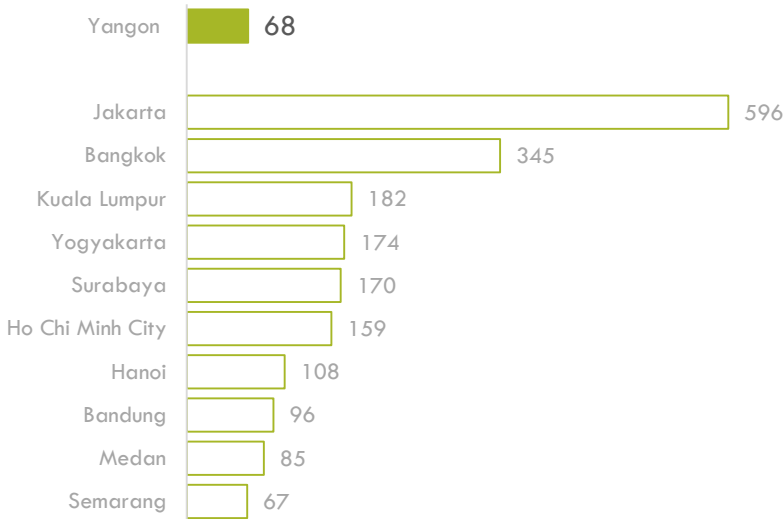
Road transport - CO2 emissions

Thousand tonnes (2022) (ClimateTrace)



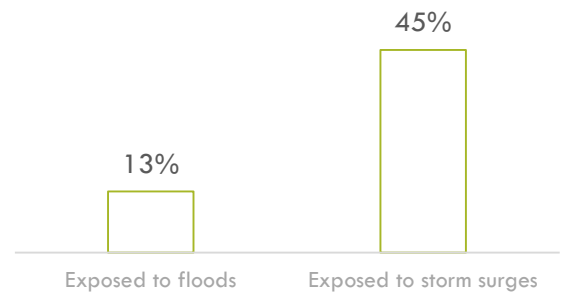
Road transport - N2O emissions

Tonnes (2022) vs. highest 10 cities in South East Asia (ClimateTrace)



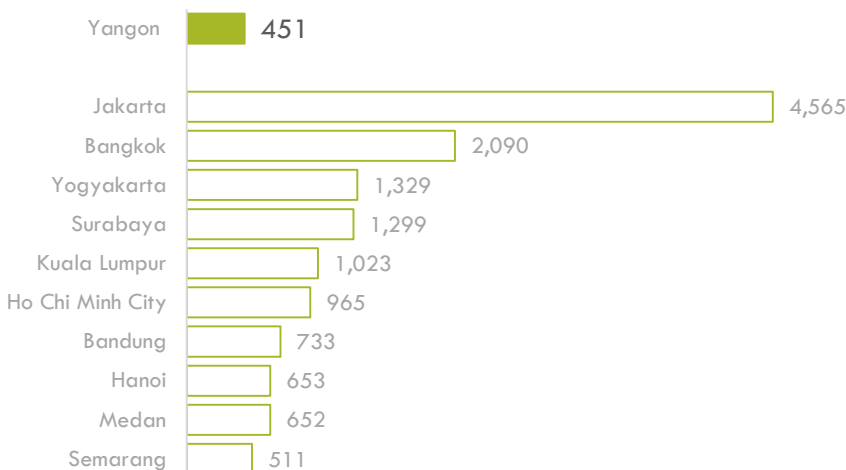
Population exposure to disasters

Share of population (2015) (GHS)



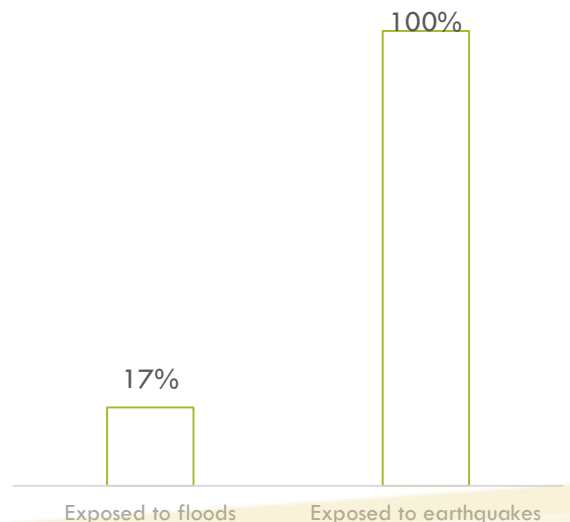
Road transport - CH4 emissions

Tonnes (2022) vs. highest 10 cities in South East Asia (ClimateTrace)



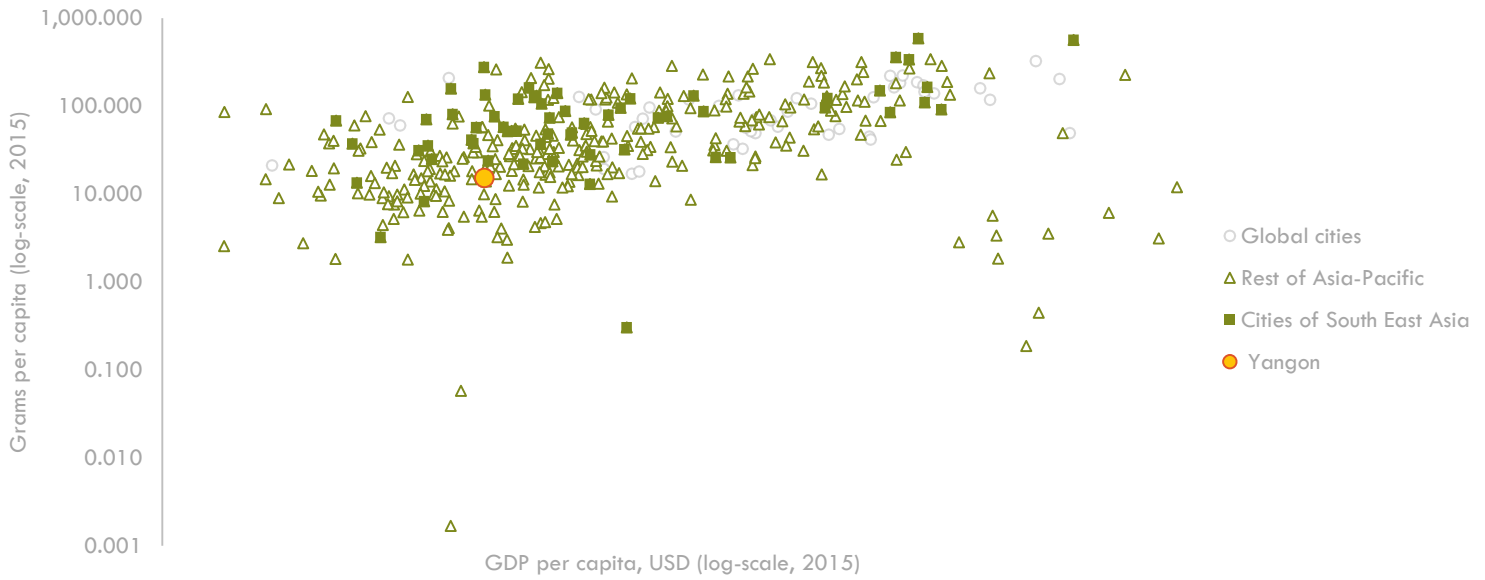
Urban built-up area exposure to disasters

Share of urban area (2020) (GHS)



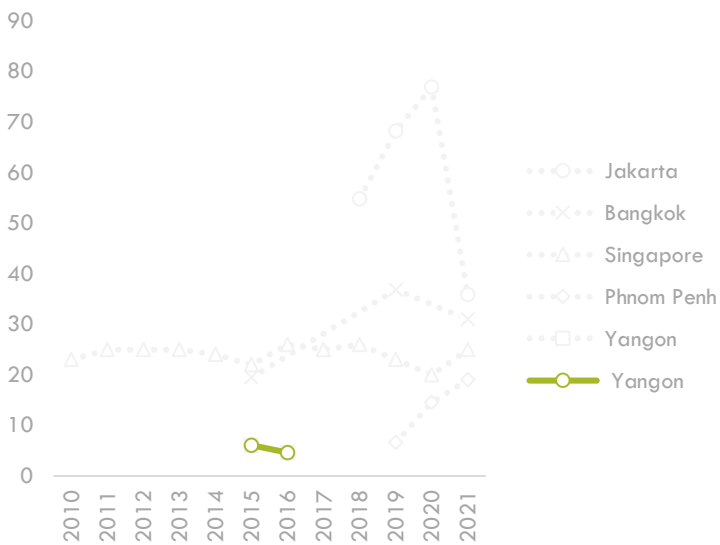
Transport PM 2.5 emissions

(GHS)



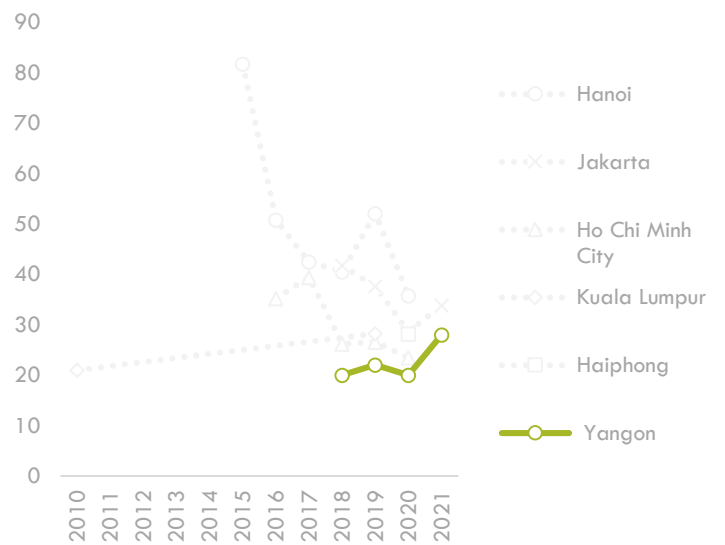
NO2 concentration

ug/m3 (vs. highest 5 cities in South East Asia) (WHO)



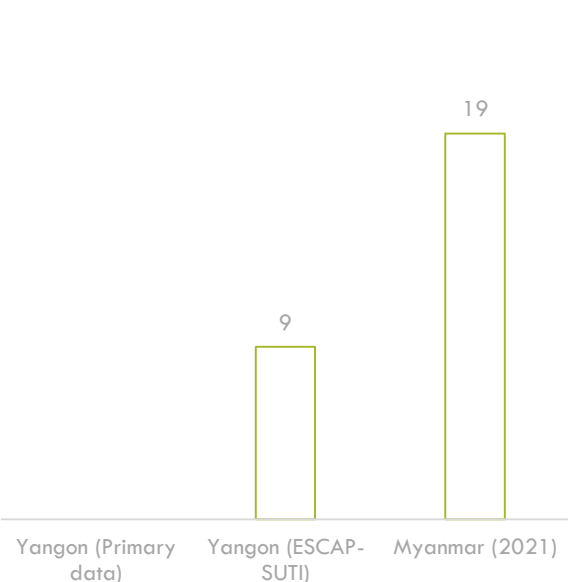
PM 2.5 concentration

ug/m3 (vs. highest 5 cities in South East Asia) (WHO)



Road crash fatality rate

Deaths per 100,000 population



Road crash fatality rate

Deaths per 100,000 population (Primary data)



Transport related Indices

Container port performance index

Index is resultant of the sum of a weighted average of indices for each of the five vessel sizes: feeders (<1,500 TEUs), intra-regional (1,500–5,000 TEUs), intermediate (5,000–8,500 TEUs), neo-Panamax (8,500–13,500 TEUs), and ultra-large container carriers (>13,500 TEU)

Yangon 256th out of 370 cities
(2023) (WB)

Critical Infrastructures Spatial Index for the transportation sector

CISI is an index that spatially explicit indicates the coverage or lack of transport infrastructure. The CISI is expressed in a dimensionless value ranging between 0 (no CI intensity) and 1 (highest CI intensity). The index aggregates high resolution geospatial information on multiple CI assets per CI system

Yangon 0.04/1.00
(2020) (GHS)

SUTI Geometric Mean

The geometric mean in the Sustainable Urban Transport Index (SUTI) by UNESCAP is a mathematical approach to aggregate scores across its 10 sub-indicators, including public transport ridership, safety, affordability, air quality, and access to transport

Yangon 49 score out of 100
(2024) (UNESCAP - SUTI)

Cities in Motion index ranking

The Cities in Motion Index (CIMI) is a composite indicator evaluating cities across nine dimensions—governance, urban planning, technology, environment, international profile, social cohesion, human capital, mobility, and economy—focusing on sustainability and quality of life. It uses a weighted aggregation model to combine sub-indicators for a holistic assessment of urban performance

Yangon n.d.

Cities in Motion index ranking by subcomponent

Ranking (vs. other Cities of South East Asia) (2024) (IESE)



Transport relevant policy documents

Year published	Document name
2014	Project For Comprehensive
2018	The Updated Strategic Urban Development Plan of the Greater Yangon
2020	Sustainable Urban Transport Index for Yangon City, Myanmar

References

- ATO Urban Policy Tracker Asian Transport Outlook (ATO). (2024). ATO Urban Policy Tracker. <https://asiantransportoutlook.com/>
- C40 C40. (2024). Greenhouse gas emissions interactive dashboard. https://www.c40knowledgehub.org/s/article/C40-cities-greenhouse-gas-emissions-interactive-dashboard?language=en_US
- CIESIN CIESIN. (2023). SDG Indicator 11.2.1: Urban Access to Public Transport, 2023 Release. <https://www.earthdata.nasa.gov/data/catalog/sedac-ciesin-sedac-sdgi-uapt-2023-2023.00>
- ClimateTrace Climate Trace. (2024). Data Downloads. <https://climatetrace.org/data>
- GHS GHS. (2024). GHSL - Global Human Settlement Layer. https://human-settlement.emergency.copernicus.eu/ghs_ucdb_2024.php
- Google Environmental Explorer Google. (2024). Environmental Insights Explorer. <https://insights.sustainability.google/places/ChIJbTgmYNLlzMROHiSrNoj7V8?ty=2023&hl=en-US>
- IESE IESE. (2024). IESE Cities in Motion Index. <https://www.iese.edu/media/research/pdfs/ST-0649-E.pdf>
- ITDP ITDP. (2024). The Atlas of Sustainable City Transport. <https://itdp.org/publication/the-atlas-of-sustainable-city-transport/>
- Oke et al. Oke et al. (2019). A novel global urban typology framework for sustainable mobility futures. <https://iopscience.iop.org/article/10.1088/1748-9326/ab22c7#erlab22c7s3>
- OSM OSM. (n.d.). Open Street Map. <https://www.openstreetmap.org/#map=4/21.84/82.79>
- Primary data This includes city official reports or MDB/ Research organisation/ Third party report endorsed/ accepted/ guided by the city government
- TE Transport Politic. (n.d.). Transit Explorer Global Data. <https://www.thetransportpolitic.com/transit-explorer/transit-explorer-data-and-sources/>
- TomTom Tom Tom. (2023). Traffic index Ranking. <https://www.tomtom.com/traffic-index/ranking/>
- UITP - GUMI UITP. (2022). Global Urban Mobility Indicators 2022. <https://www.uitp.org/publications/global-urban-mobility-indicators-2022>
- UN Habitat UN Habitat. (2021). Urban Indicators Database. <https://data.unhabitat.org/>
- UNESCAP - SUTI UNESCAP. (n.d.). Sustainable Urban Transport Index (SUTI). <https://www.unescap.org/our-work/transport/suti>
- WHO WHO. (2024). WHO Ambient Air quality database. <https://www.who.int/data/gho/data/themes/air-pollution/who-air-quality-database>
- WB WB. (2024). The Container Port Performance Index 2023. <https://documents1.worldbank.org/curated/en/099060324114539683/pdf/P17583313892300871be641a5ea7b90e0e6.pdf>