



HYDERABAD, INDIA

URBAN TRANSPORT PROFILE

December 2024

Summary

Hyderabad, a major city in India with a population of 9 million in 2020, has seen consistent population density over the past two decades, maintaining around 10,000 persons per sq km. The city has experienced significant economic growth, with GDP per capita rising from \$3,000 in 2000 to \$6,000 in 2015. Hyderabad's urban form is characterized by a relatively high number of blocks and intersections per sq km, exceeding the national average. While road infrastructure is less developed compared to the national average, with 2 kilometers of road per thousand capita, Hyderabad has made progress in establishing a metro system, reaching 40 kilometers by 2023. This development contributes to the city's public transport accessibility, with 32% of the population having convenient access, surpassing the South Asia average of 19%.

However, private modes of transport still dominate in Hyderabad, accounting for 87% of trips. This preference for private vehicles may be linked to the limited extent of the rapid transit network and the lack of protected bike lanes, which could discourage cycling. Despite these challenges, Hyderabad is actively pursuing sustainable transport solutions. The Telangana State Road Transport Corporation is committed to converting its entire bus fleet to electric vehicles by 2025, aiming for over 3,000 electric buses. This ambitious initiative and ongoing efforts to expand the metro network demonstrate Hyderabad's commitment to improving its urban transport system and reducing its environmental impact.

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

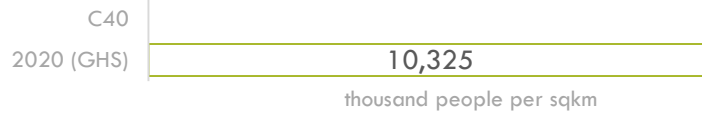
The Asian Transport Observatory (ATO) project collects, collates, and organizes data from publicly available official, as well as reputable and peer-reviewed secondary sources, which may contain incomplete or inconsistent data. It is important to note that the ATO does not generate data. Moreover, while 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 9.0 million
(2020) (GHS)

Population density

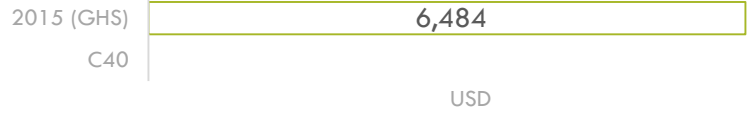
Land area 874 sqkm
(2015) (GHS)



Population density 10 thousand per sqkm
(2020) (GHS)

GDP per capita

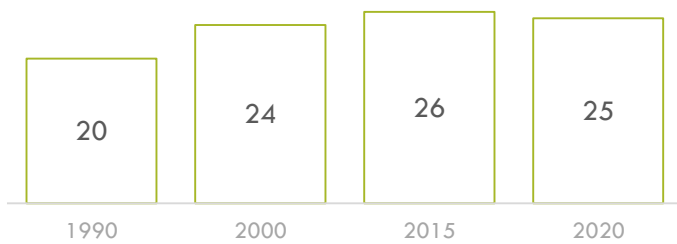
GDP per capita 6 thousand USD
(2015) (GHS)



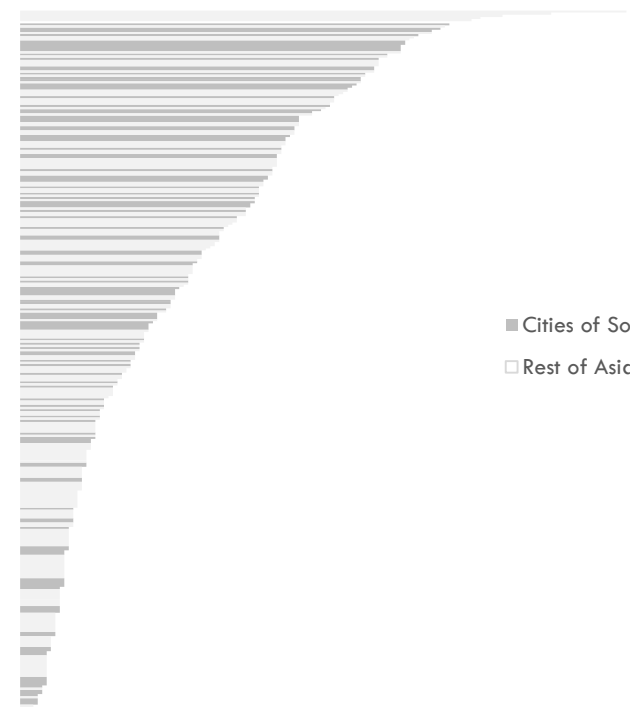
Urban Form and Structure

Builtup area per capita
sqm per capita (GHS)

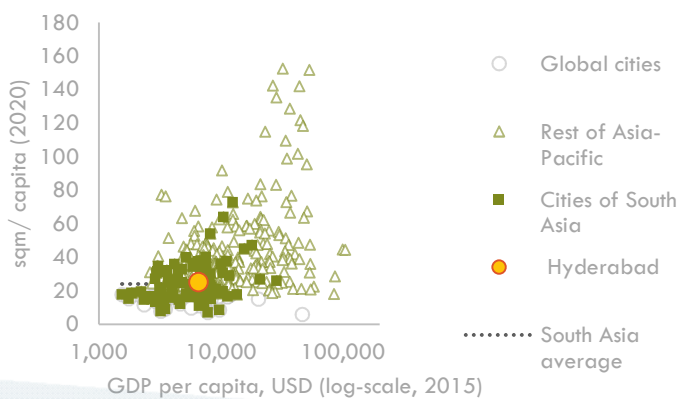
Mean block density
blocks per sqkm (2020) (ITDP)



0 50 100 150

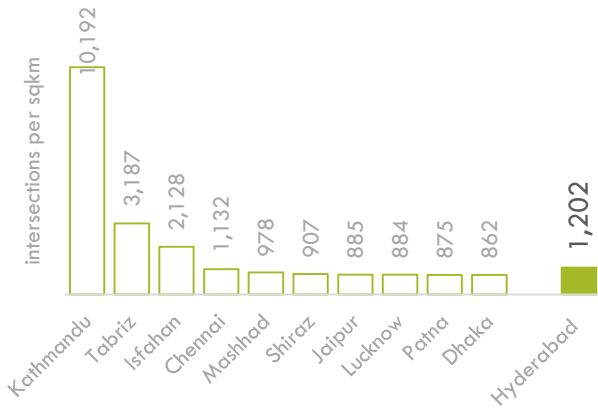


Builtup area per capita
(GHS)



Intersection density

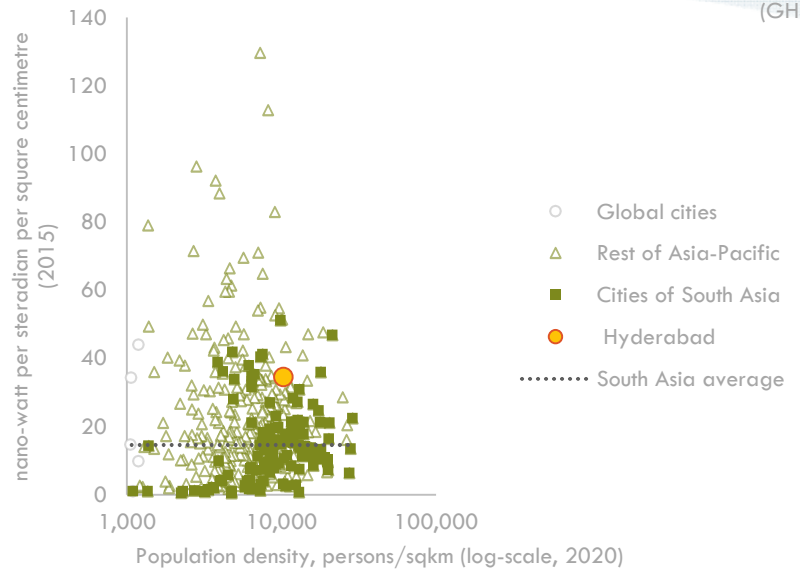
(Oke et.al. (2019) (OSM))



(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)

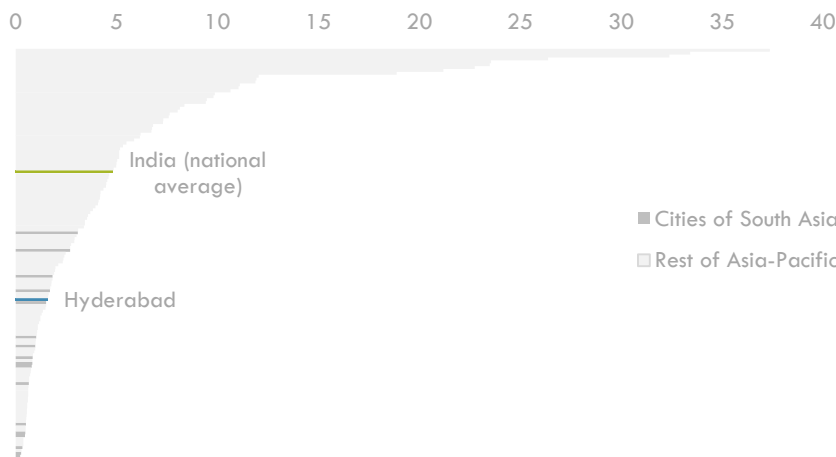
(GHS)



Urban Transport Infrastructure

Road availability

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



Road kilometers 5,400 kilometers

(2016) (Primary data)

Rapid transit infrastructure

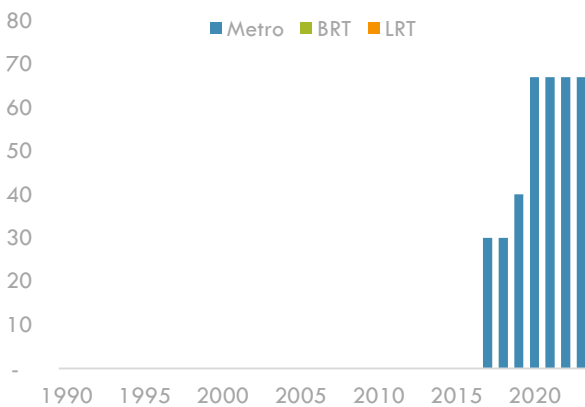
(2024) (TE)

■ Under construction ■ Planned



Rapid transit infrastructure

kilometers (ITDP, Primary data)



BRT none

LRT none

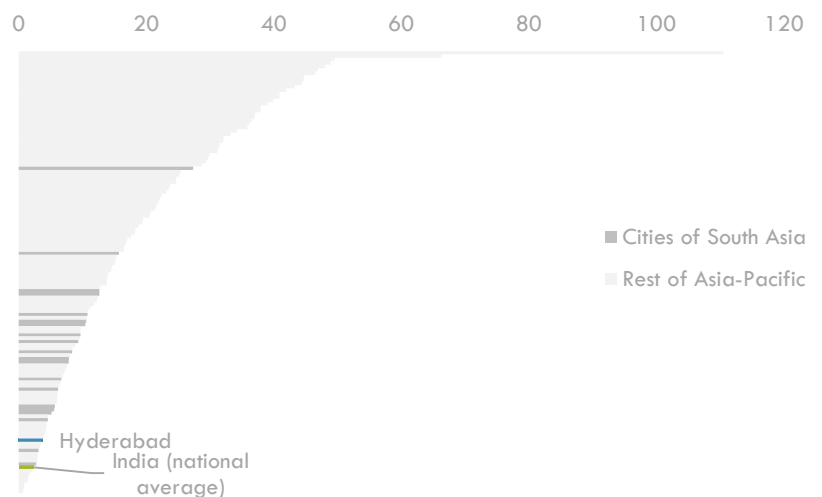
Metro 67 kilometers

Total 67 kilometers

(2023) (ITDP)

Rapid transit availability

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

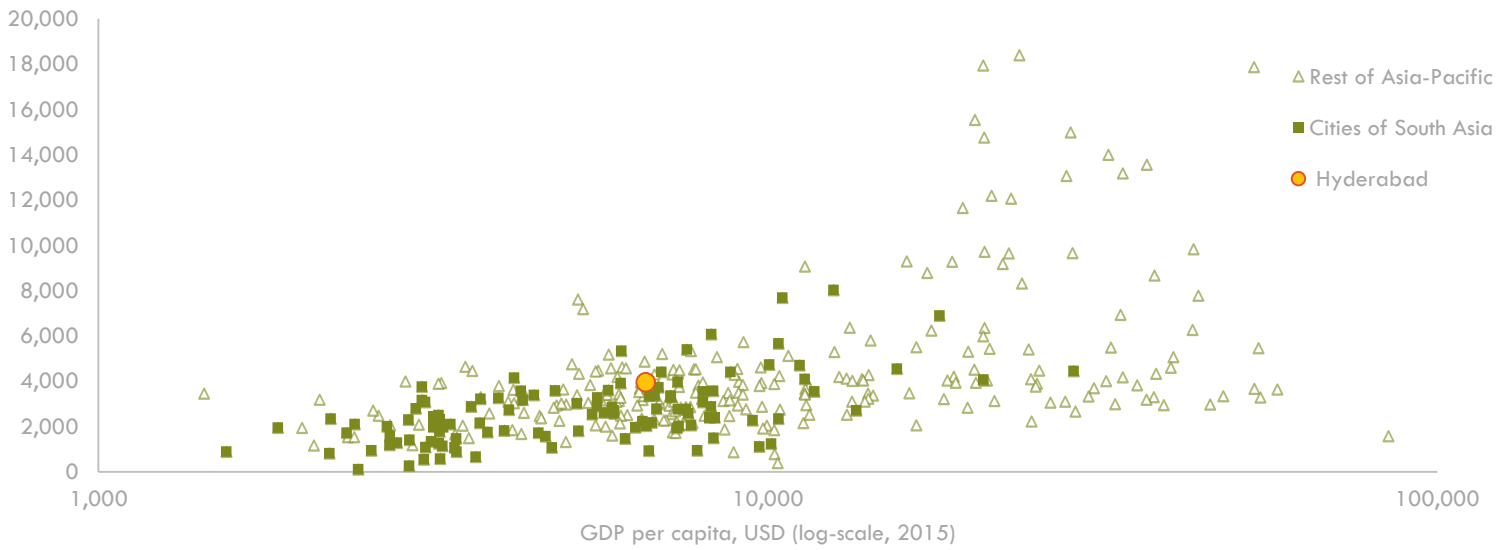


Approximate transit coverage n.d.

Transport Activity and Services

VKT per capita

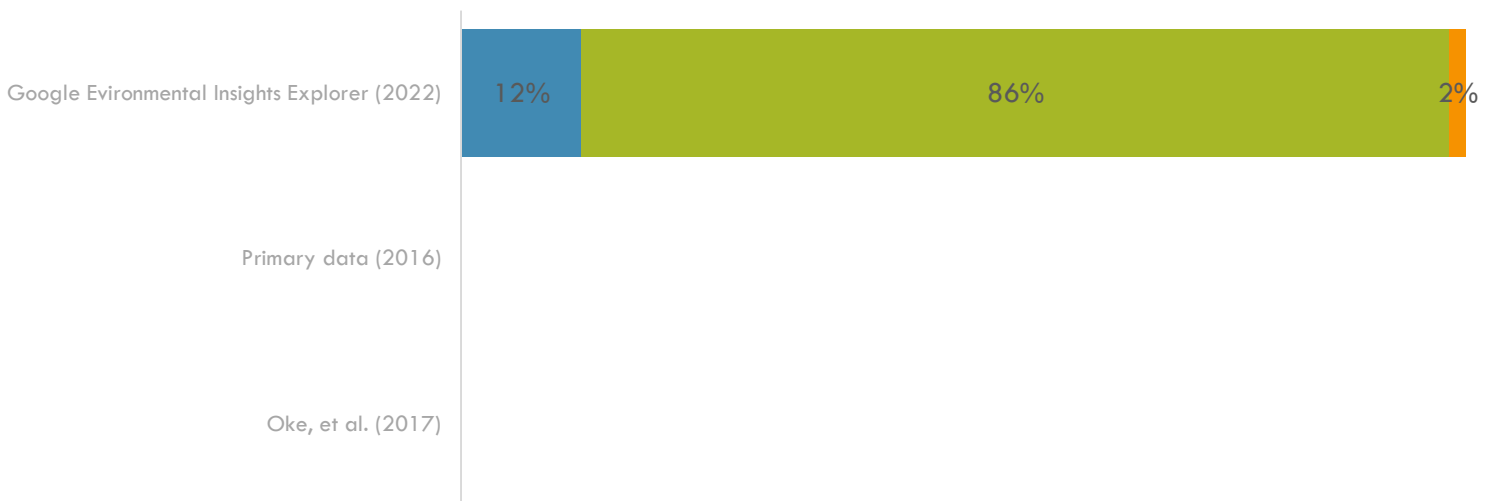
Vehicle-kilometer per capita (2022) (ClimateTrace)



Trips Mode share (b)

Share, %

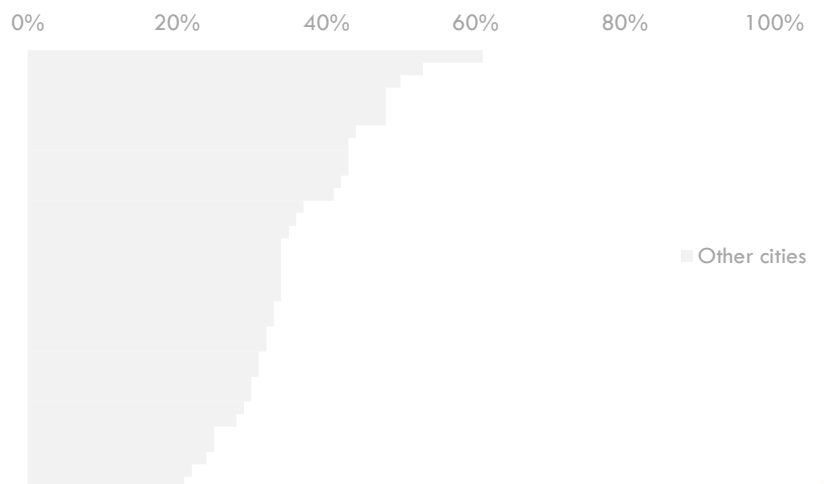
■ Walking and cycling ■ Private ■ Public transport (bus, ferry, informal public transit, etc)



(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)

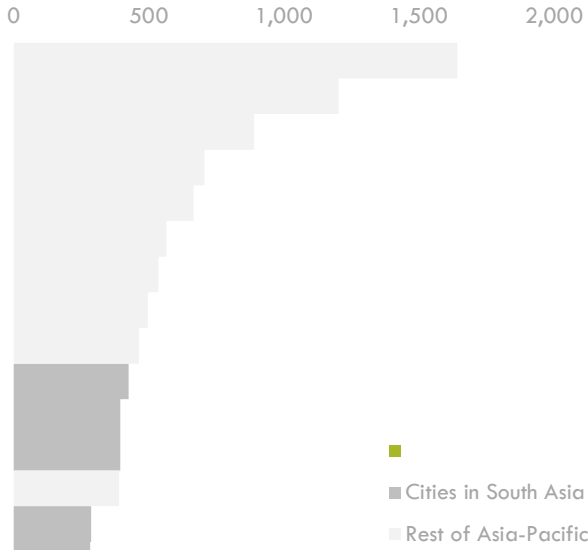


Metro ridership n.d.

Congestion ranking n.d.

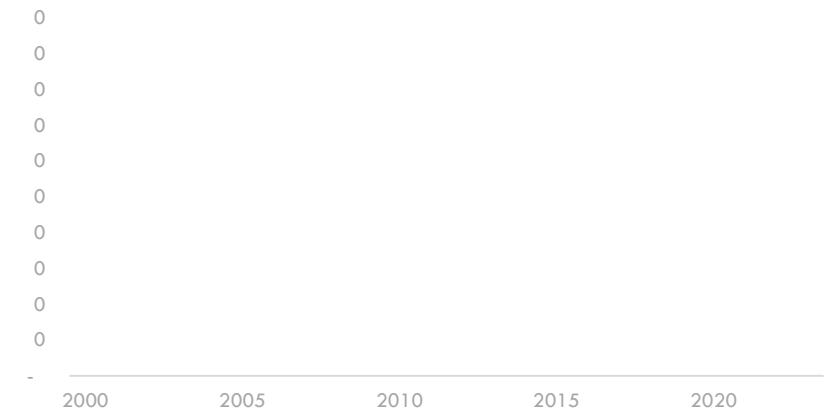
Vehicle motorization

Vehicles per thousand population (Primary data)



Vehicles registered (c)

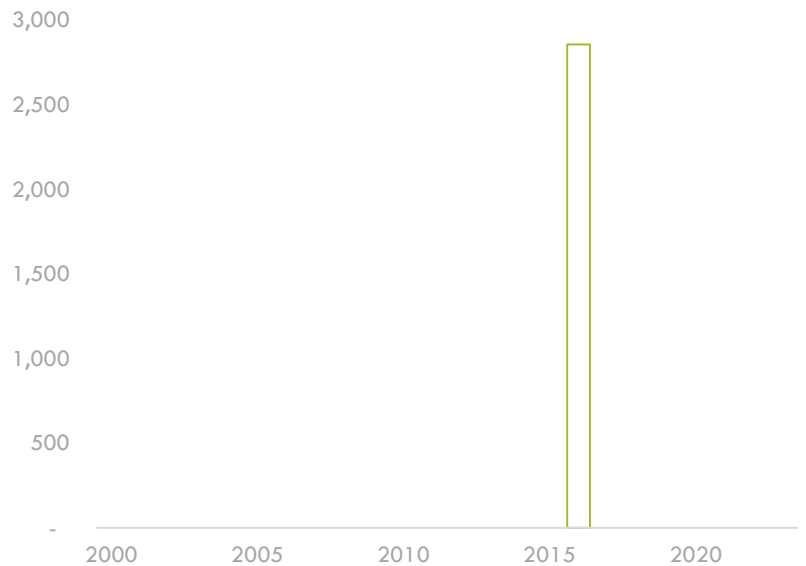
Thousand vehicles (Primary data)



Vehicles considered: no further information

Bus fleet (operational)

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

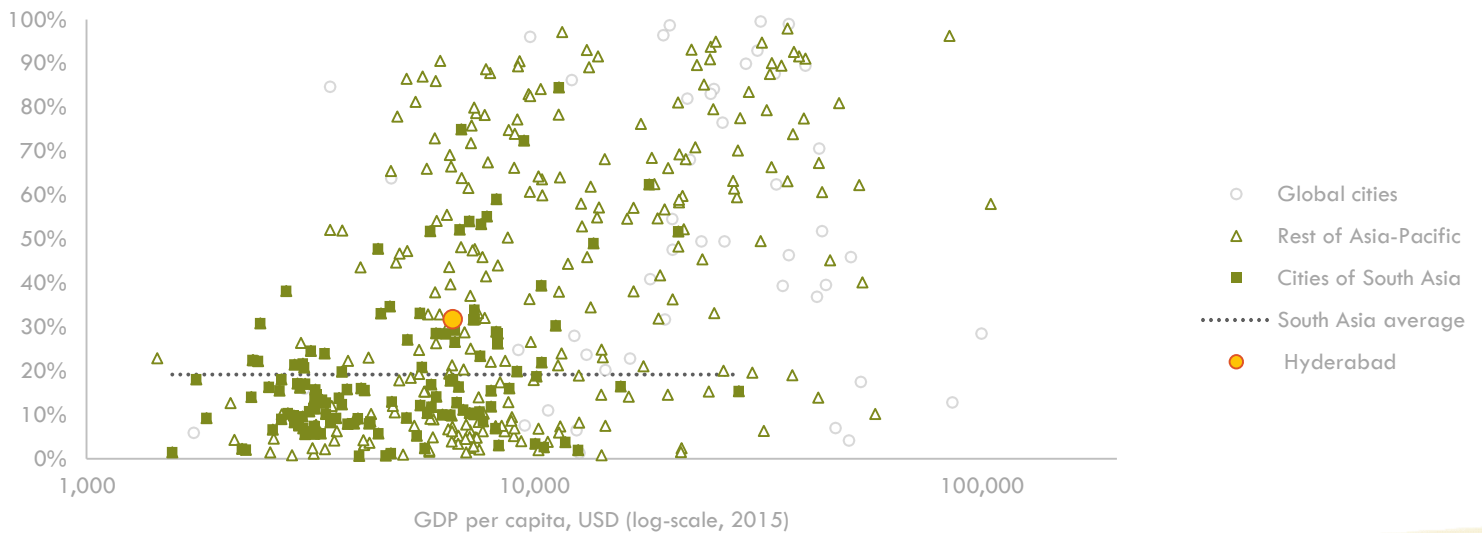


(c) It should be noted that, in most cases, scrapped vehicles are not de-registered, which may result in slightly inflated numbers.

Urban Access

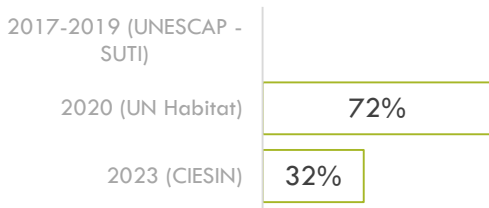
Access to urban public transport

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



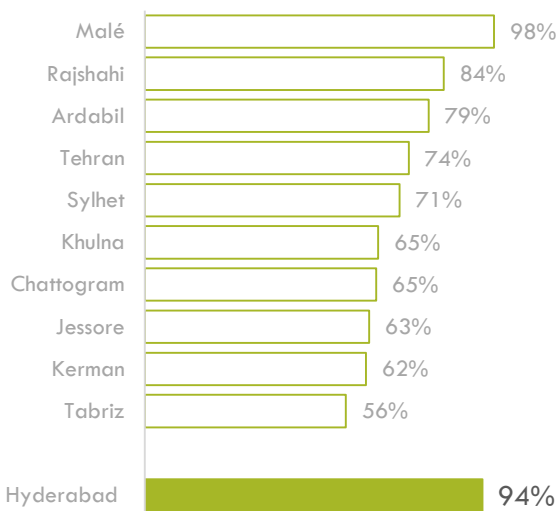
(d) "Access to urban public transport" is computed as share of population who live within a walking distance (along a street network) of 500m to a low capacity public transport system (eg bus, tram) and 1000m to a high capacity public transport system (eg trains, ferries, etc). Only public transport 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).

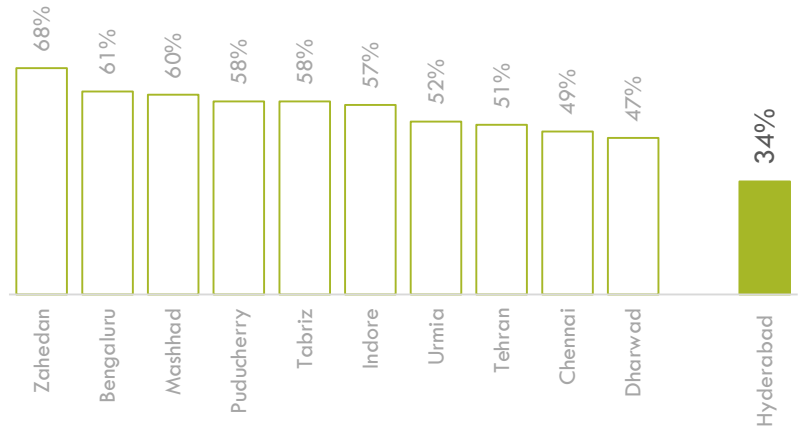
People near open public space

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



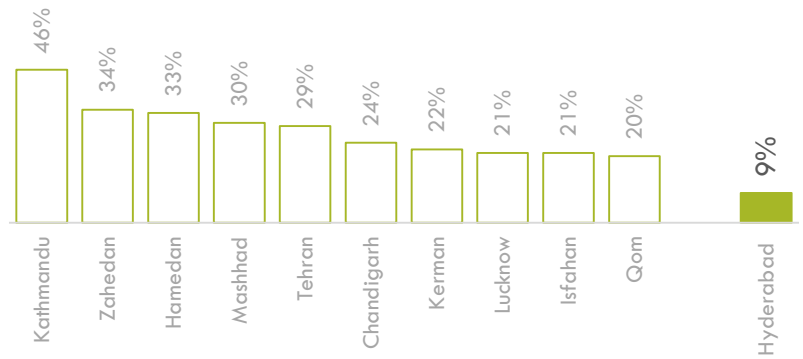
People near services (both healthcare and schools) (e)

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



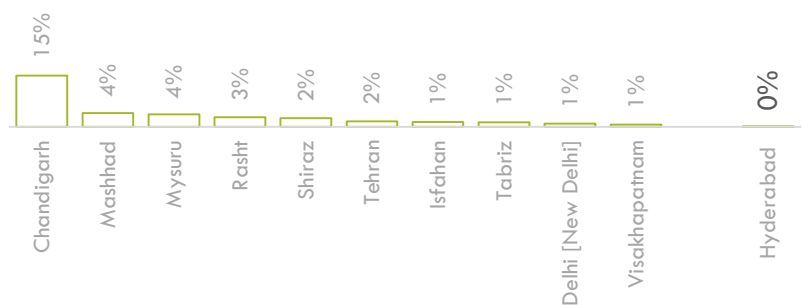
People near car-free places (f)

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



People near protected bikelanes

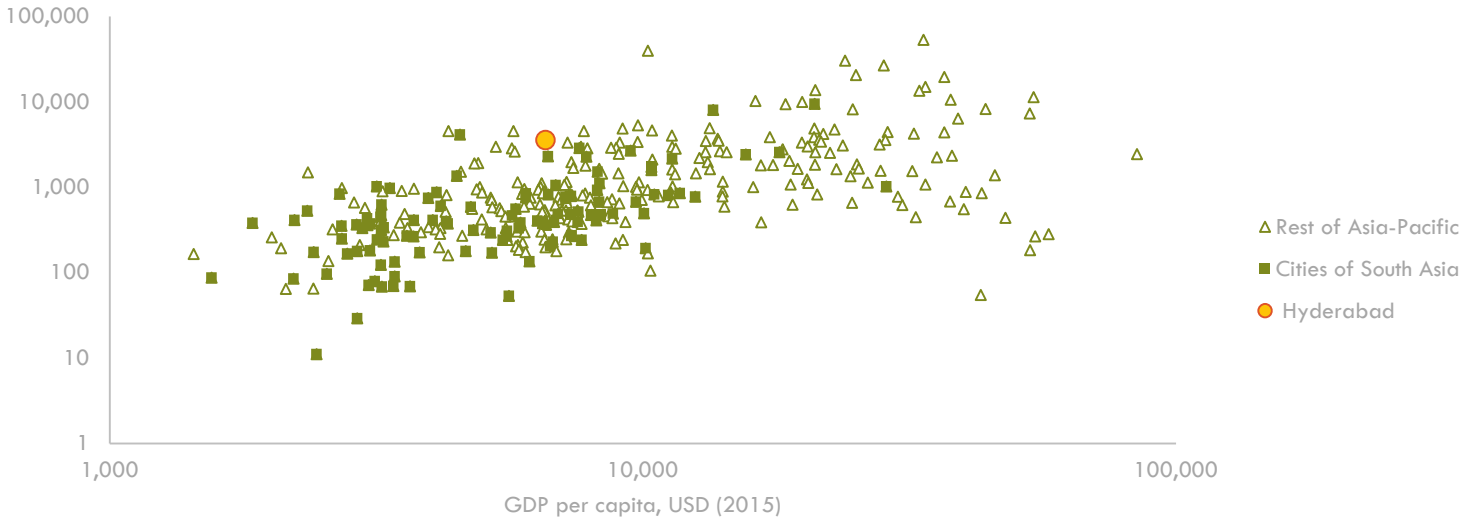
(Share of population) vs. highest 10 cities in South Asia (2020) (ITDP)



Transport externalities

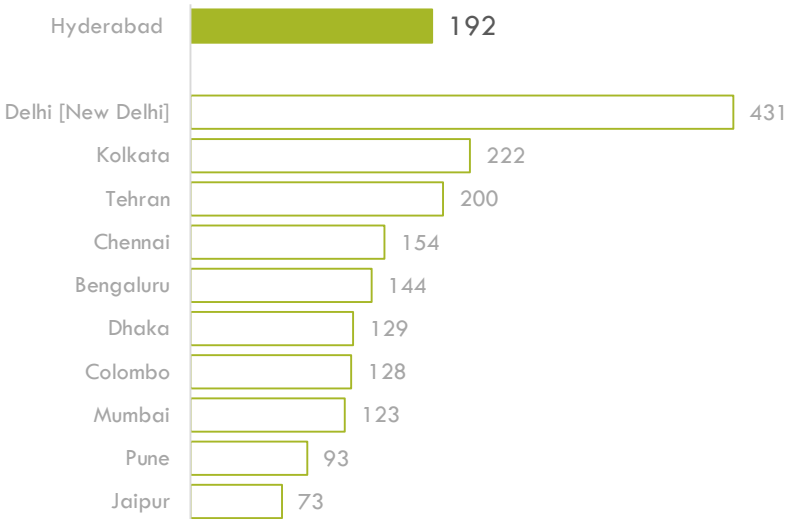
Road transport - CO2 emissions

Thousand tonnes (2022) (ClimateTrace)



Road transport - N2O emissions

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



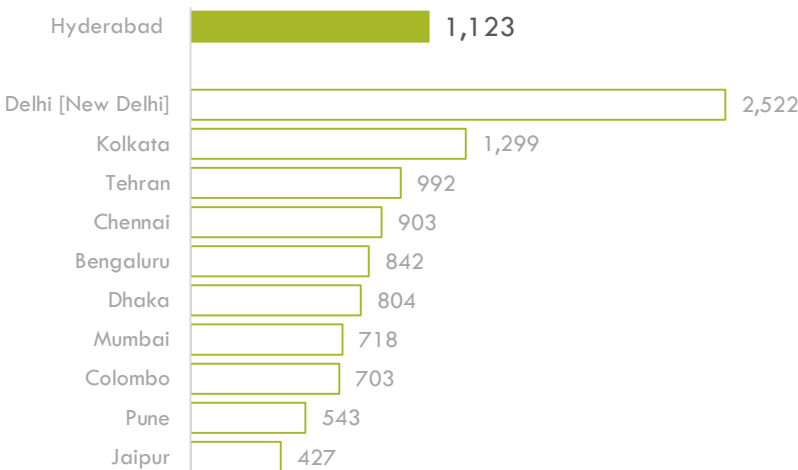
Population exposure to disasters

Share of population (2015) (GHS)



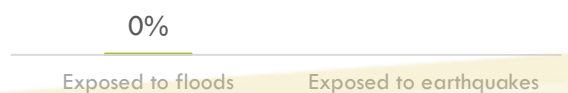
Road transport - CH4 emissions

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



Urban built-up area exposure to disasters

Share of urban area (2020) (GHS)



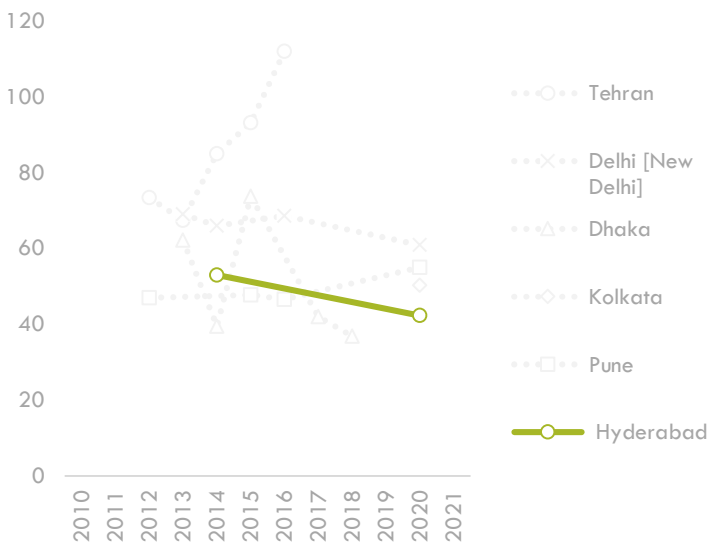
Transport PM 2.5 emissions

(GHS)



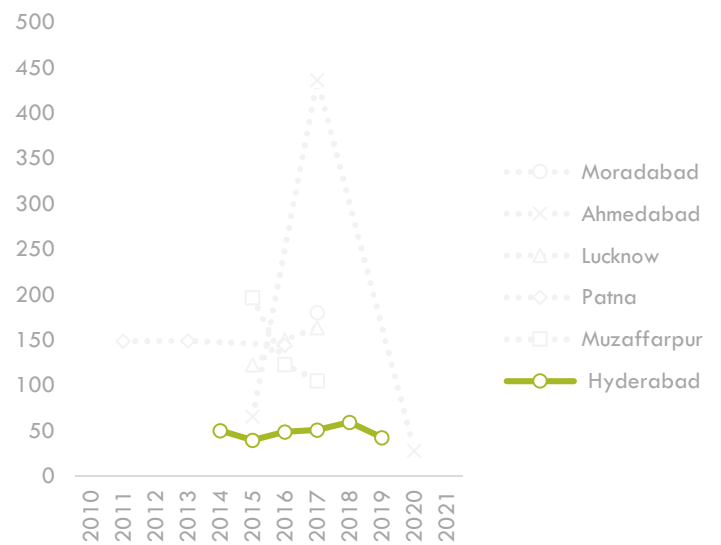
NO2 concentration

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



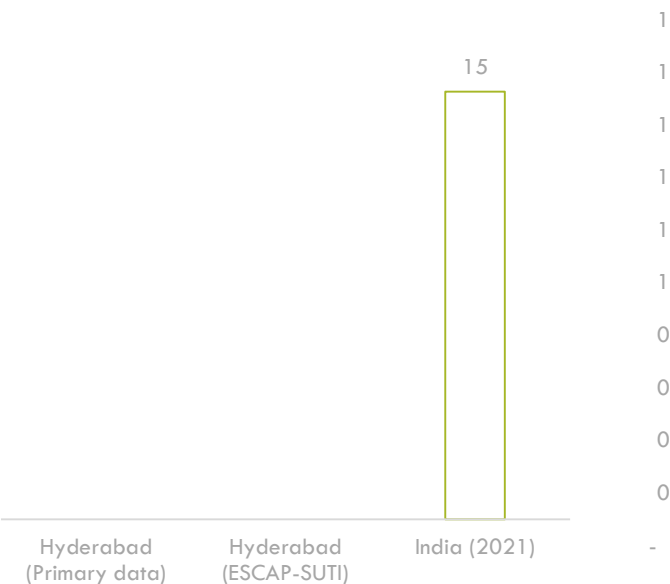
PM 2.5 concentration

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



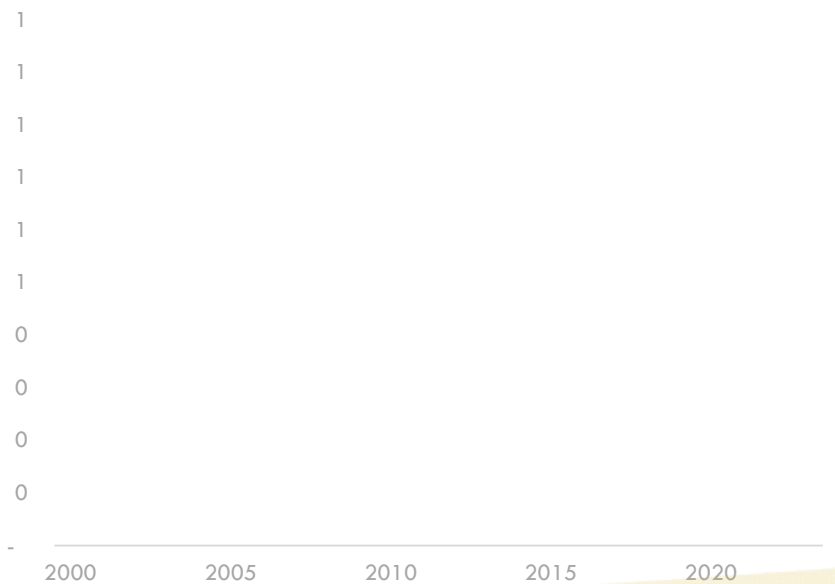
Road crash fatality rate

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)

Hyderabad n.d.

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

Hyderabad n.d.

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

Hyderabad 0.07/1.00
(2020) (GHS)

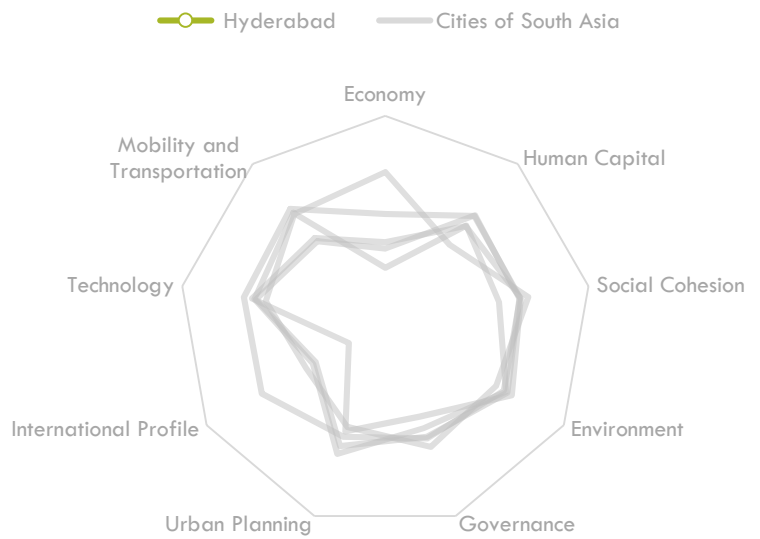
SUTI Geometric Mean

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

Hyderabad n.d.

Cities in Motion index ranking by subcomponent

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



Transport relevant policy documents

Year published	Document name
2013	HMDA Master Plan 2031
n.d.	Comprehensive Transportation Study for Hyderabad Metropolitan Area (HMA)

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>