



ABBOTTABAD, PAKISTAN

URBAN TRANSPORT PROFILE

December 2024

Summary

Abbottabad, nestled in the foothills of the Himalayas in Pakistan, faces unique urban transport challenges due to its mountainous terrain and rapid population growth. While the city has experienced a significant increase in built-up area per capita, its road infrastructure remains limited. This lack of adequate road infrastructure and the absence of rapid transit systems like MRT, LRT, or BRT contributes to a heavy reliance on private vehicles and informal paratransit services. Furthermore, Abbottabad's urban transport system is characterized by a lack of formal organization and regulation, leading to challenges such as poor road conditions, traffic congestion, and pedestrian safety concerns.

In 2022, Abbottabad residents made 2.5 trips per person daily, resulting in 1,290,000 total trips, with an even split between short and longer distances. 200,000 daily exchange trips supplemented this. By 2040, the road network is projected to increase by 27% to 1,199km, with 14% main roads and 86% local roads.

Despite these challenges, Abbottabad has embarked on a journey towards sustainable urban mobility by developing a Sustainable Urban Mobility Plan (SUMP). This plan, developed in collaboration with the provincial government and international partners, aims to address the city's mobility needs in a participatory and integrated manner. The SUMP envisions Abbottabad as a compact city with an efficient and sustainable mobility system that prioritizes walking, cycling, and public transport. The plan also emphasizes the importance of improving road safety and reducing greenhouse gas emissions from the transport sector.

A key component of Abbottabad's SUMP is the proposed development of a Bus Rapid Transit (BRT) corridor along the Karakorum Highway, the city's main artery. This BRT system, feeder systems, and reorganized paratransit services are expected to improve public transport accessibility and connectivity across the city significantly. The SUMP also prioritizes road improvements, focusing on central areas and missing links, to enhance traffic flow and pedestrian safety. The successful implementation of the SUMP will require ongoing coordination and collaboration between local and provincial authorities, as well as continuous capacity strengthening and community engagement.

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

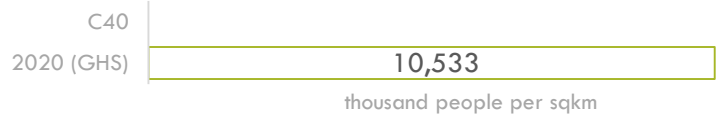
The Asian Transport Observatory (ATO) project collects, collates, and organizes data from publicly available official, as well as reputable and peer-reviewed secondary sources, which may contain incomplete or inconsistent data. It is important to note that the ATO does not generate data. Moreover, while 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 758 thousand
(2020) (GHS)

Population density

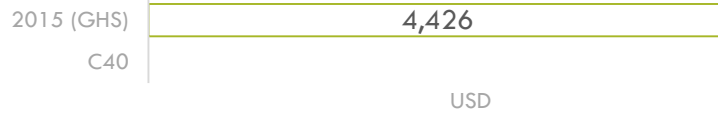
Land area 72 sqkm
(2015) (GHS)



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

GDP per capita

GDP per capita 4 thousand USD
(2015) (GHS)



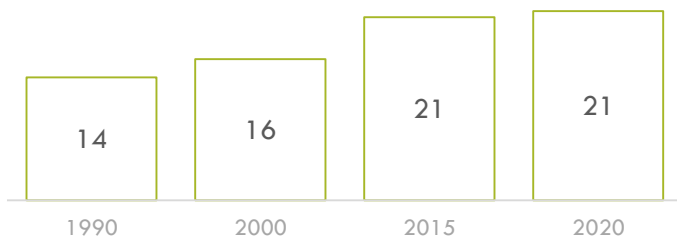
Urban Form and Structure

Builtup area per capita

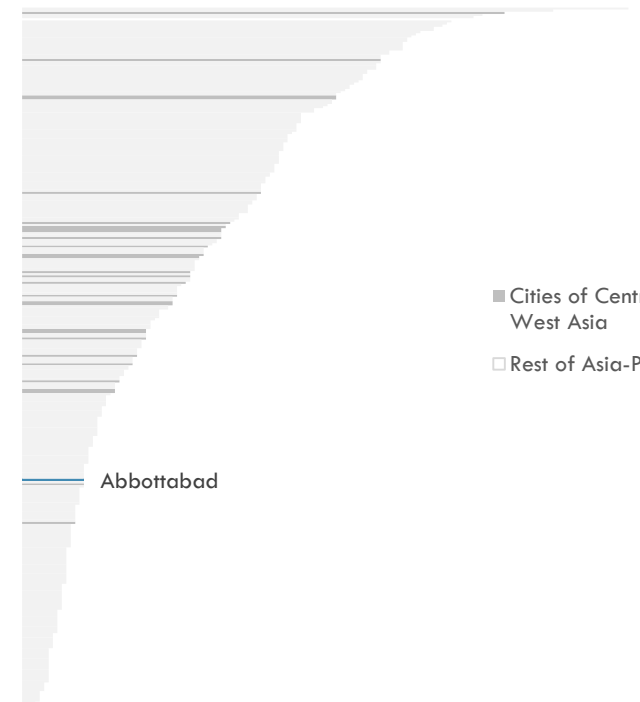
sqm per capita (GHS)

Mean block density

blocks per sqkm (2020) (ITDP)

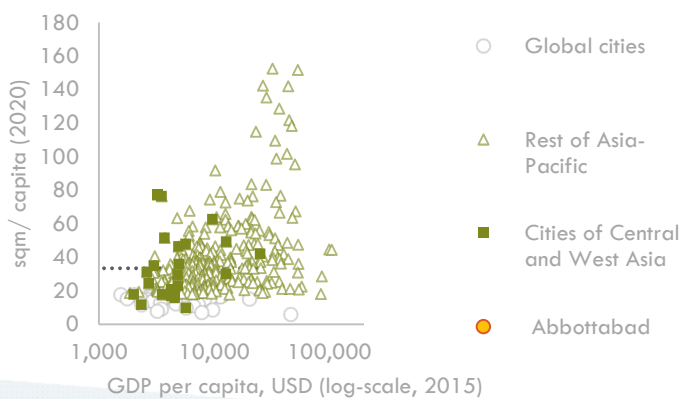


0 50 100 150



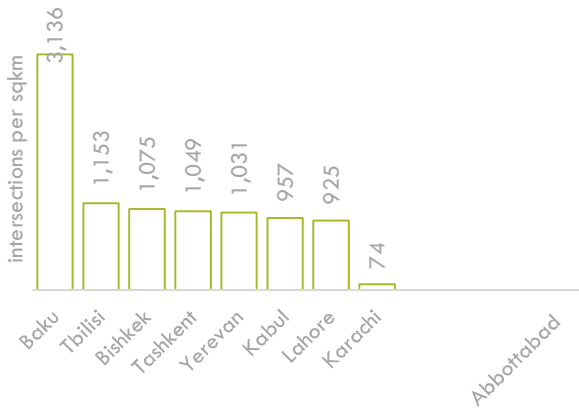
Builtup area per capita

(GHS)



Intersection density

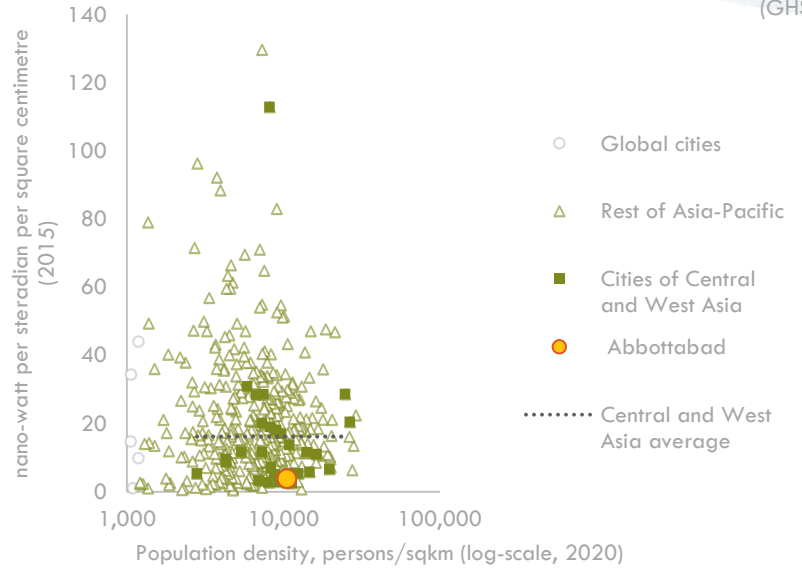
(Oke et.al. (2019) (OSM))



(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 n.d.

Rapid transit infrastructure

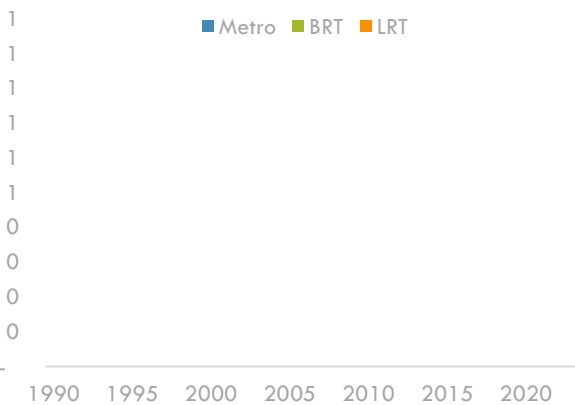
(2024) (TE)

■ 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)

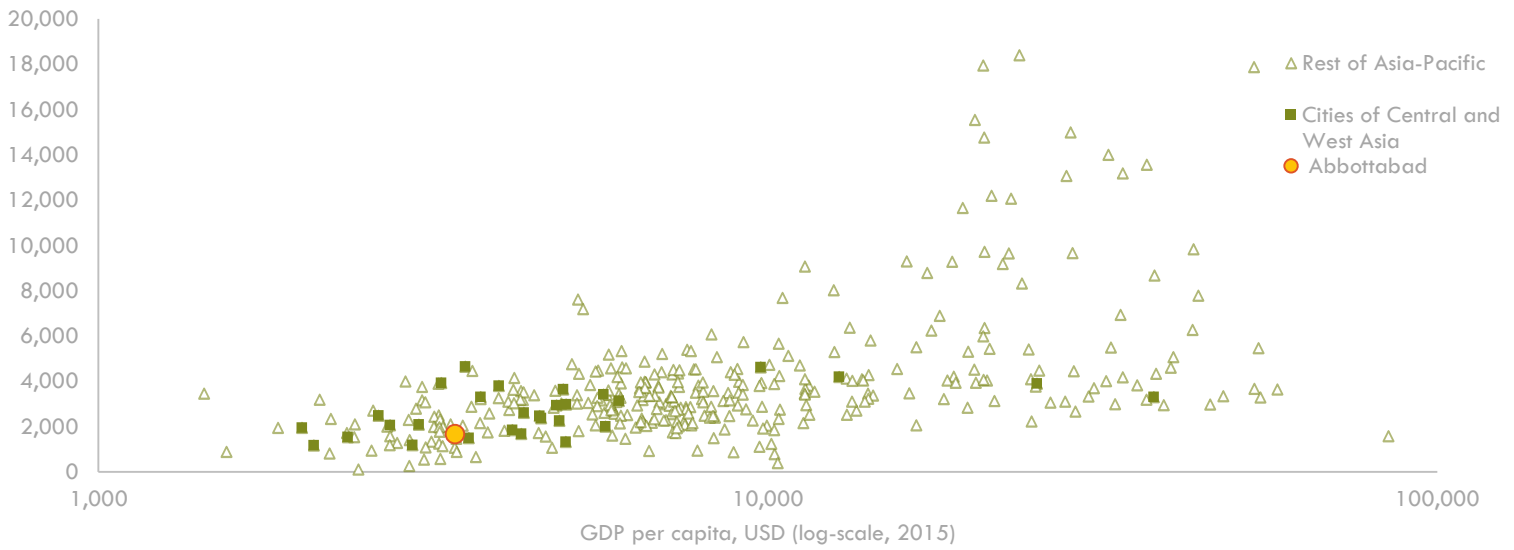


Approximate transit coverage n.d.

Transport Activity and Services

VKT per capita

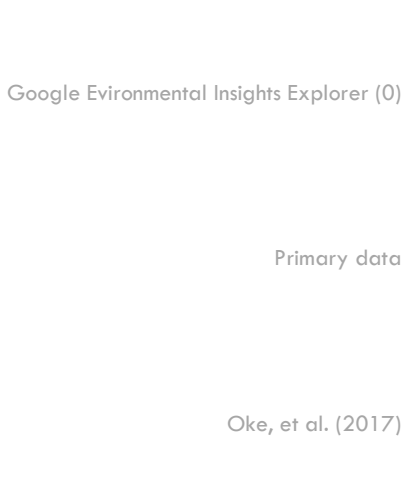
Vehicle-kilometer per capita (2022) (ClimateTrace)



Trips Mode share (b)

Share, %

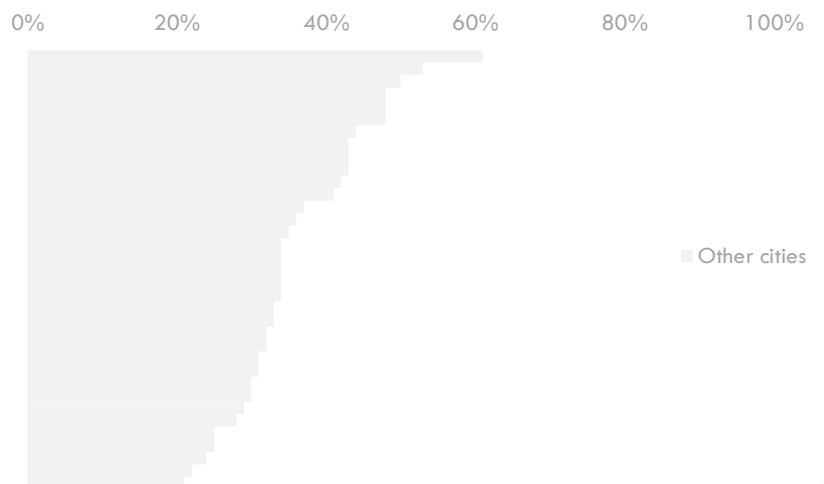
■ Walking and cycling ■ Private ■ Public transport (bus, ferry, informal public transit, etc)



(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)

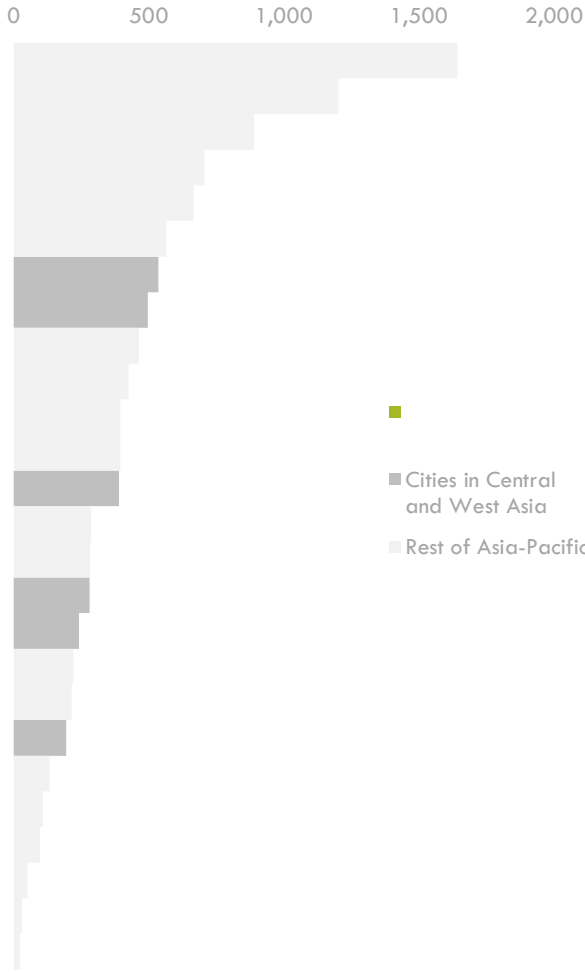


Metro ridership n.d.

Congestion ranking n.d.

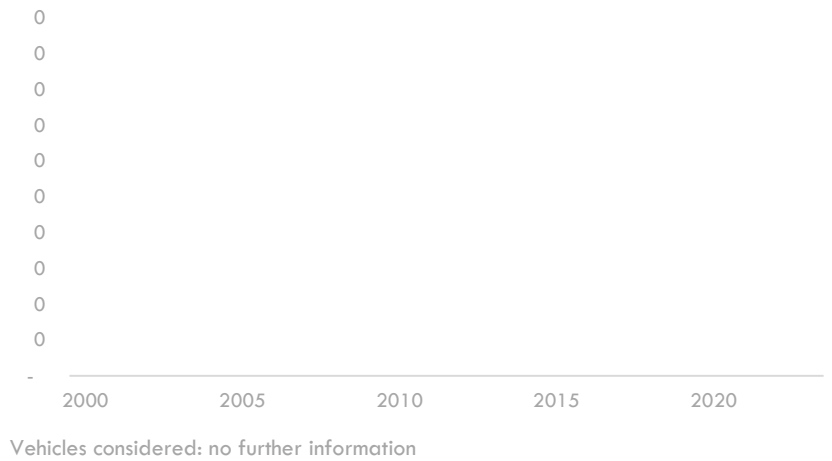
Vehicle motorization

Vehicles per thousand population (Primary data)



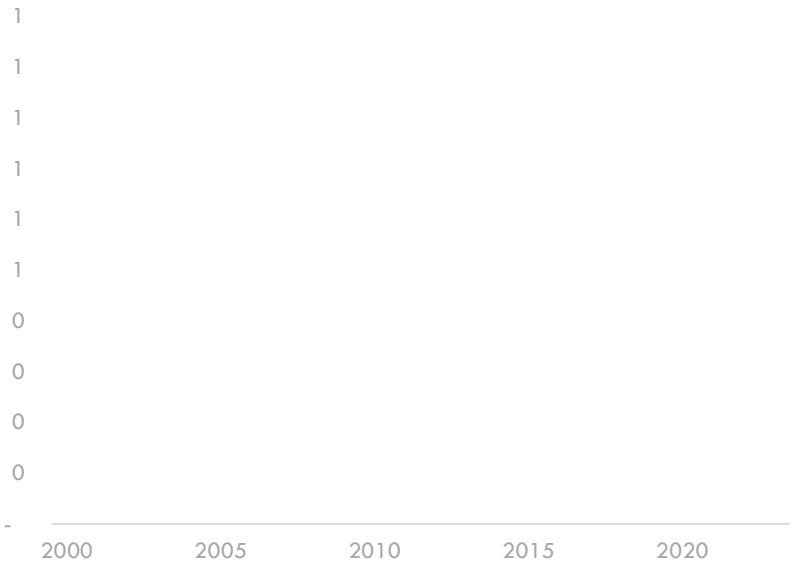
Vehicles registered (c)

Thousand vehicles (Primary data)



Bus fleet (operational)

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

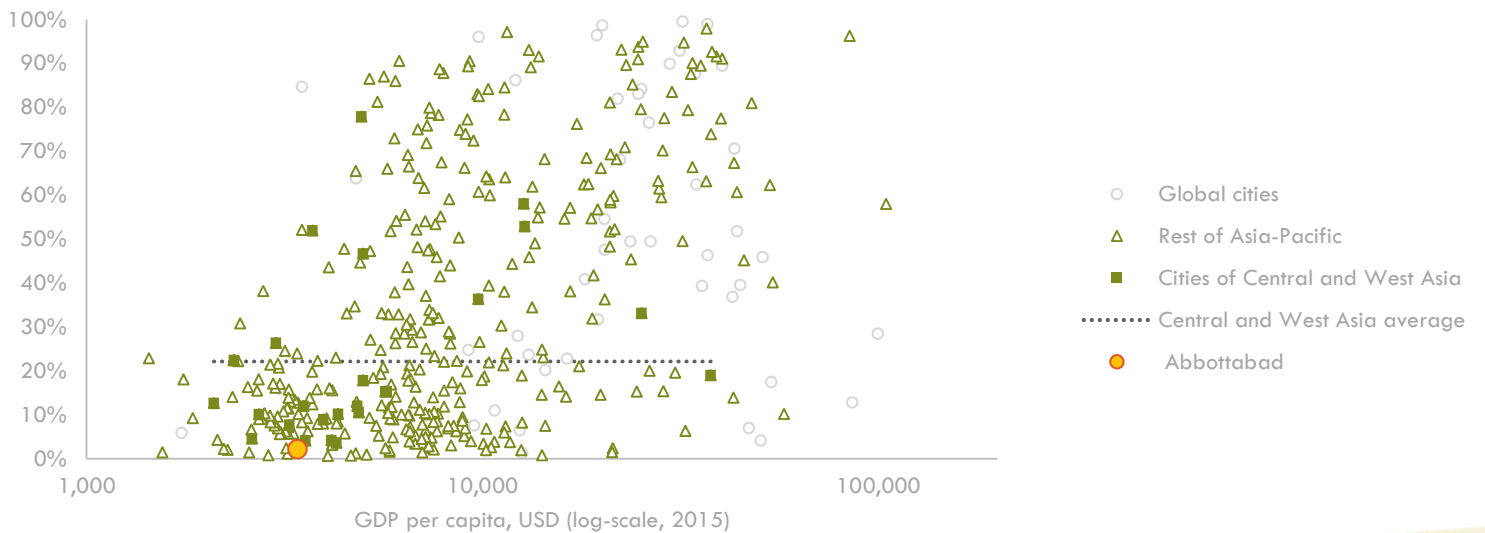


(c) It should be noted that, in most cases, scrapped vehicles are not de-registered, which may result in slightly inflated numbers.

Urban Access

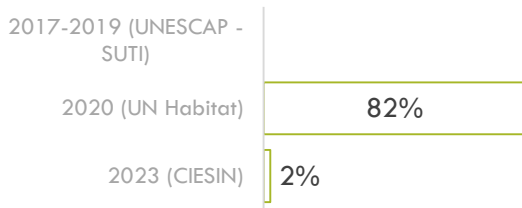
Access to urban public transport

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



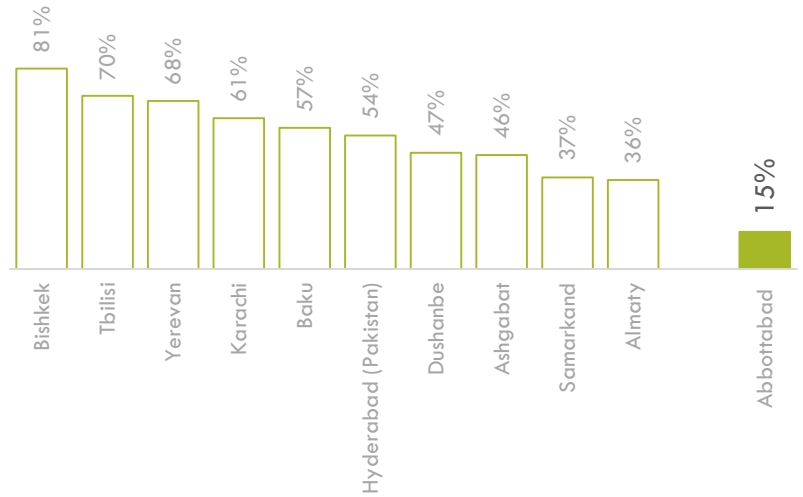
(d) "Access to urban public transport" is computed as share of population who live within a walking distance (along a street network) of 500m to a low capacity public transport system (eg bus, tram) and 1000m to a high capacity public transport system (eg trains, ferries, etc). Only public transport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

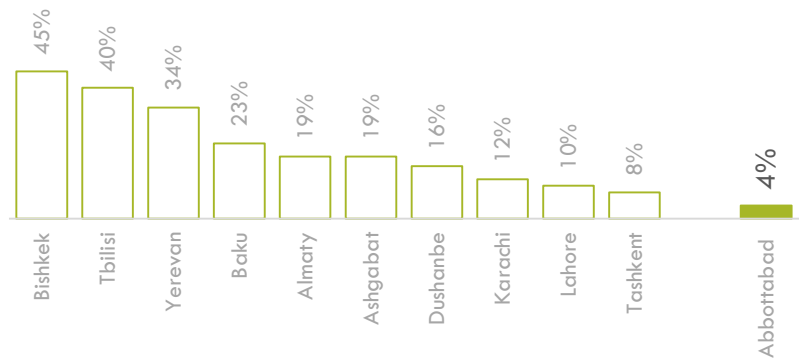
People near services (both healthcare and schools) (e)

(Share of population) vs. highest 10 cities in Central and West Asia (2020) (ITDP)



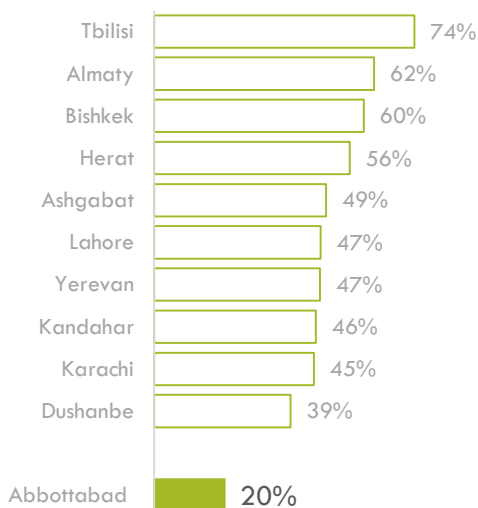
People near car-free places (f)

(Share of population) vs. highest 10 cities in Central and West Asia (2020) (ITDP)



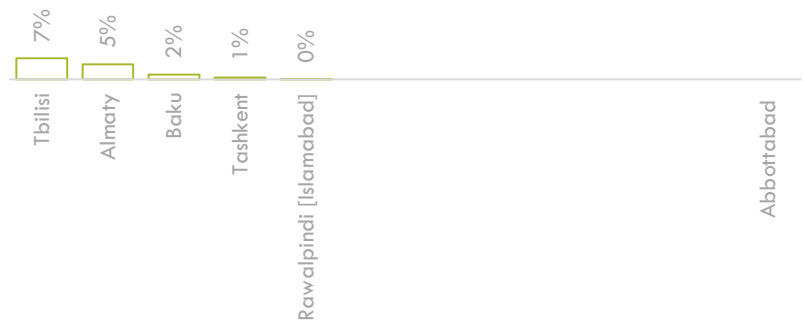
People near open public space

(Share of population) vs. highest 10 cities in Central and West Asia (2020) (UN Habitat)



People near protected bikelanes

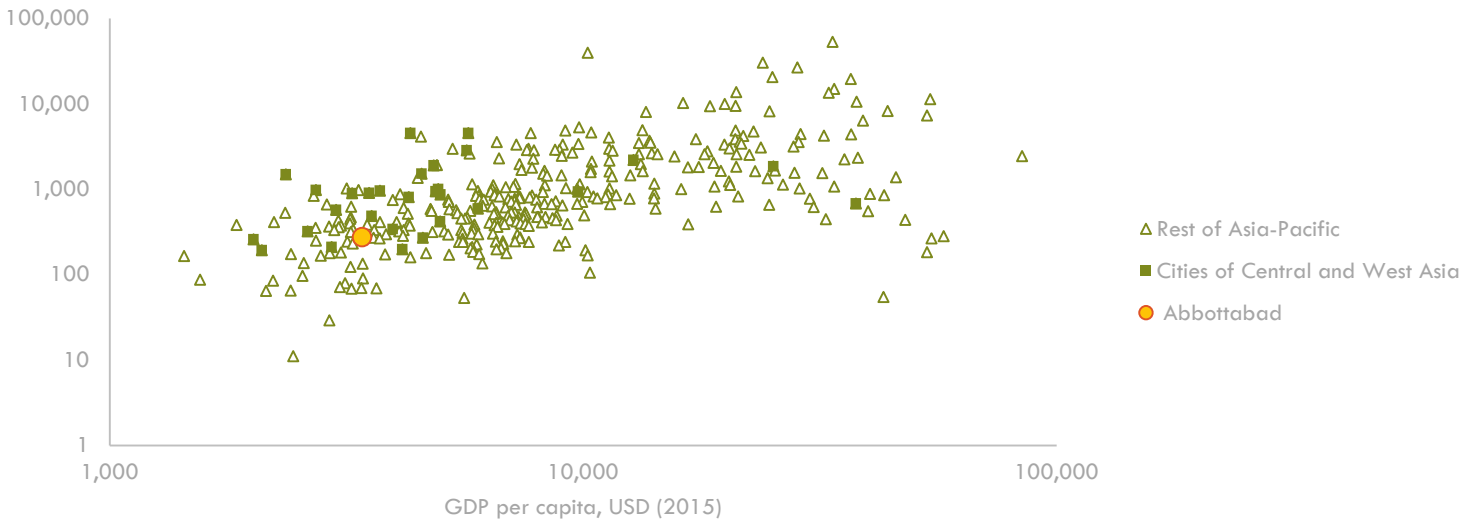
(Share of population) vs. highest 10 cities in Central and West Asia (2020) (ITDP)



Transport externalities

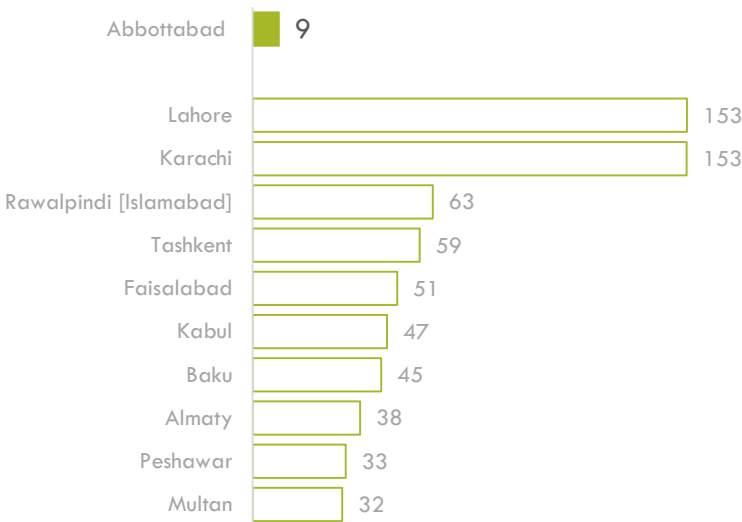
Road transport - CO2 emissions

Thousand tonnes (2022) (ClimateTrace)



Road transport - N2O emissions

Tonnes (2022) vs. highest 10 cities in Central and West Asia (ClimateTrace)



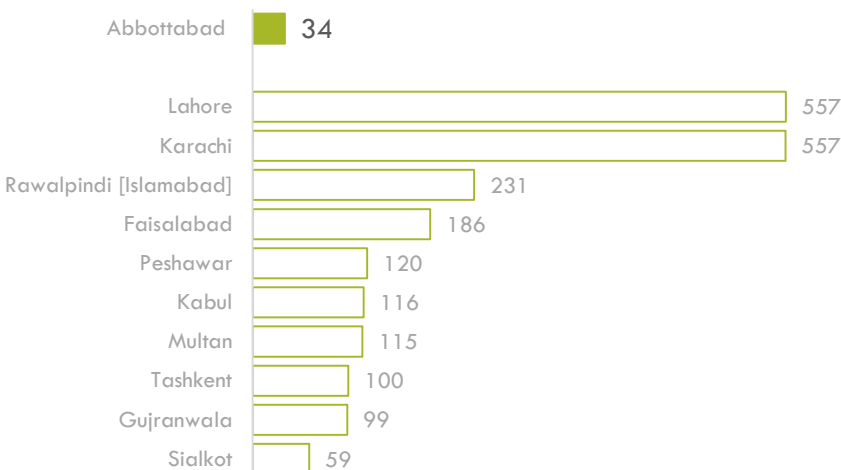
Population exposure to disasters

Share of population (2015) (GHS)



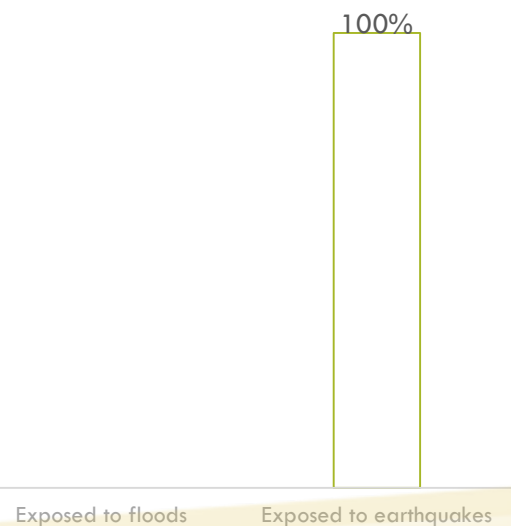
Road transport - CH4 emissions

Tonnes (2022) vs. highest 10 cities in Central and West Asia (ClimateTrace)



Urban built-up area exposure to disasters

Share of urban area (2020) (GHS)



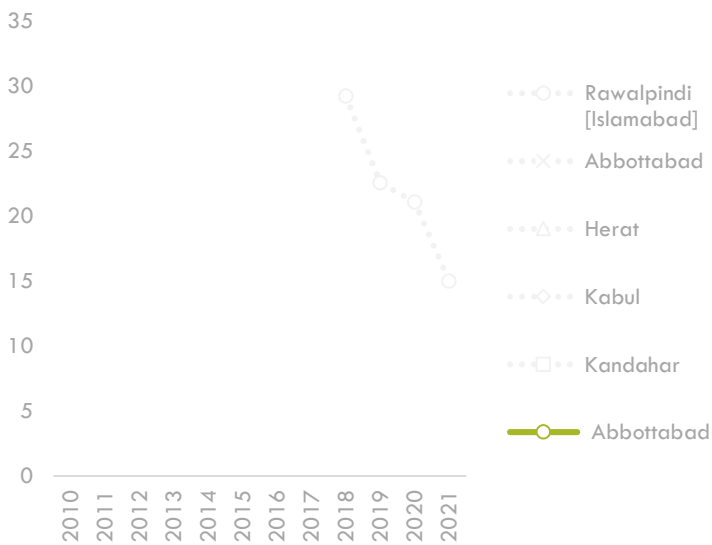
Transport PM 2.5 emissions

(GHS)



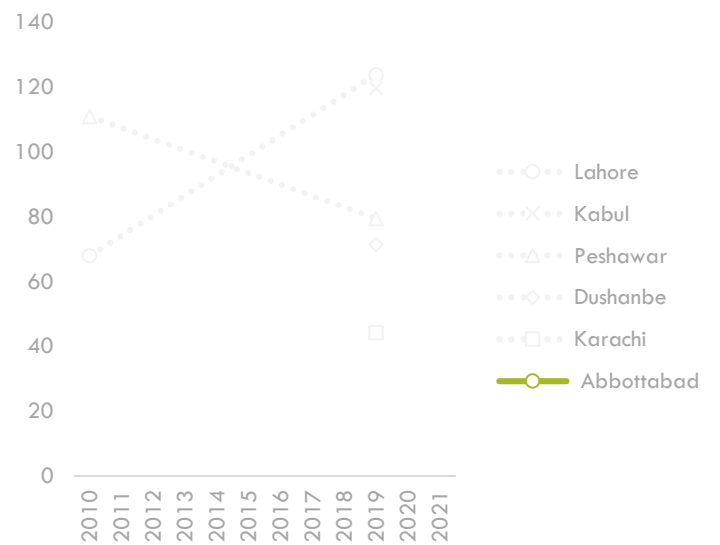
NO2 concentration

ug/m3 (vs. highest 5 cities in Central and West Asia) (WHO)



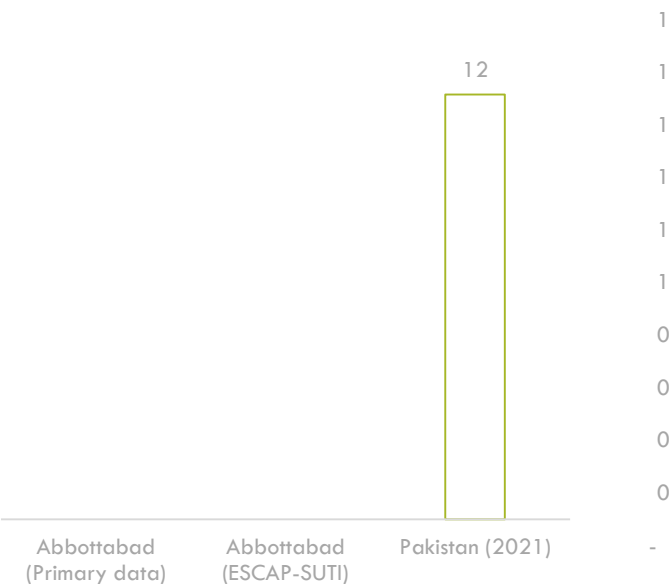
PM 2.5 concentration

ug/m3 (vs. highest 5 cities in Central and West Asia) (WHO)



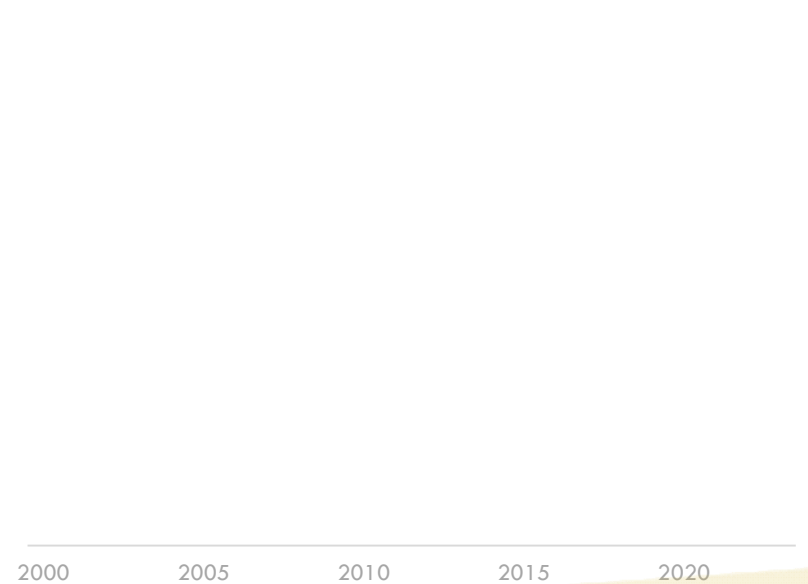
Road crash fatality rate

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)

Abbottabad 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

Abbottabad 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

Abbottabad 0.01/1.00
(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

Abbottabad n.d.

Cities in Motion index ranking by subcomponent

Ranking (vs. other Cities of Central and West Asia) (2024) (IESE)



Transport relevant policy documents

Year published	Document name
2024	Draft Master Plan for Abbottabad City

References

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