



BISHKEK, KYRGYZ REPUBLIC

URBAN TRANSPORT PROFILE

December 2024

Summary

Bishkek, the capital of the Kyrgyz Republic, is a city grappling with the complexities of urban transport in a rapidly changing world. Despite a population of 1.3 million and a growing economy (GDP per capita doubled between 2000 and 2015), Bishkek's transport infrastructure presents a mixed picture. While road infrastructure is relatively good compared to other Central and West Asian cities, with 3 kilometers of road per thousand capita, the city lacks any form of rapid transit system. This absence is notable, especially given the increasing number of vehicles in the city, which reached almost 500 vehicles per thousand residents in 2005. This reliance on private vehicles, coupled with the dominance of minibusses (marshrutkas) in public transport, creates challenges in congestion, air quality, and the efficient movement of people.

Public transport in Bishkek is undergoing a period of transition. Although the city boasts a large number of buses, their condition and efficiency have been a concern. While providing extensive coverage, the reliance on marshrutkas contributes to congestion and air pollution due to their smaller capacity and often older, less environmentally friendly vehicles. However, recent initiatives offer hope for improvement. Introducing new CNG buses, with more electric buses expected, signals a move towards modernization and cleaner technologies. Furthermore, implementing electronic ticketing, dedicated bus lanes, and bus stop renovations aim to enhance the public transport experience and encourage its use.

Despite these positive developments, challenges persist. The focus on road expansions and interchanges, while potentially improving traffic flow for private vehicles, may inadvertently exacerbate the issue of car dependency. Balancing infrastructure development with a strong emphasis on sustainable modes like walking, cycling, and efficient public transport is crucial for Bishkek's future. The city's commitment to improving public transport and initiatives like promoting electric vehicles and piloting eco-taxis indicates a positive direction. However, a comprehensive and integrated approach to urban transport planning will ensure a sustainable and livable city for all residents.

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

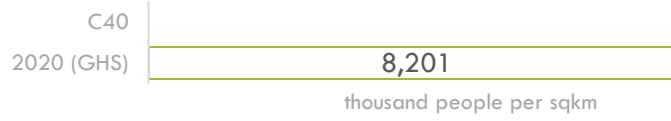
The Asian Transport Observatory (ATO) project collects, collates, and organizes data from publicly available official, as well as reputable and peer-reviewed secondary sources, which may contain incomplete or inconsistent data. It is important to note that the ATO does not generate data. Moreover, while 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 1.3 million
(2020) (GHS)

Population density

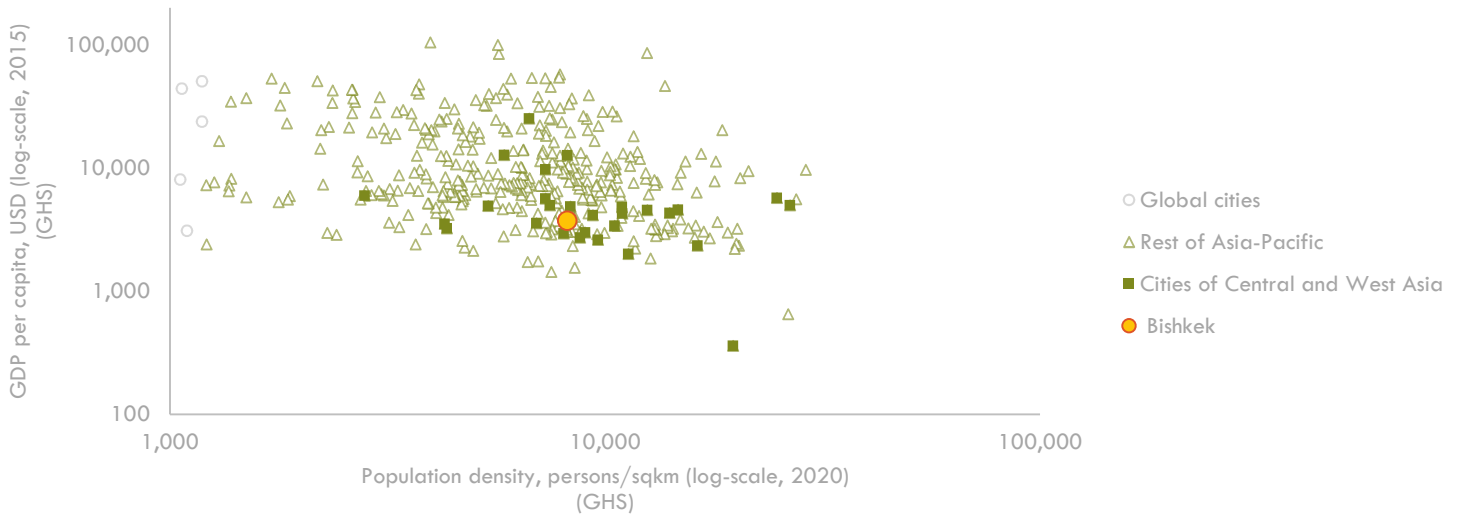
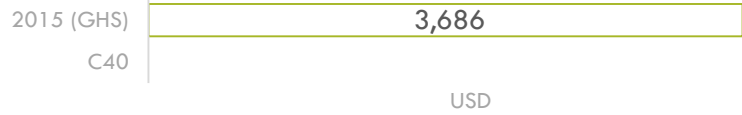
Land area 181 sqkm
(2016) (Oke et.al. (2019) (Demographia))



Population density 8 thousand per sqkm
(2020) (GHS)

GDP per capita

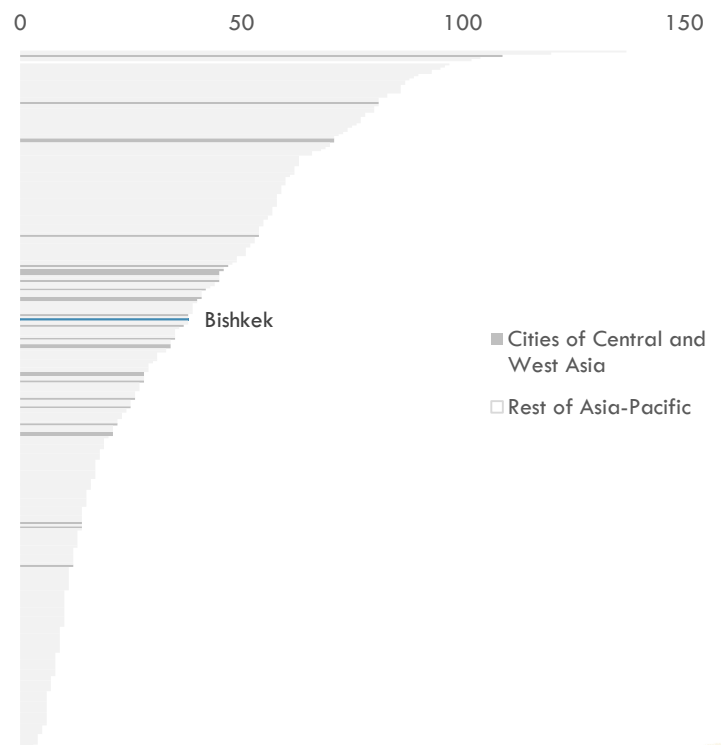
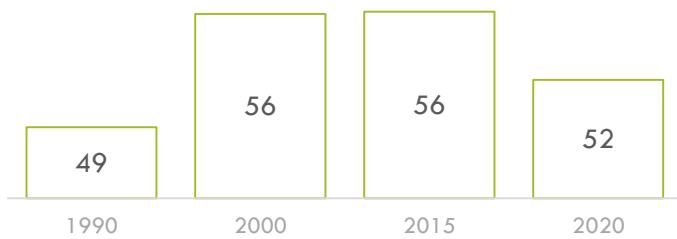
GDP per capita 4 thousand USD
(2015) (GHS)



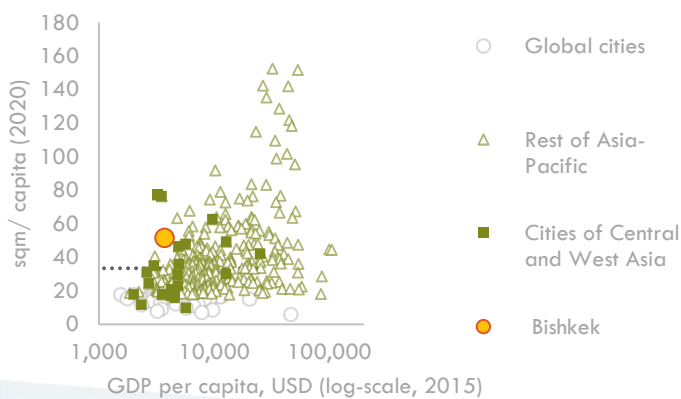
Urban Form and Structure

Builtup area per capita
sqm per capita (GHS)

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

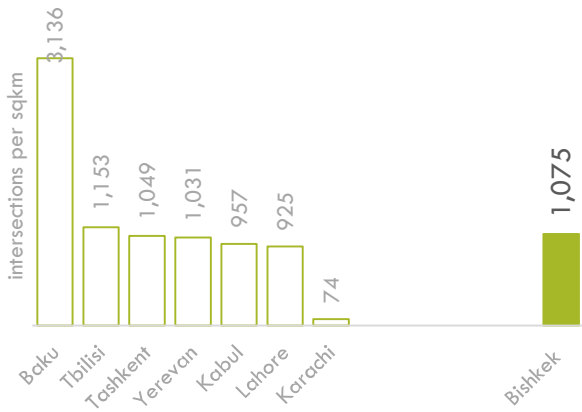


Builtup area per capita
(GHS)



Intersection density

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



Night time light intensity (a)

(GHS)

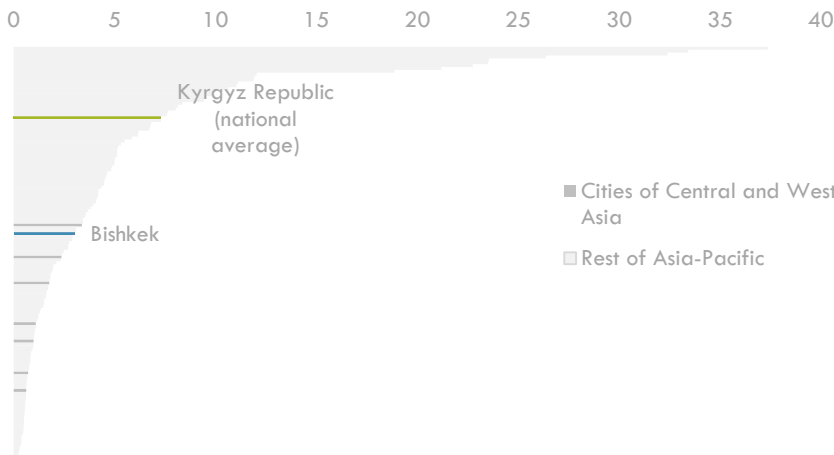


(a) Night time light intensity studies illustrate urban forms and patterns by mapping human activity, infrastructure, and connectivity, offering insights into urban sprawl, density variations, and transport network

Urban Transport Infrastructure

Road availability

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



Road kilometers 1,256 kilometers

(2005) (Primary data)

Rapid transit infrastructure

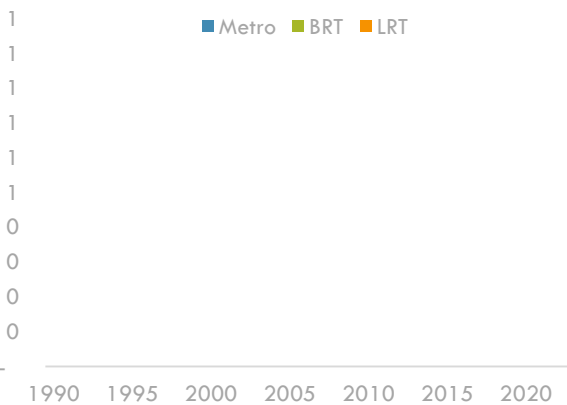
(2024) (TE)

■ Under construction ■ Planned

BRT LRT Metro

Rapid transit infrastructure

kilometers (ITDP, Primary data)



BRT none

LRT none

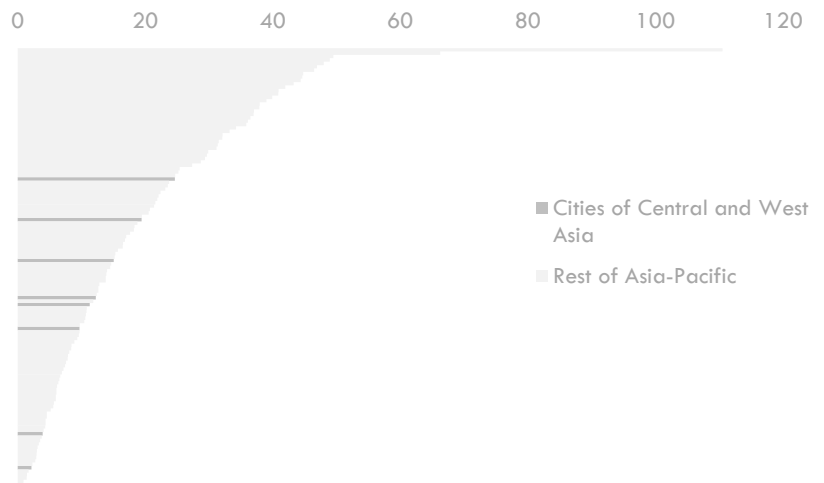
Metro none

Total none

(2023) (ITDP)

Rapid transit availability

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

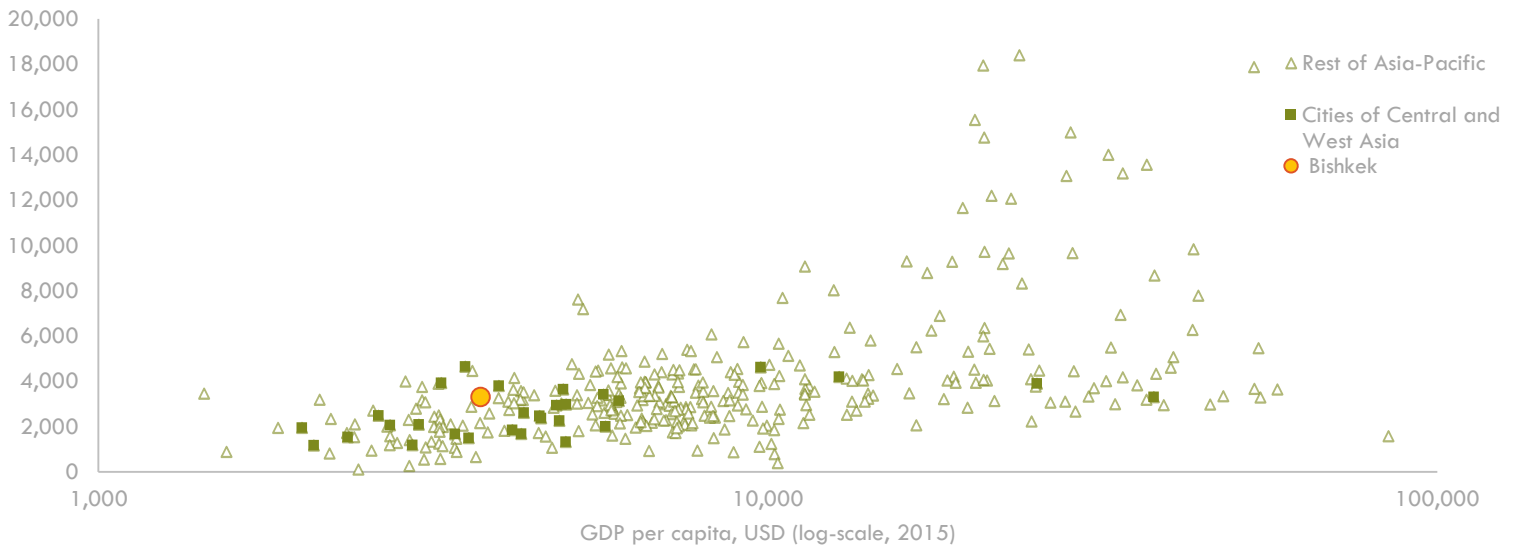


Approximate transit coverage n.d.

Transport Activity and Services

VKT per capita

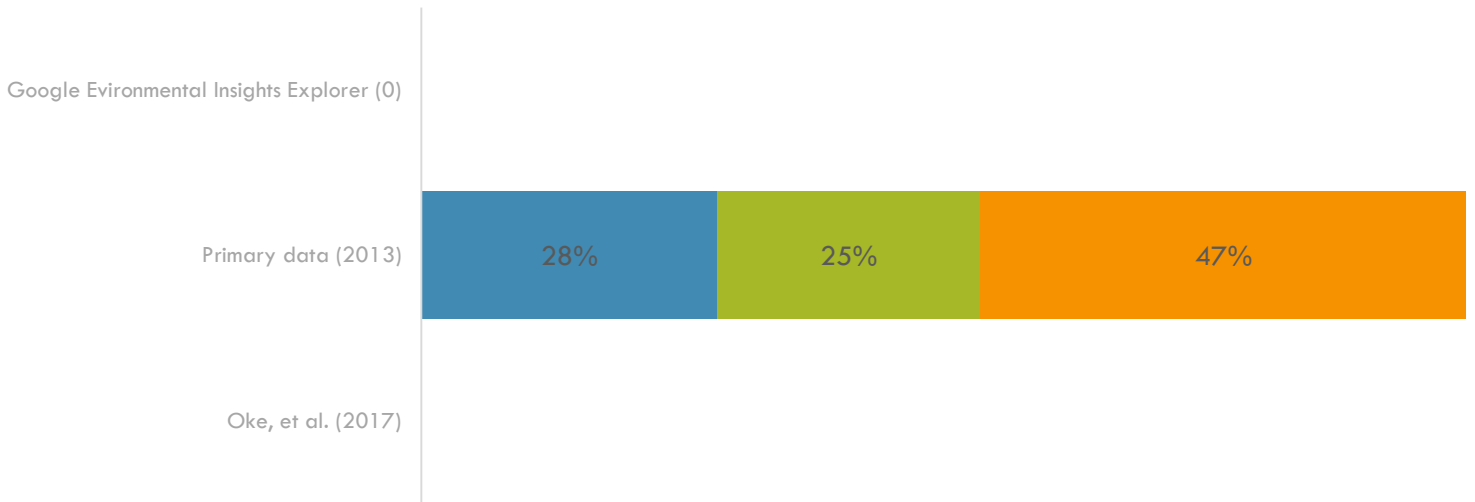
Vehicle-kilometer per capita (2022) (ClimateTrace)



Trips Mode share (b)

Share, %

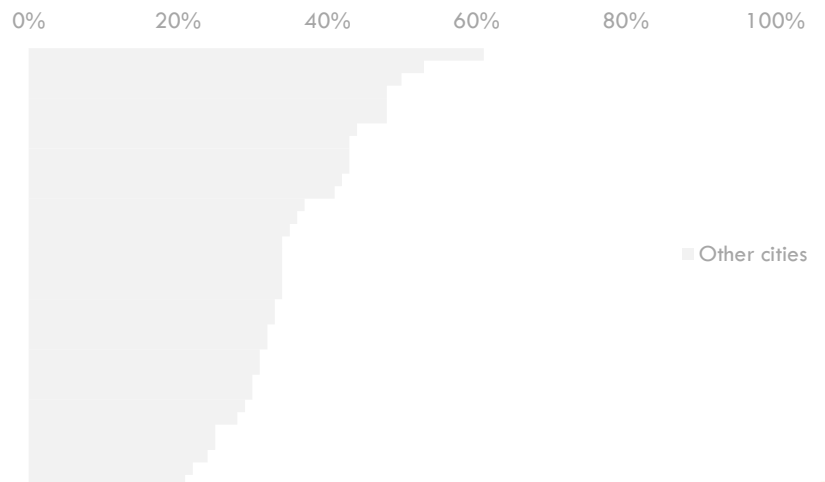
■ Walking and cycling ■ Private ■ Public transport (bus, ferry, informal public transit, etc)



(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)

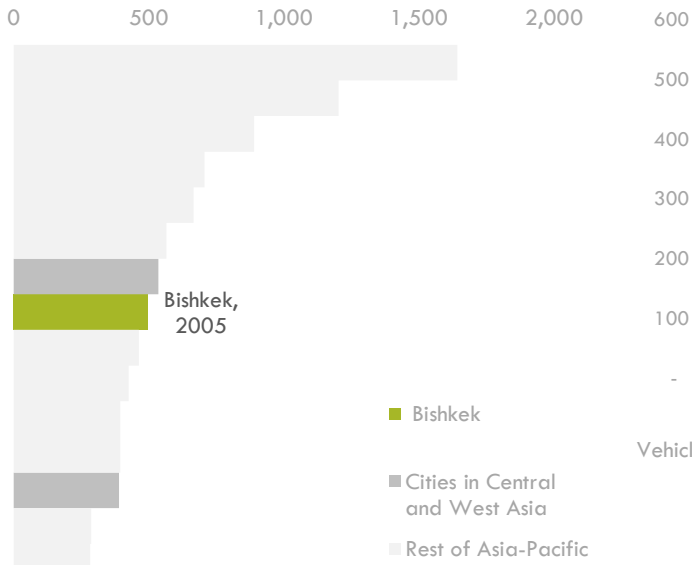


Metro ridership n.d.

Congestion ranking n.d.

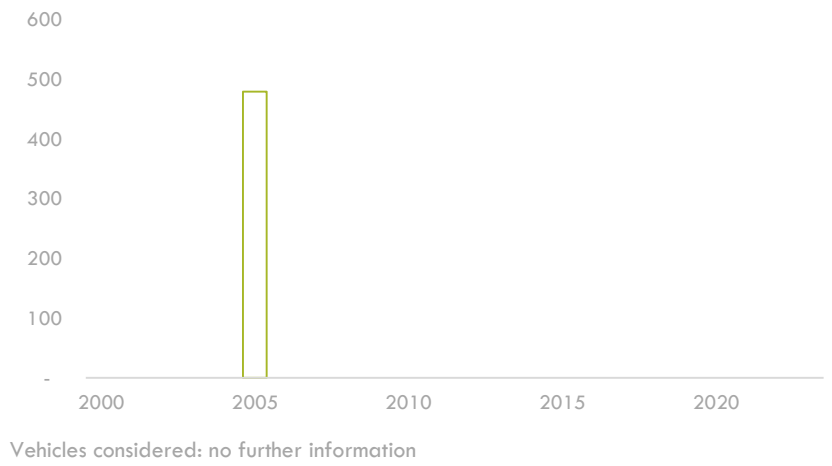
Vehicle motorization

Vehicles per thousand population (Primary data)



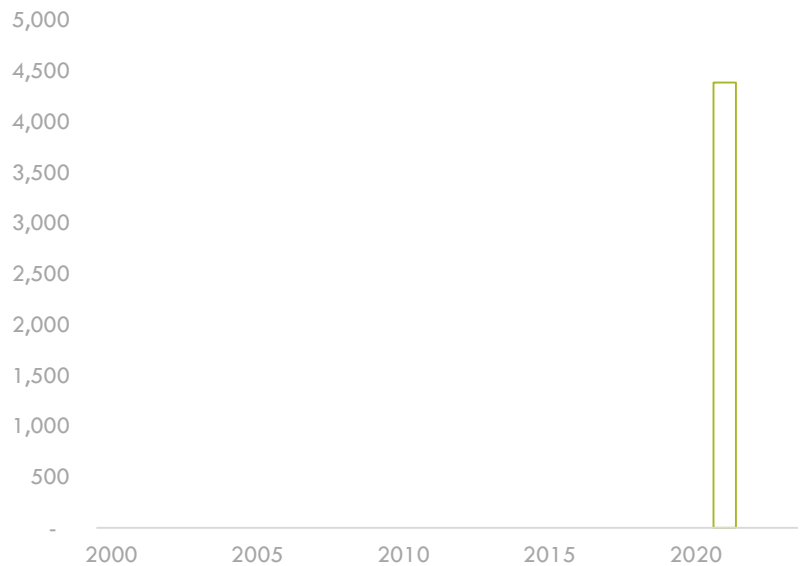
Vehicles registered (c)

Thousand vehicles (Primary data)



Bus fleet (operational)

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

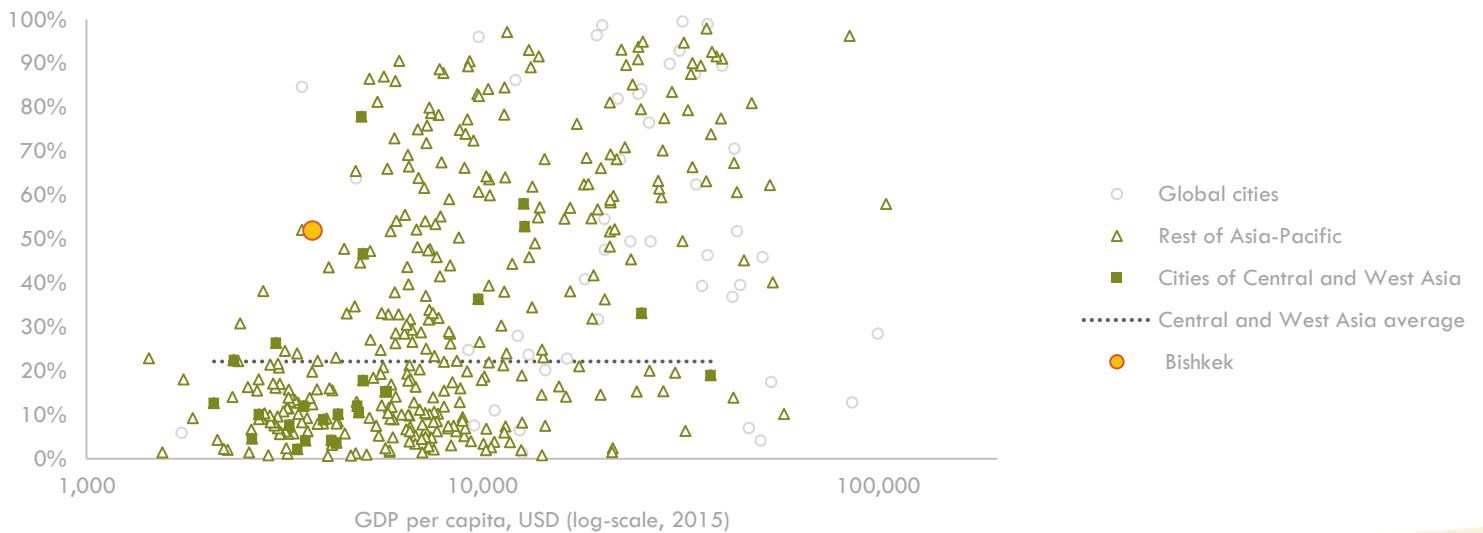


(c) It should be noted that, in most cases, scrapped vehicles are not de-registered, which may result in slightly inflated numbers.

Urban Access

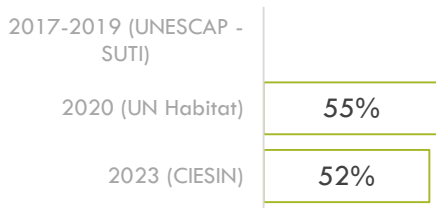
Access to urban public transport

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



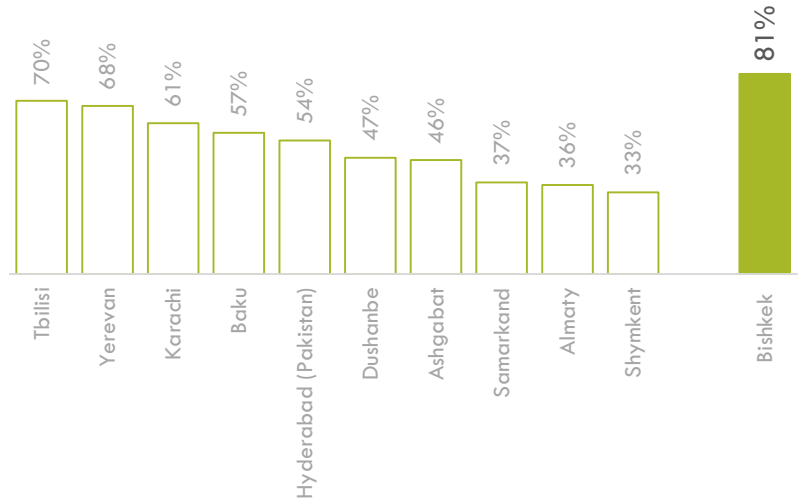
(d) "Access to urban public transport" is computed as share of population who live within a walking distance (along a street network) of 500m to a low capacity public transport system (eg bus, tram) and 1000m to a high capacity public transport system (eg trains, ferries, etc). Only public transport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

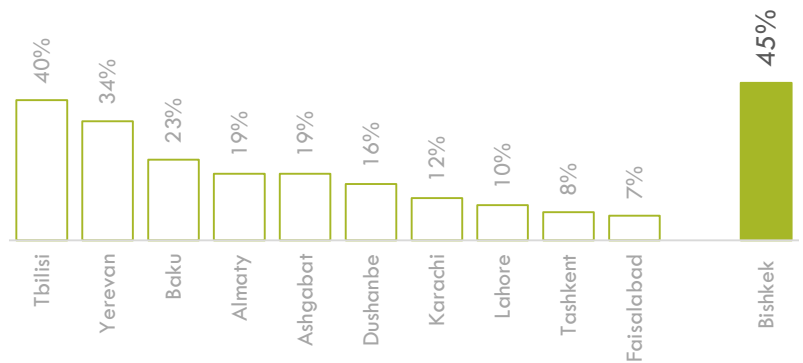
People near services (both healthcare and schools) (e)

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



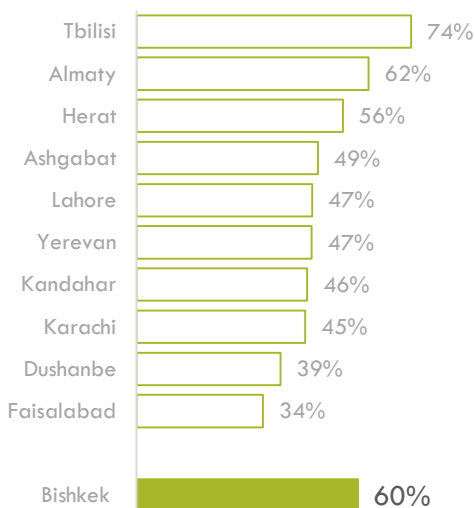
People near car-free places (f)

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



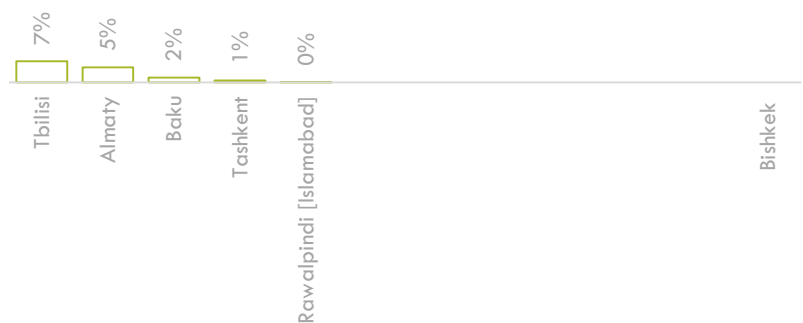
People near open public space

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



People near protected bikelanes

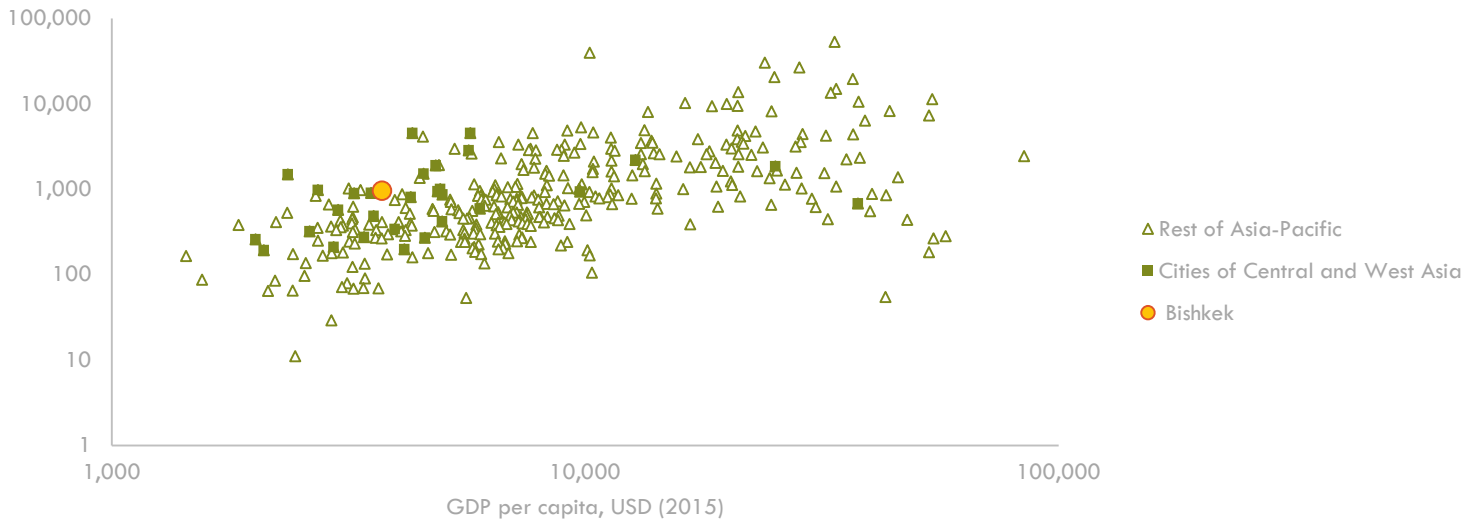
(Share of population) vs. highest 10 cities in Central and West Asia (2020) (ITDP)



Transport externalities

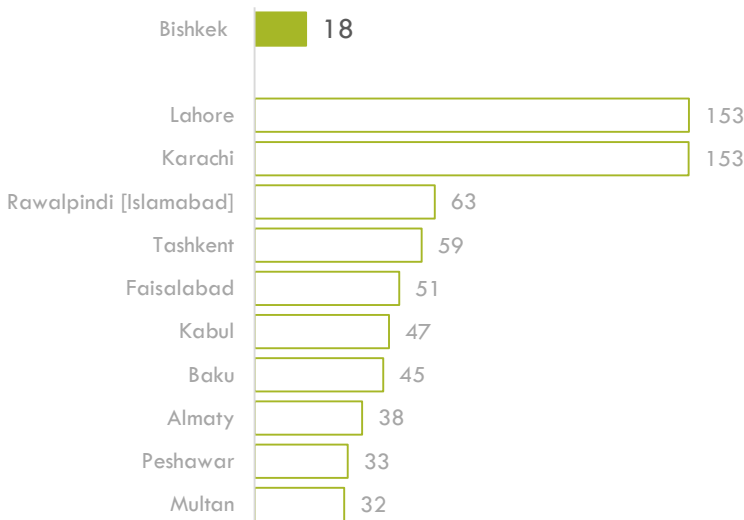
Road transport - CO2 emissions

Thousand tonnes (2022) (ClimateTrace)



Road transport - N2O emissions

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



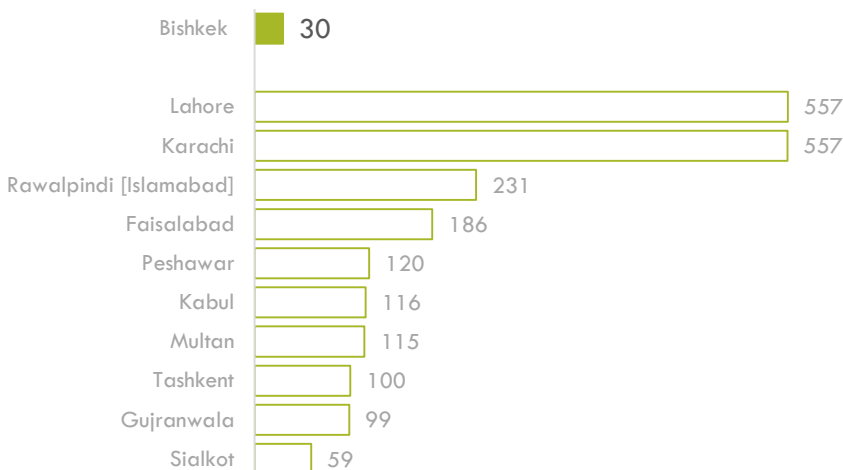
Population exposure to disasters

Share of population (2015) (GHS)

Exposed to floods Exposed to storm surges

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)

Exposed to floods Exposed to earthquakes

100%

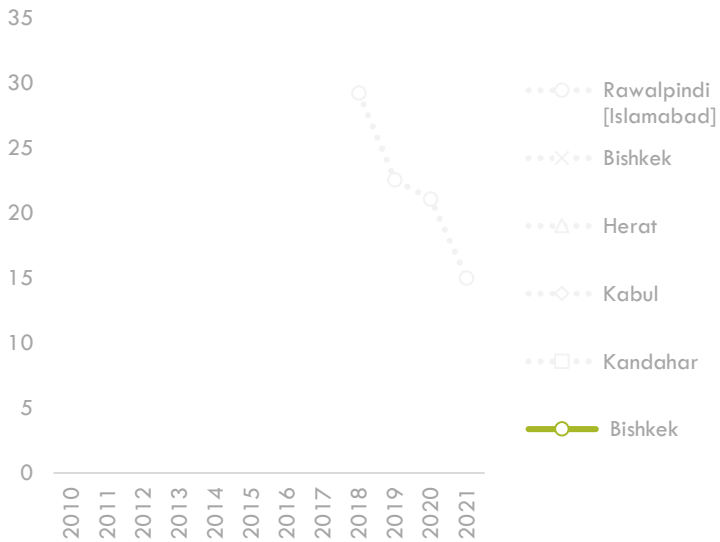
Transport PM 2.5 emissions

(GHS)



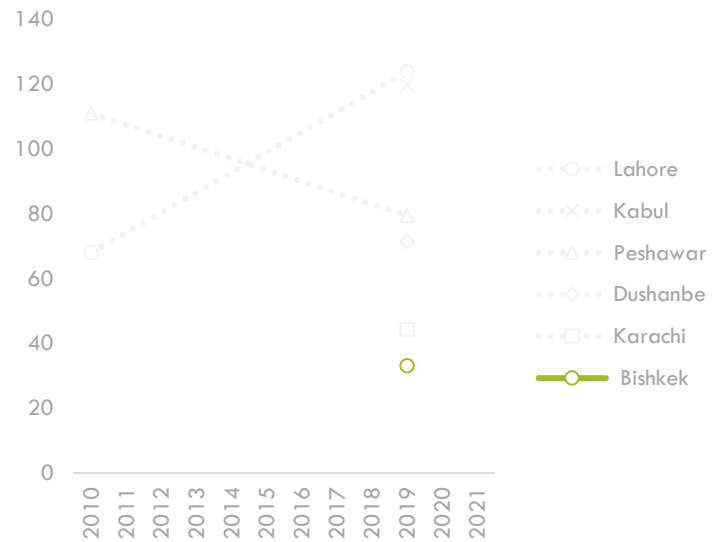
NO2 concentration

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



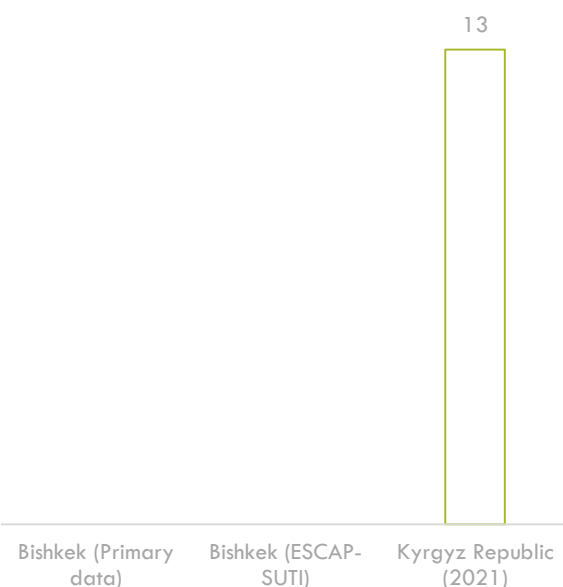
PM 2.5 concentration

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



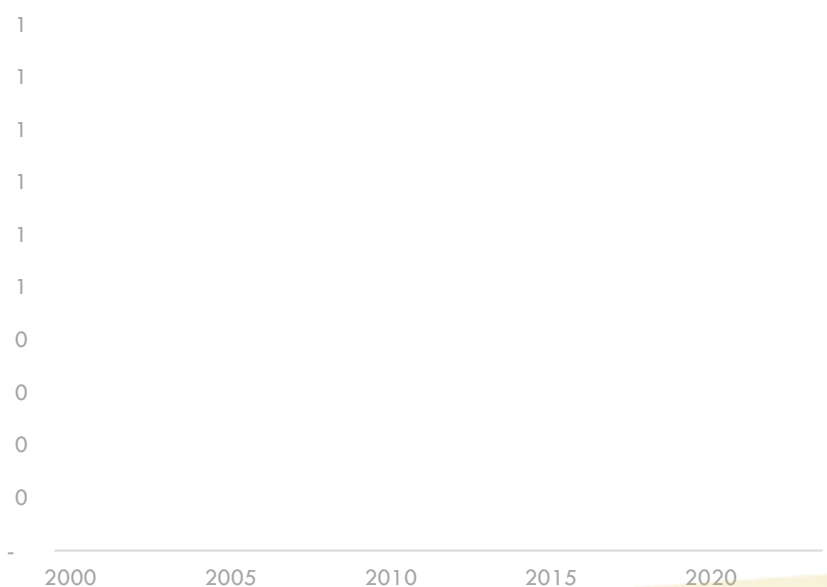
Road crash fatality rate

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)

Bishkek 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

Bishkek 0.02/1.00
(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

Bishkek n.d.

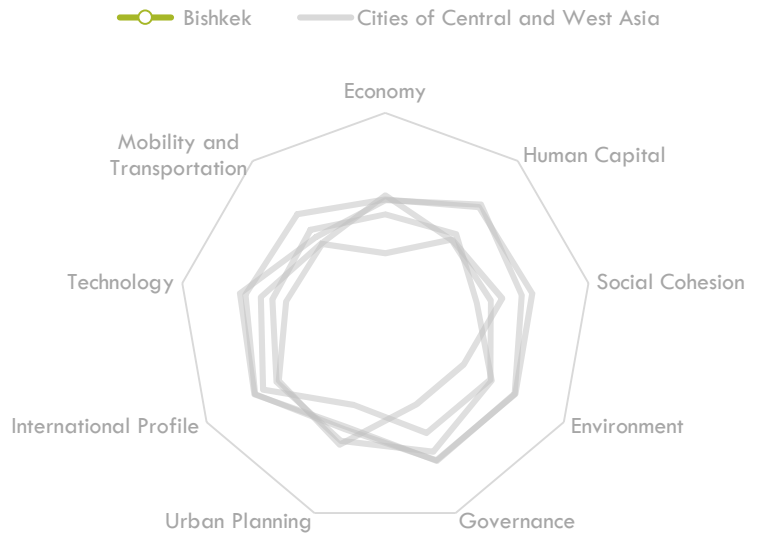
Cities in Motion index ranking

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

Bishkek 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
2018	Program of Social and Economic Development of Bishkek for 2017-2020
2021	Urban Transport Electrification Project: RRP
2024	Green City Action Plan for the City of Bishkek
n.d.	Master Plan of Bishkek, The main directions of urban development for the period up to 2025

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