

State of play of rail transport: North and Central Asian Countries

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High-Level Meeting on
Deepening Digitalization of International Rail Transport
in Asia-Pacific
13 - 15 May 2025, Xian, China



Asian Transport Observatory (ATO)

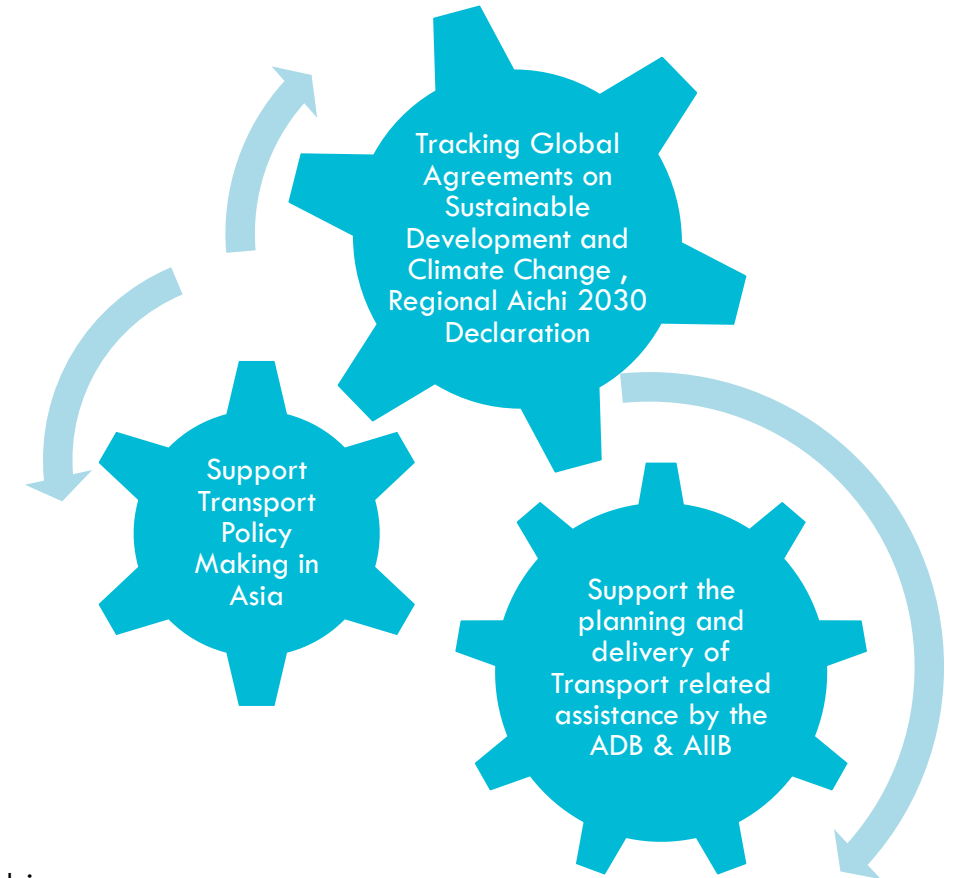
A Catalyst for Sustainable Transport in Asia



50+ Economies (ADB Members + Russia and Iran (Islamic Republic of))

460 Urban Centers (412 Asia-Pacific, 48 International)

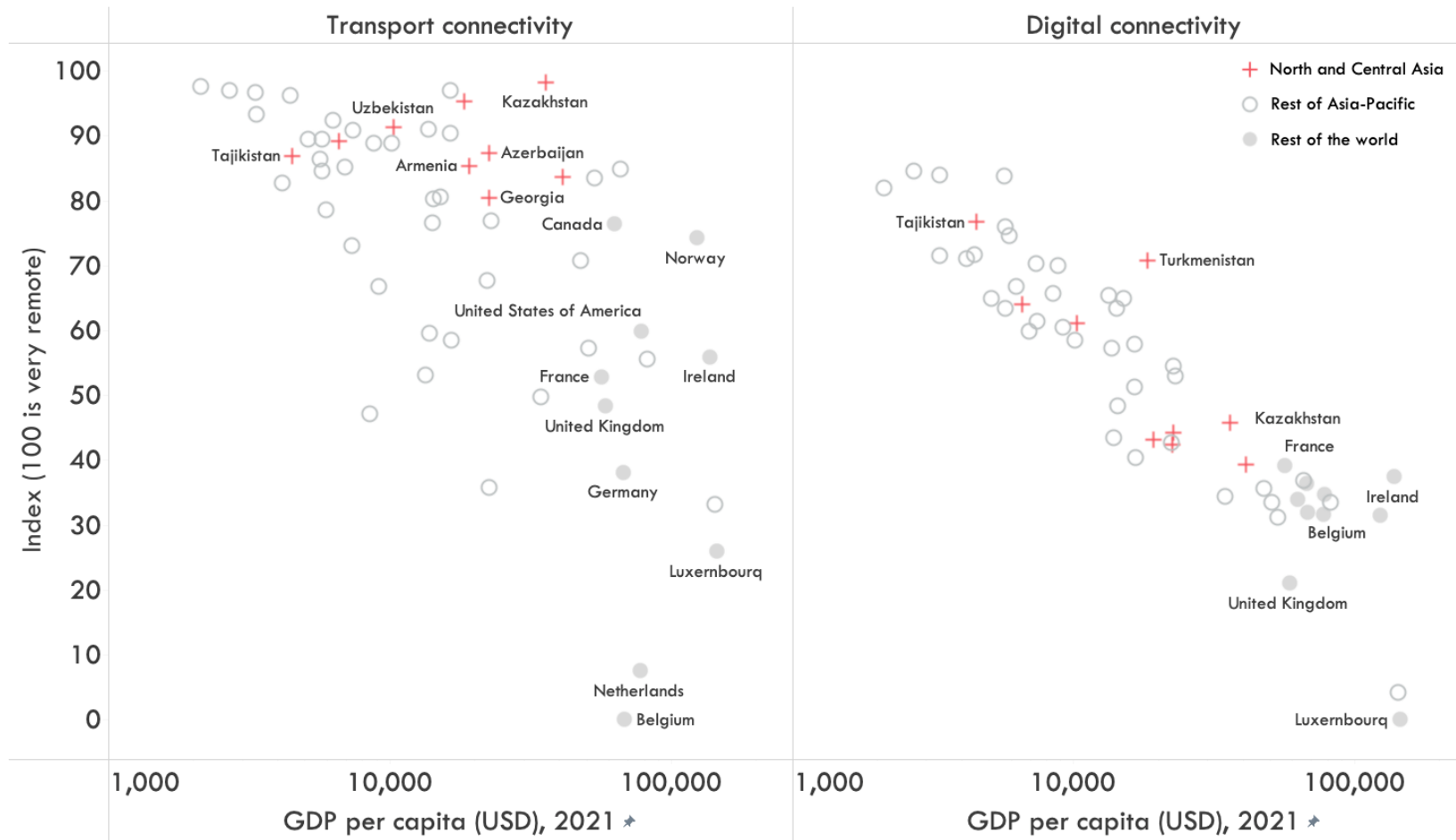
47 Urban Centers with a detailed review * To be increased to 50



Disclaimer: The work on the analytical report for the State of Play – Railway subsector in the NCA countries is still a work in progress

Transport expansion vs, limiting geography

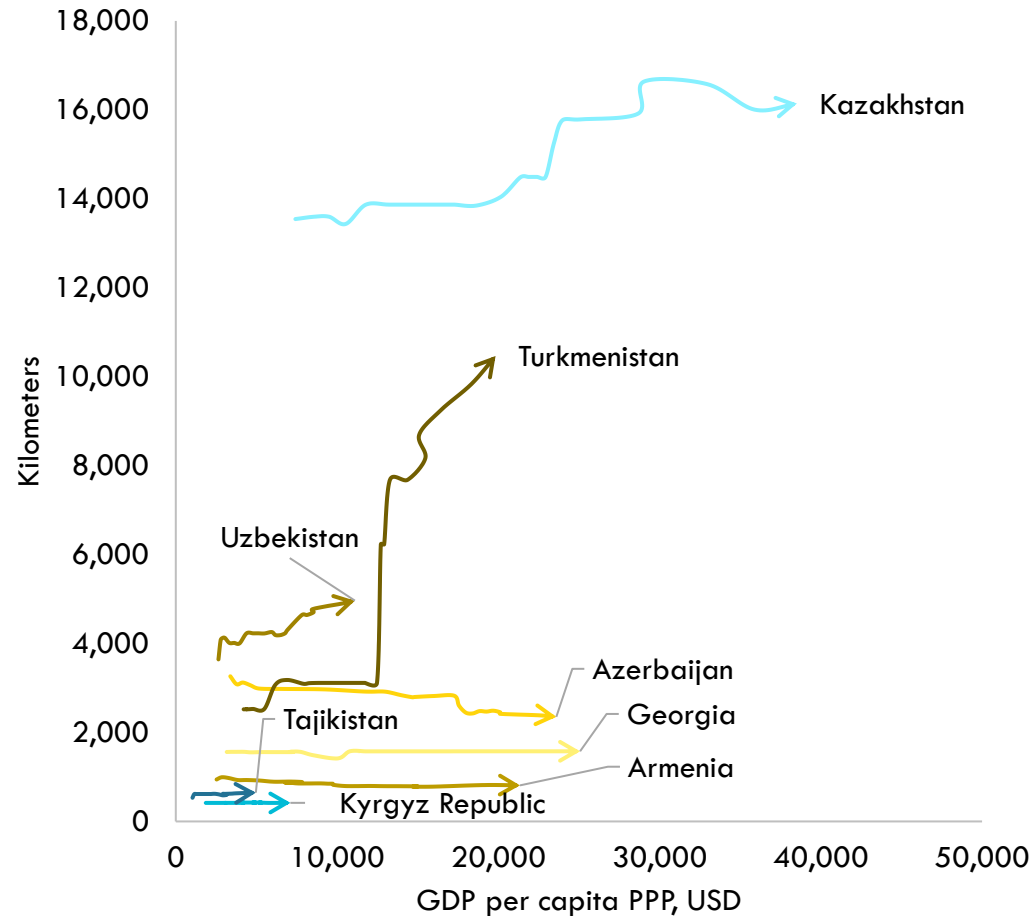
Remoteness Index - Transport connectivity and Digital Connectivity in the North and Central Asian countries



Source: (UN-DESA n.d.)

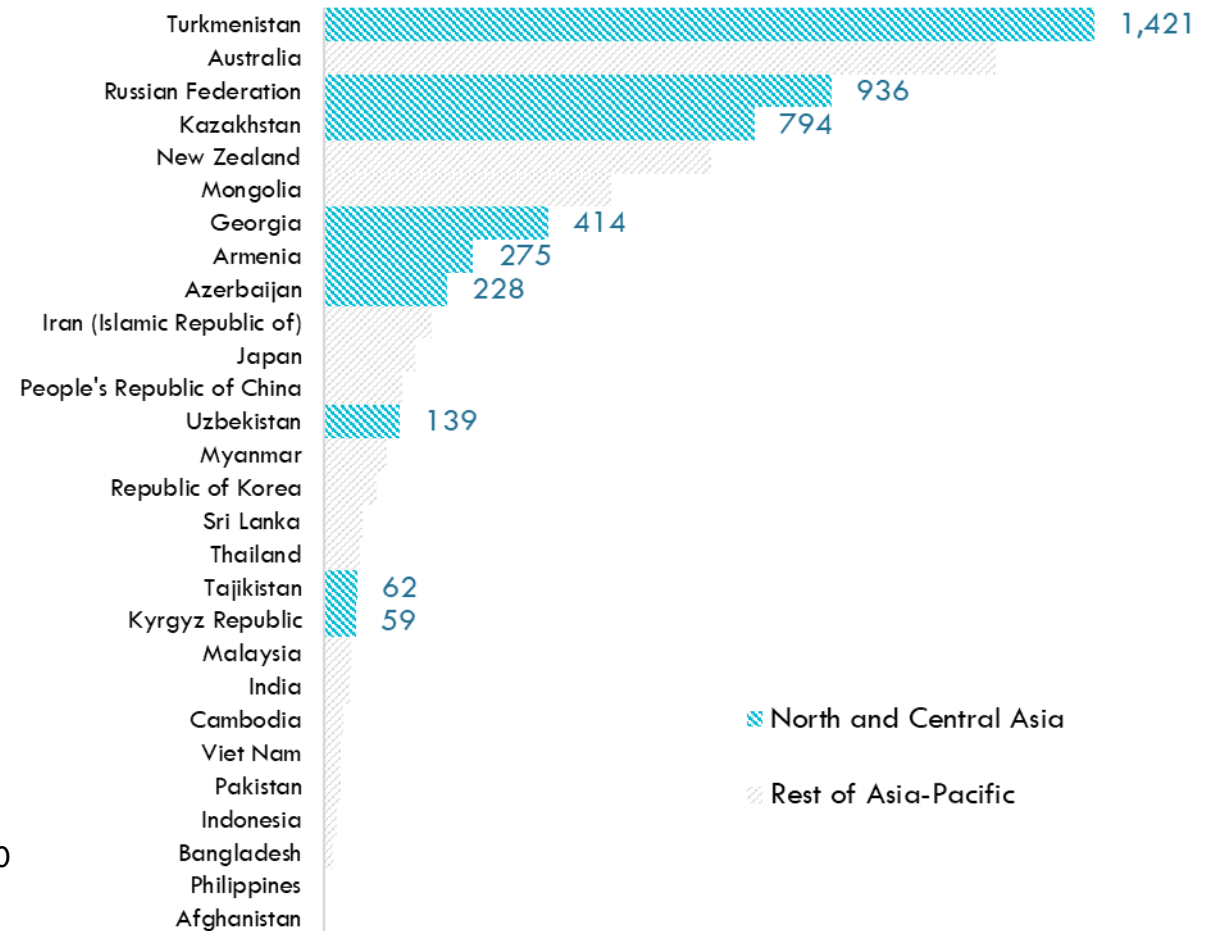
Strong heavy rail expansion, but is it enough?

Heavy rail infrastructure (2000-2023)



Source: Country official statistics, WB

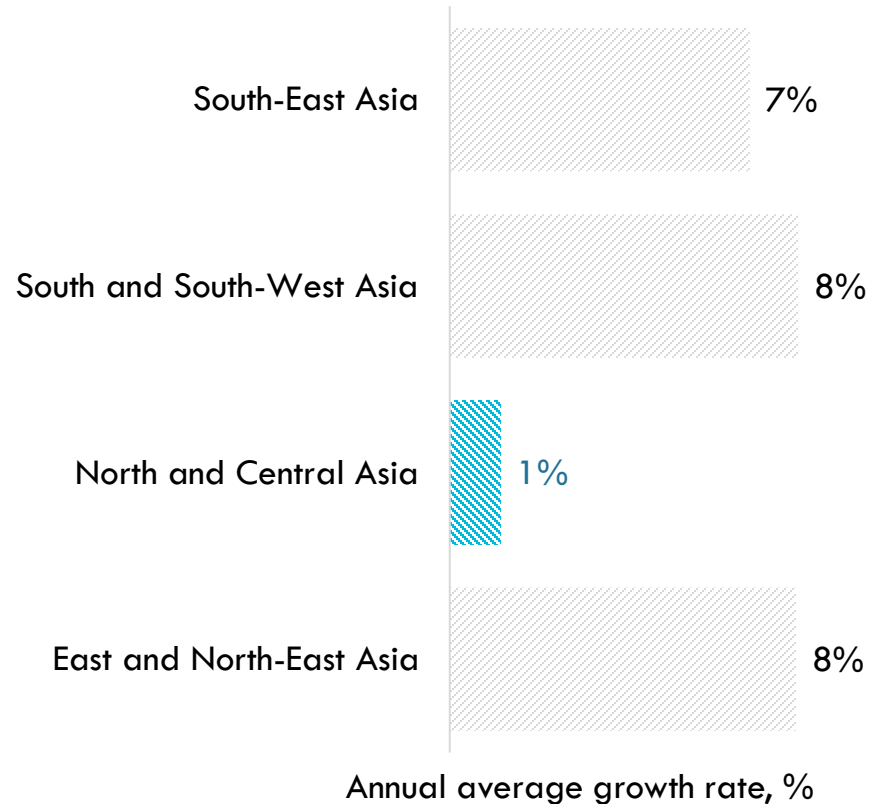
Heavy rail infrastructure (km) per million population



Source: Country official statistics

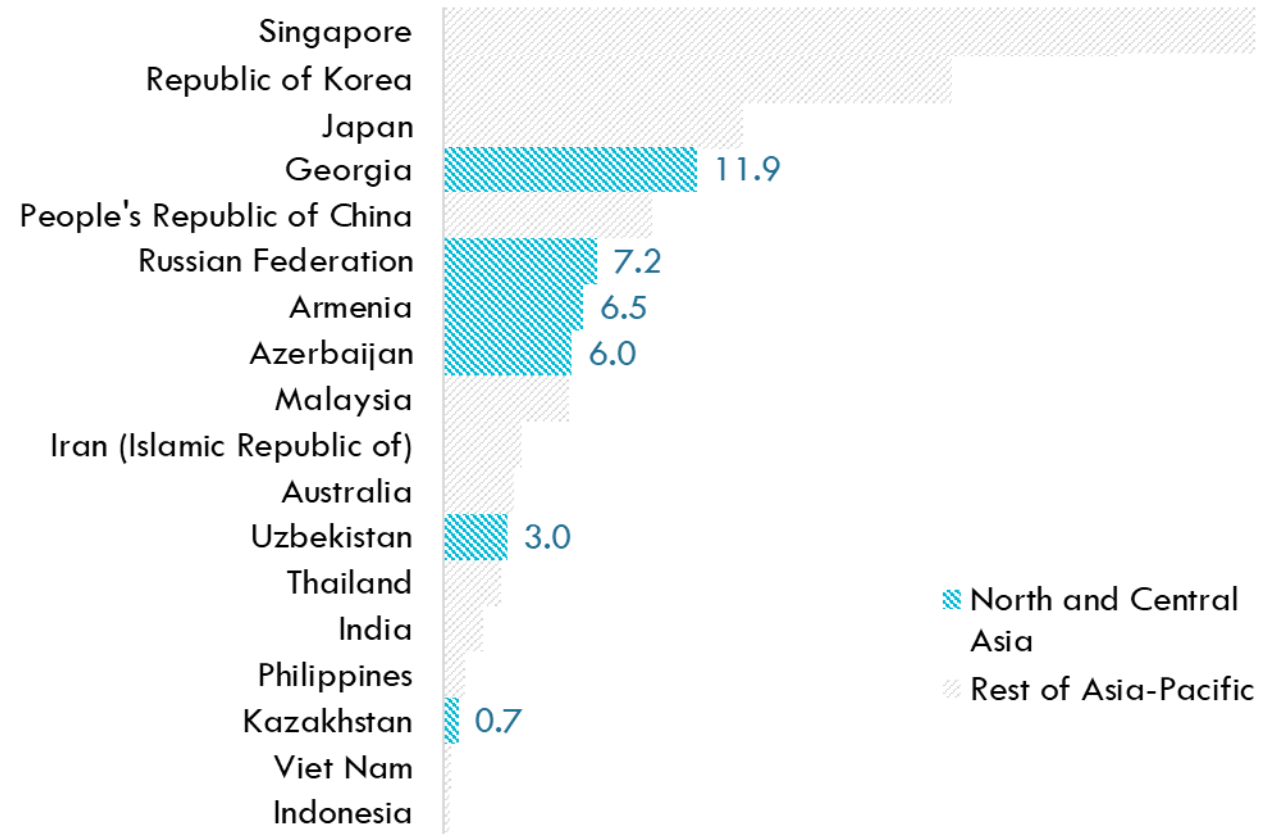
Stalling urban rail infrastructure growth

**Rapid transit infrastructure growth rate
(2000 – 2023)**



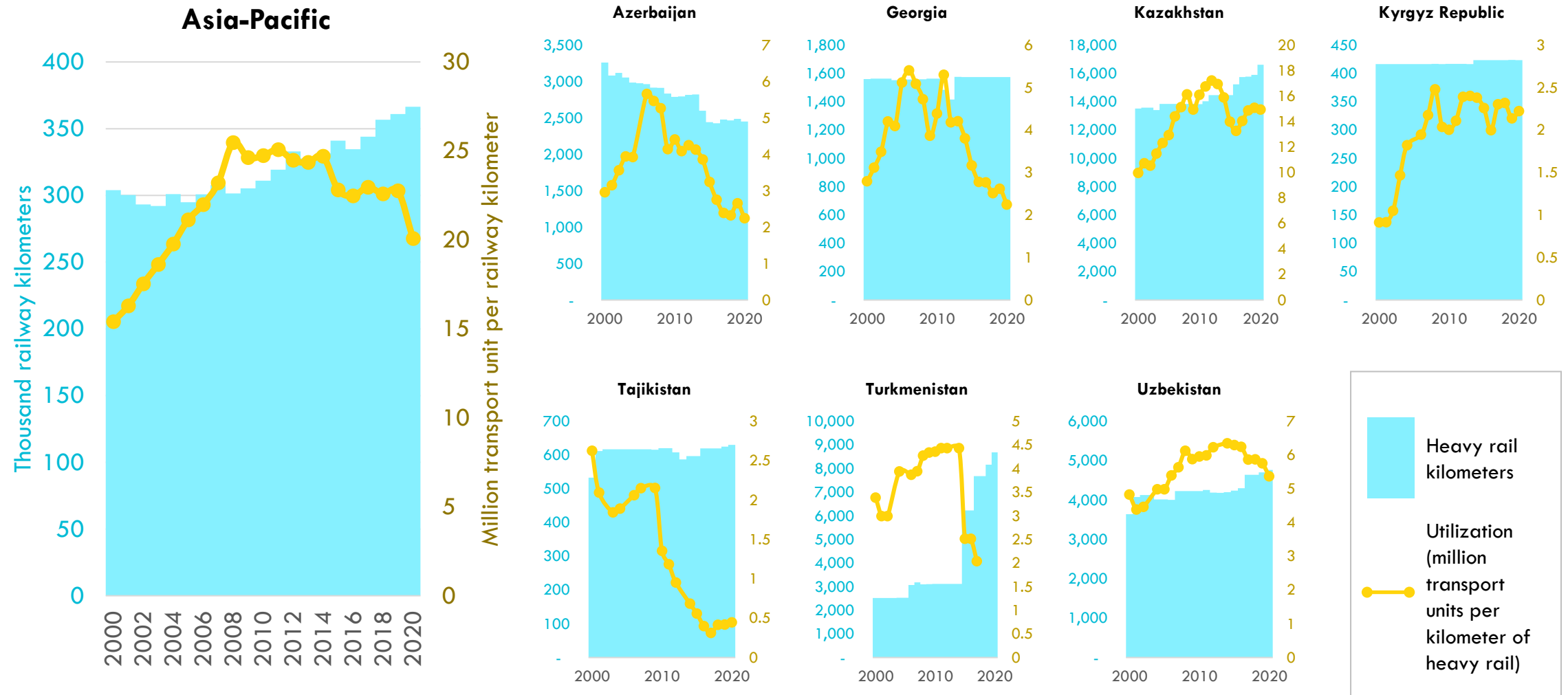
Source: (ITDP n.d.)

Urban rail availability (km) per million urban population



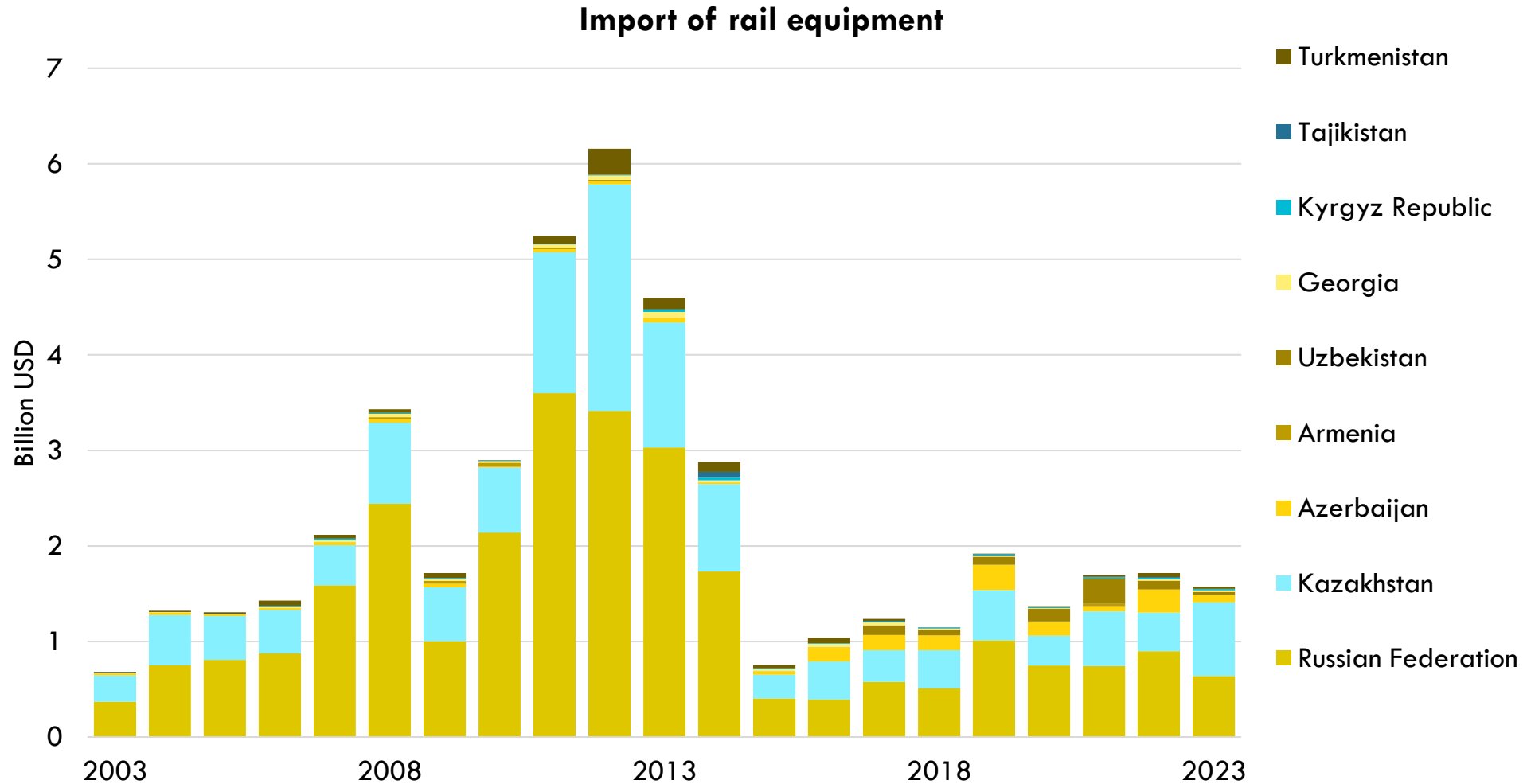
Source: (ITDP n.d.)

Utilisation misaligned with infrastructure growth



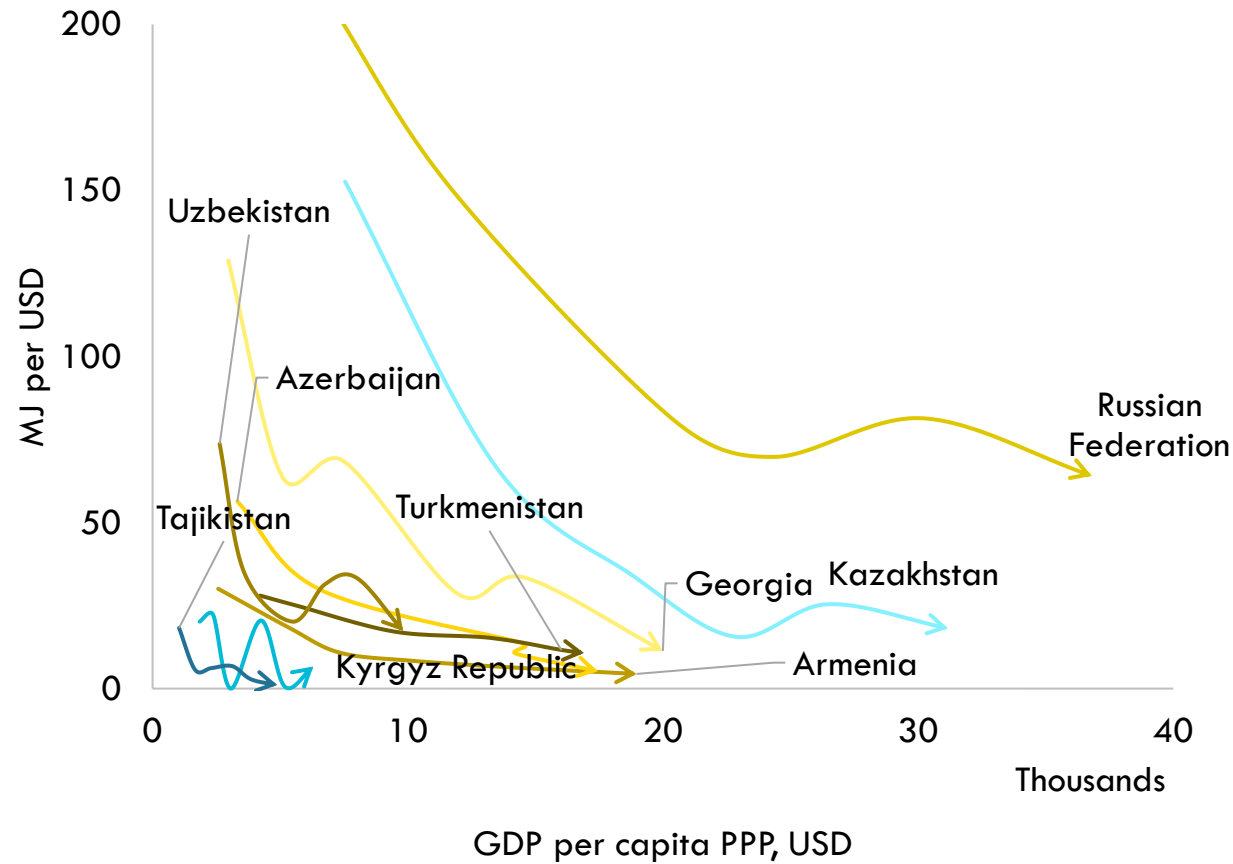
Source: ATO calculations using the data from UIC, Country Statistics

Declining rail equipment import trends



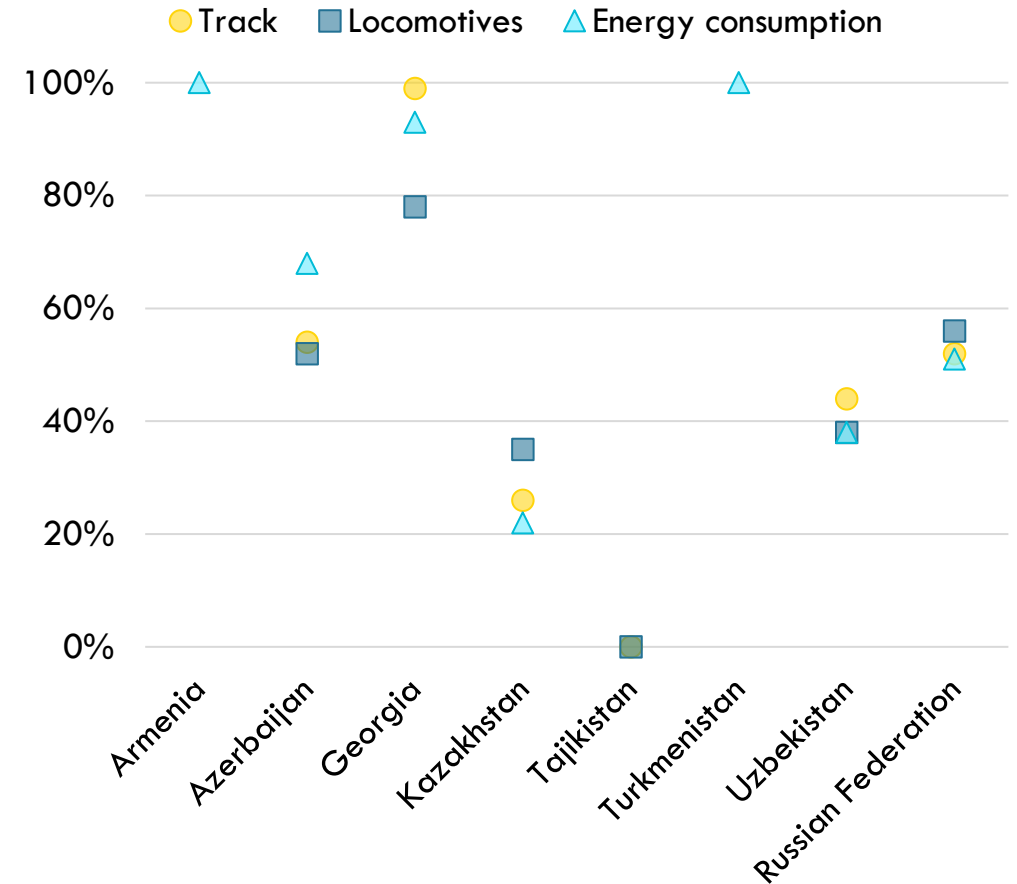
Efficiency improves, electricity transition uneven

Rail energy consumption intensity, 2000-2022



Source: (United Nations Statistics Division 2024)

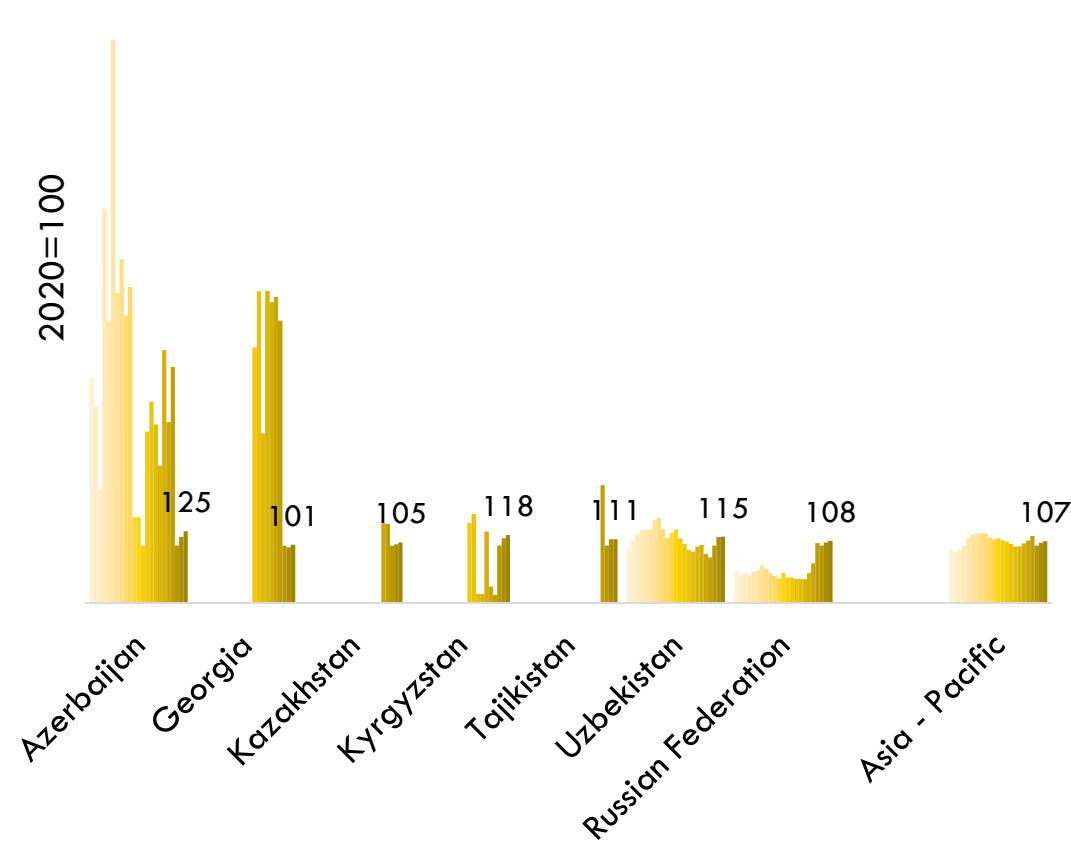
Electrification trends



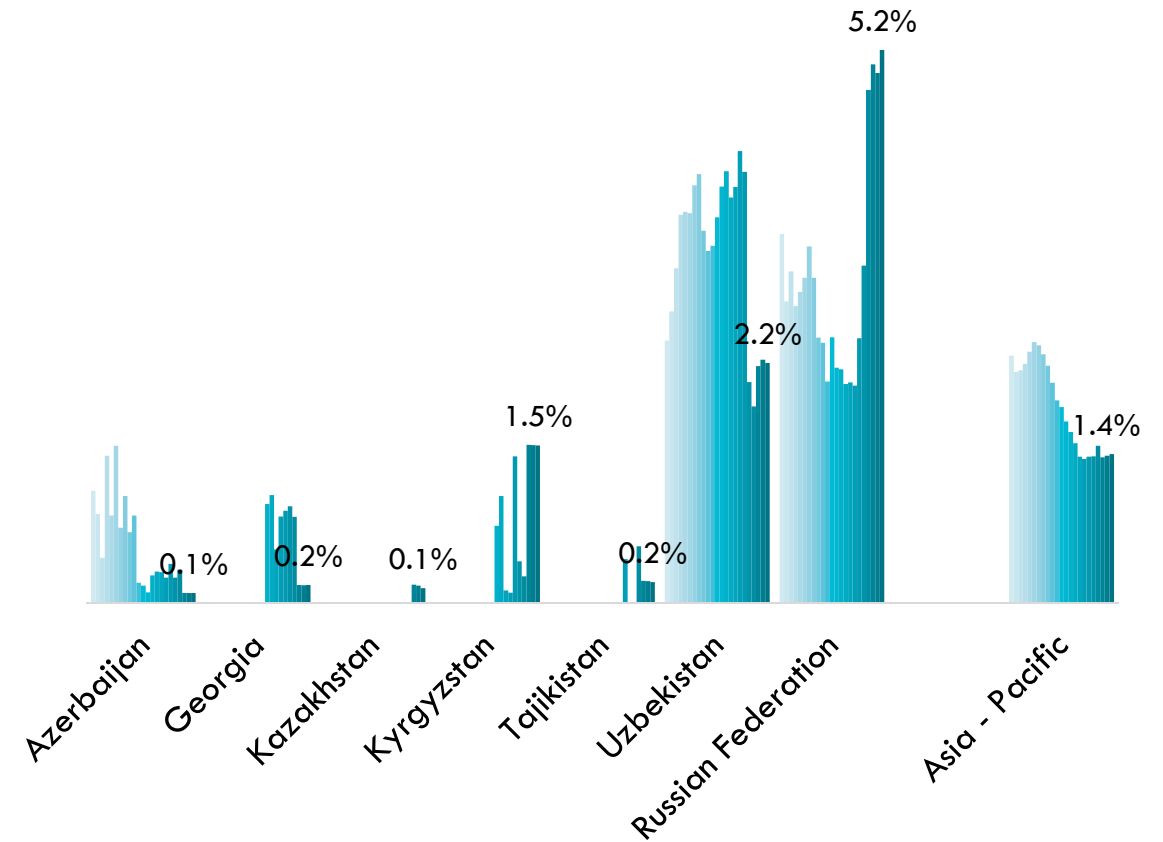
Source: (OSJD 2024) (United Nations Statistics Division 2024)

Railways – potential backbone for transport decarbonisation

Rail CO2 emissions trend (2000 - 2022)

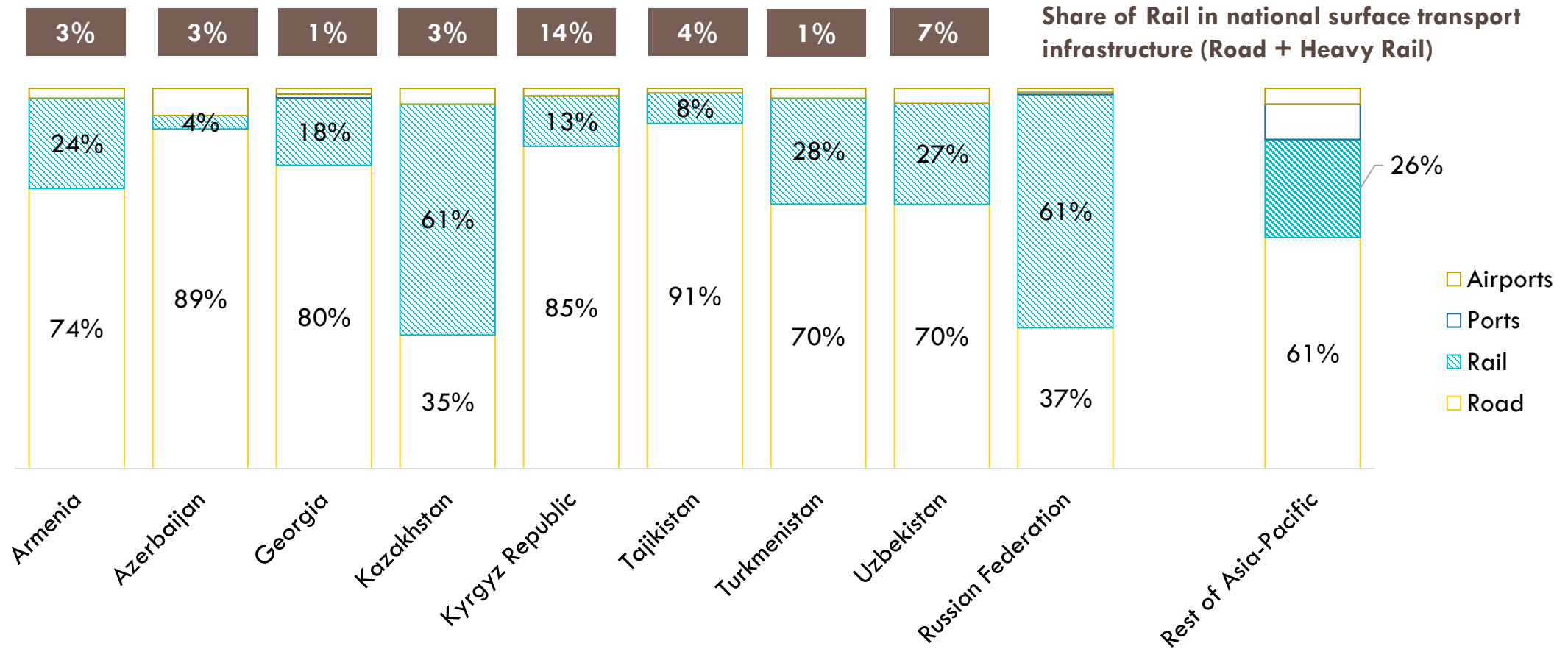


Share of Rail in Total transport CO2 emissions (2000 – 2022)

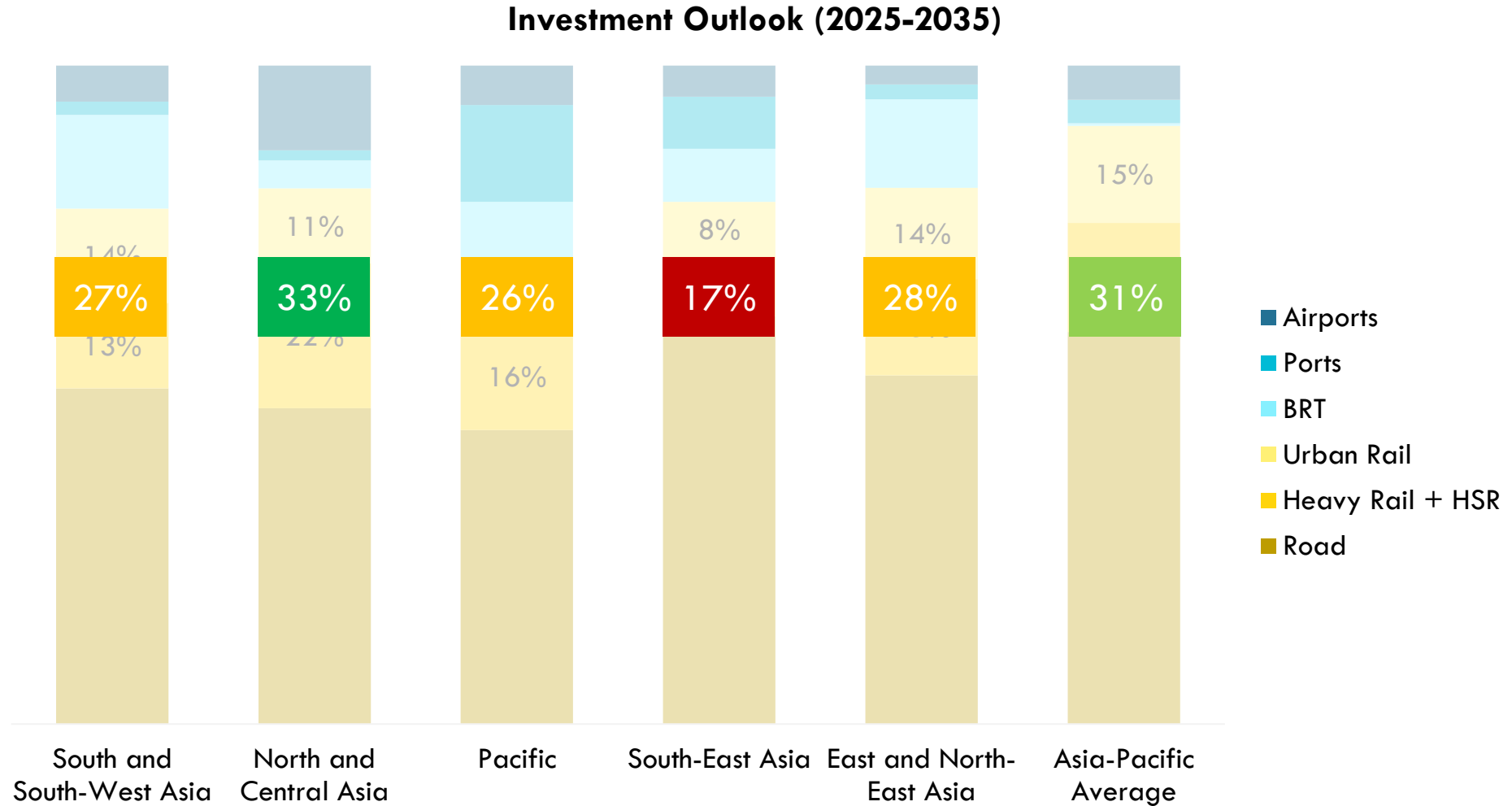


Rail bears disproportionate climate change burden

Average annual losses in transport infrastructure, share by mode

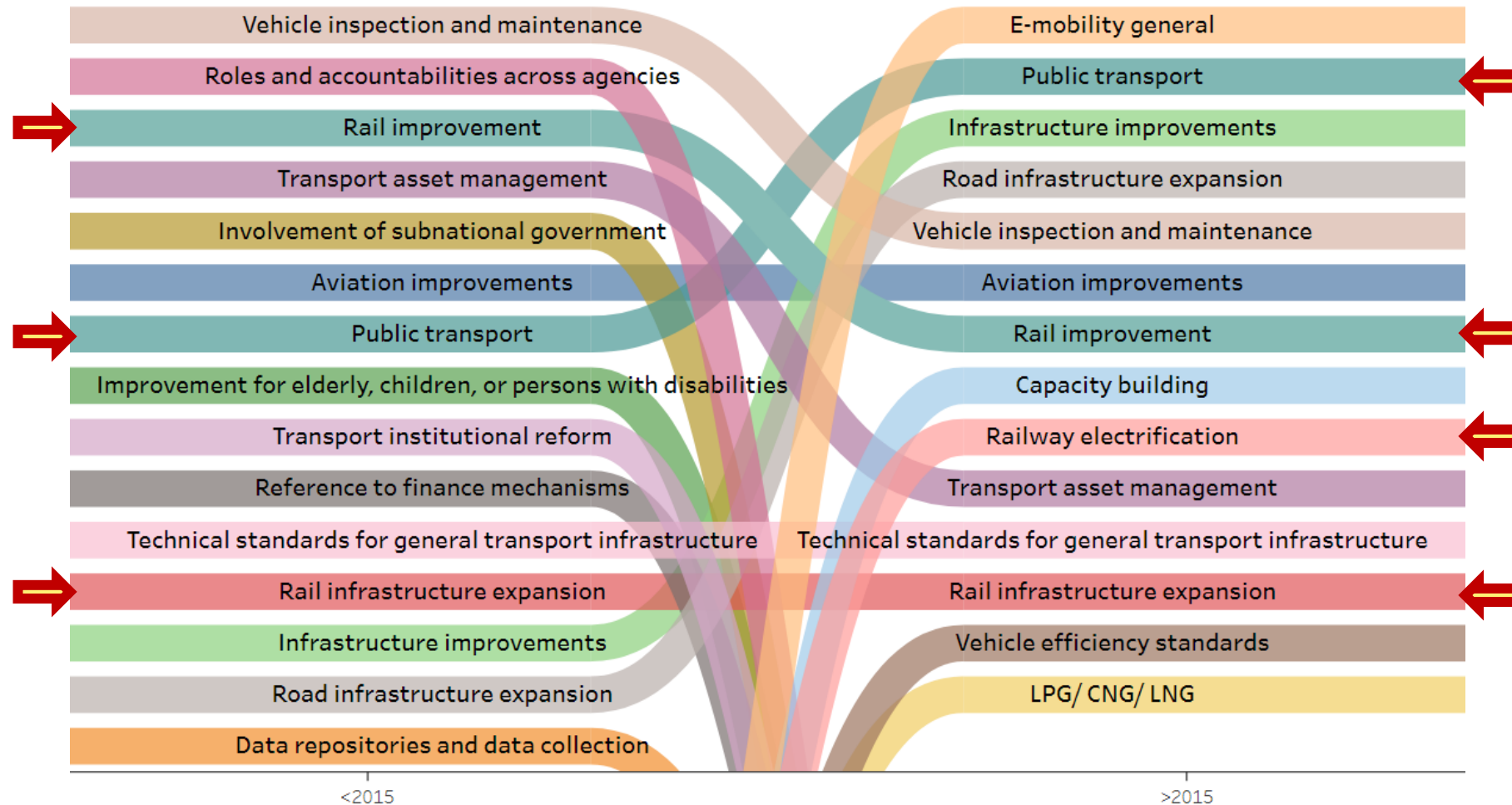


Investment outlook indicates a silver lining



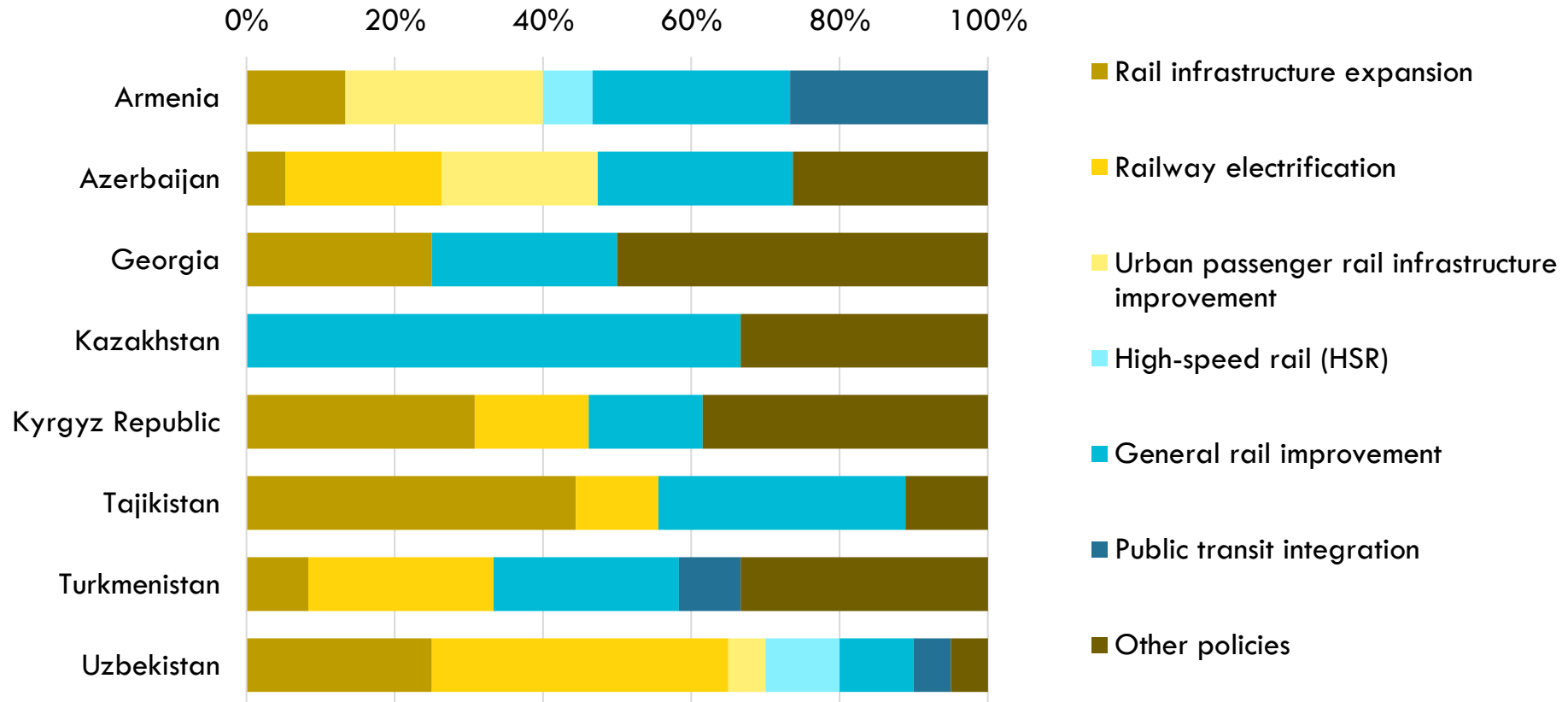
Transport policy landscape – mixed news

North and Central Asia - Transport related top 15 policy measures



Diversity of rail policy measures

Rail-related transport policy measures in North and Central Asia



In Summary

1. North and Central Asia's rail sector is growing rapidly, but faces key challenges: geography, underutilization, and limited urban connectivity.
2. While efficiency gains and electrification offer a glimpse of potential, progress is inconsistent, and emissions are on the rise.
3. Policy and investment signals are mixed, but with focused action, rail could emerge as a climate-resilient backbone, driving sustainable growth in the region.

asiantransportobservatory.org

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

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