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Introduction to the profiles: These "Transport and Climate Profiles" are part of the research work entitled "Transport NDC Gap Analysis for Low- and Middle-Income Countries (LMICs) in Asia and the Pacific" which is being implemented and builds on the work of the Asian Transport Outlook (ATO), a project initiated and supported by the Asian Development Bank (ADB). ATO is also being supported by the Asian Infrastructure Investment Bank (AIIB). The research is being co-funded by UKAID through the UK Foreign, Commonwealth and Development Office (FCDO) under the High-Volume Transport (HVT) Applied Research Program managed by DT Global International Development UK LTD (DT Global). The research is being implemented under HVT057 (Transport Decarbonisation Index - https://transport-links.com/funded-projects/transport-decarbonisation-index-tdi) whose lead research supplier is the Partnership on Sustainable, Low Carbon Transport. These profiles are designed to complement the main report of the research entitled *Bridging the Gap: A Deep Dive into NDCs and Transport Policy Landscapes in Low- and Middle-Income Asian Economies*. While intended as supplementary materials, they also function as standalone knowledge products. All the related knowledge products will be made available through https://asiantransportoutlook.com/analytical-outputs/ndc-analysis and https://asiantransportoutlook.com/analytical-outputs/fransportclimateprofiles/

The Asian Transport Outlook (ATO) is an initiative that aims at strengthening the knowledge base on transport in the Asia-Pacific region. It supports the planning and delivery of transport-related assistance in Asia, supports wider transport policy making, and helps track global and regional processes related to sustainable development. For example, ATO is the monitoring mechanism for the Aichi 2030 Declaration on Environmentally Sustainable Transport – Making Transport in Asia Sustainable (2021-2030) which was adopted by more than 20 countries in Asia-Pacific through the High Level Environmentally Sustainable Transport Forum (EST) that is organized by the United Nations Centre for Regional Development (UNCRD)-DSDG/UN DESA, along with its partners. For more information, visit asiantransportoutlook.com

This profile is structured into two main sections: Data Insights and Policy Insights. Under "Data Insights", individual components at the intersection of transport and climate change are detailed. Similarly, the "Policy Insights" section outlines various policy documents, measures, and targets.

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**Transport and Climate Profile: Kazakhstan** 

2024

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# **Executive Summary**

Kazakhstan, an upper-middle-income economy in Central and West Asia, faces significant challenges in its transport sector regarding climate change.

#### CO2 Emissions:

• In 2023, Kazakhstan's transport sector emitted 23.5 million tonnes of CO2, accounting for 10% of the country's total emissions. While CO2 emissions from transport grew by 3% annually before the Paris Agreement, they have since increased to 5% annually. The road sector dominates emissions, contributing 100% in 2022 and representing 11% of total economy-wide emissions. This is significantly higher than the Asia-Pacific average of 89% for road transport emissions. Notably, Kazakhstan's transport CO2 emissions intensity has decreased from 81.6 gCO2 per USD in 2000 to 30.1 gCO2 per USD in 2023, outperforming both its regional and income group peers.

### **Energy Consumption:**

- High Energy Intensity: Transport sector energy intensity is higher than regional and peer averages, indicating inefficient energy use.
- Oil Dependency: The road sector heavily relies on oil products, hindering the transition to cleaner energy sources.
- Low Electrification: Electrification of the transport sector remains minimal, especially in the road sector.

### Adaptation and Resilience:

- Significant Losses: Kazakhstan faces potential average annual losses of 32.14 million USD to transport infrastructure due to hazards.
- Road Vulnerability: The country ranks 28th globally regarding road vulnerability, emphasizing the need for enhanced resilience.

### **Vehicle Fleet:**

- Rapid Growth: The vehicle fleet has grown substantially, with a high number of vehicles per thousand population.
- Limited Electric Vehicle Adoption: Despite some progress, the share of electric vehicle imports remains low compared to the regional average.

### **Urban Transport:**

- Limited Rapid Transit: Urban rapid transit infrastructure is underdeveloped, hindering efficient and sustainable urban mobility.
- Unequal Public Transport Access: Many cities lack adequate public transport access, contributing to congestion and emissions.

#### Investments:

- Declining ODA: Official development assistance in the transport sector has dropped significantly in recent years.
- PPP Focus: Public-private partnerships have focused mainly on road transport.

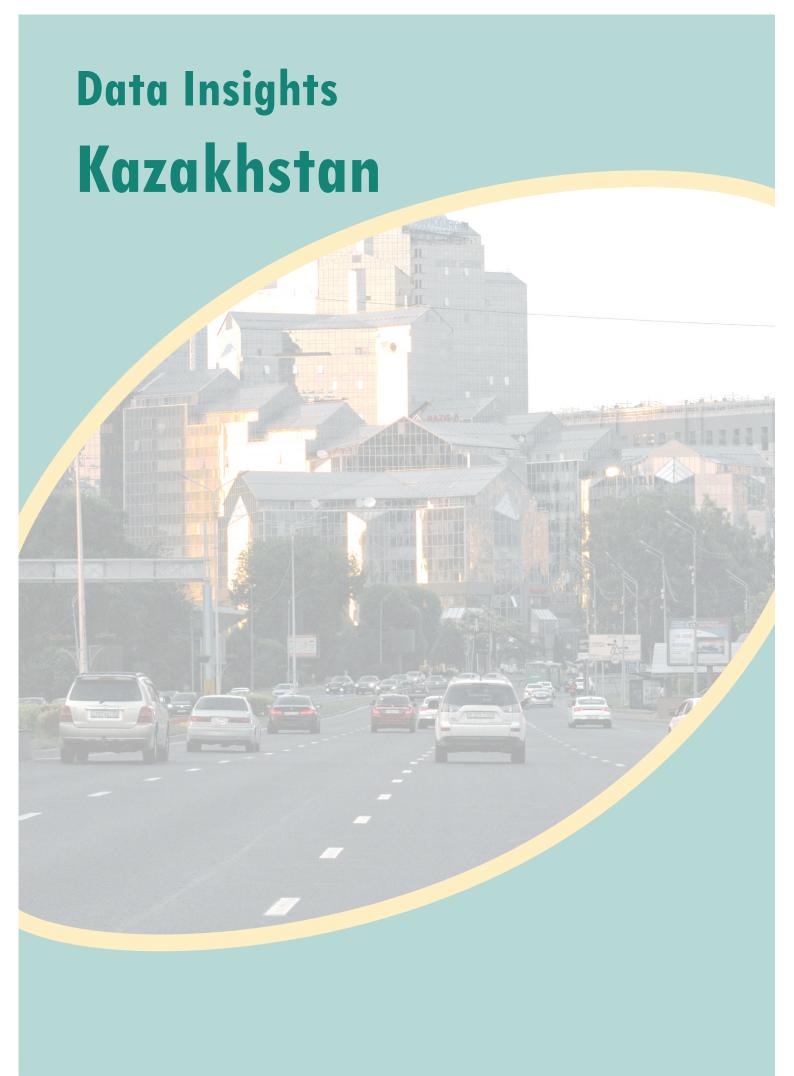
#### **Policy:**

- NDC Gaps: The NDC lacks specific transport sector emissions targets and long-term decarbonization strategies. There is a poor alignment of NDC's with transport policies.
- Limited Adaptation Focus: Policy measures predominantly focus on mitigation, with insufficient attention to adaptation and resilience.
- In terms of the number of policy measures, Kazakhstan's priority policies on climate change are Vehicle air pollution emission standards, General public transport, Transport law, Vehicle efficiency standards, General emobility, General infrastructure improvements, General rail improvement, Road-side vehicle technical checks, Vehicle scrappage scheme, LPG/ CNG/LNG

### **Policy Opportunities:**

- Strengthened NDC: The NDC should include specific transport sector emissions reduction targets and long-term decarbonization pathways.
- Mode Diversification: Promote rail, domestic navigation, and non-motorized transport to reduce reliance on the road sector.
- Energy Transition: Accelerate the electrification of the transport sector, including the deployment of charging infrastructure and incentives.
- Enhanced Resilience: Invest in climate-resilient transport infrastructure to mitigate the risks of climate-related hazards.
- Urban Transport Improvements: Expand and improve urban rapid transit systems and public transport access to reduce congestion and emissions.
- Integrated Planning: Develop an integrated transport and climate change strategy that aligns with national development goals.
- International Cooperation: Seek international collaboration and financial support for technology transfer and capacity building.

By addressing these challenges and seizing the policy opportunities, Kazakhstan can transition towards a more sustainable and climate-resilient transport sector, contributing to its national climate goals and global efforts to combat climate change.



### **Transport and Climate Profile**

Population (2024) 19.8 million

Urban population

**58%** 

Below 18 y.o.

36%

Population density 7 persons per sqkm Rural population

42%

Above 60 y.o.

13%

Gross domestic product GDP per capita (PPP, 2023) 39,921 USD (GDP PPP, 2023) (1,2)**782.72 billion USD** (2)Domestic consumption per capita, tonnes (2024) 26.6 tonnes (3)Domestic consumption is the total amount of materials directly used

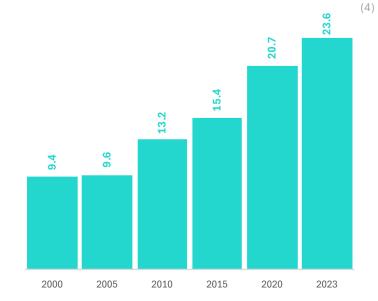
(1,2) in the economy (used domestic extraction plus imports), minus the

Income class

Upper middle income

### I. Transport and Climate Change

Transport fossil CO2 emissions, million tonnes



In 2010, transport contributed 5% of total fossil CO2 emissions. By 2023, transport contributed 10%.

Share of transport CO2 emissions by mode (2022)

Subregion

**Central and West Asia** 

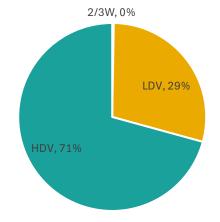
materials that are exported.

| Rail |Road 99.9% 0.1% (4)| Navigation | Aviation 0.0% 0.0% (4)

Navigation and aviation only includes domestic transportation

Between 2000-2015, road transport contributed 91% in transport fossil CO2 emissions. Between 2016-2022, road transport contributed 98%.

Road transport CO2 emissions (well-to-wheel), share by mode (2022)

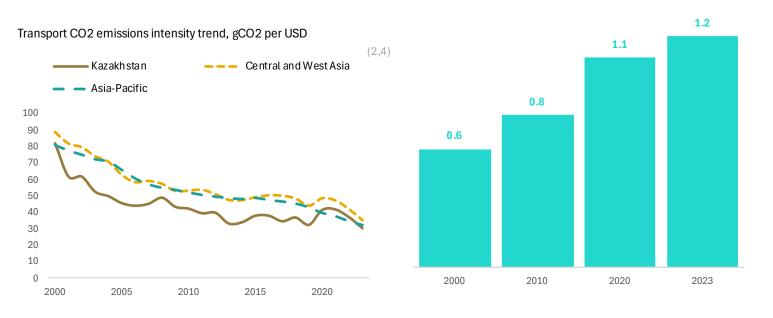


# Transport CO2 emissions intensity (2023) 30 gCO2 per USD

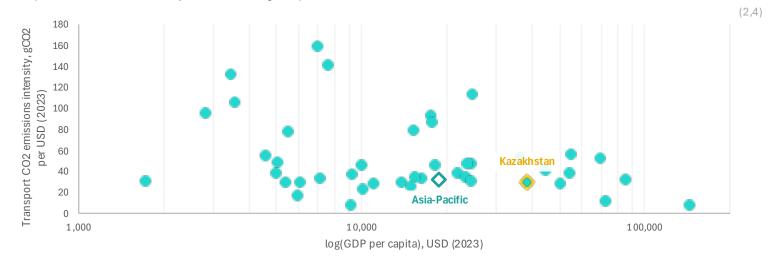
Transport fossil CO2 emissions per capita, tonnes

Asia-Pacific average is 32 gCO2 per USD

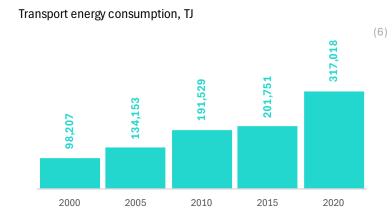
(2,4)

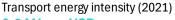


### Transport CO2 emissions intensity in Asia-Pacific, gCO2 per USD



### **II. Transport Energy Consumption**

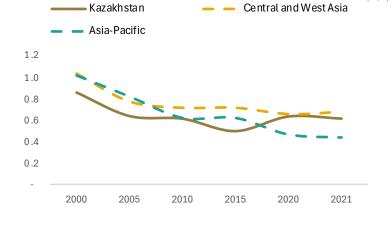




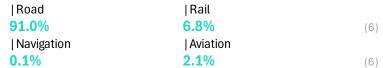
0.6 MJ per USD

Asia-Pacific average is 0.4 MJ per USD

### Transport energy intensity trend, MJ per USD

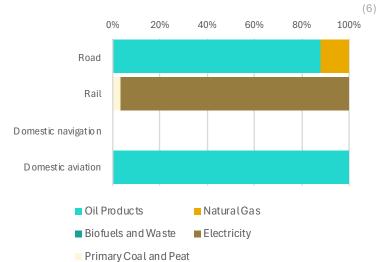


### Share of transport energy consumption by mode (2021)



Navigation and aviation only includes domestic transportation

### Share of transport energy consumption by source (2021)

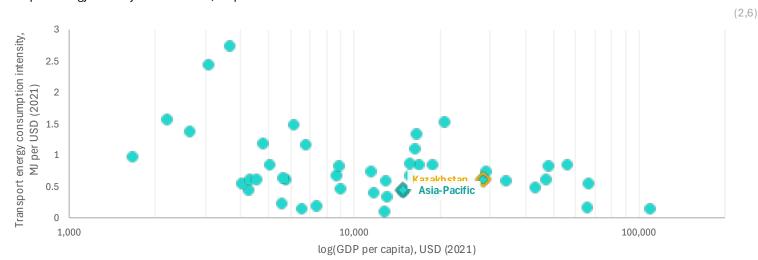


(6)

#### Share of transport in renewable energy consumption

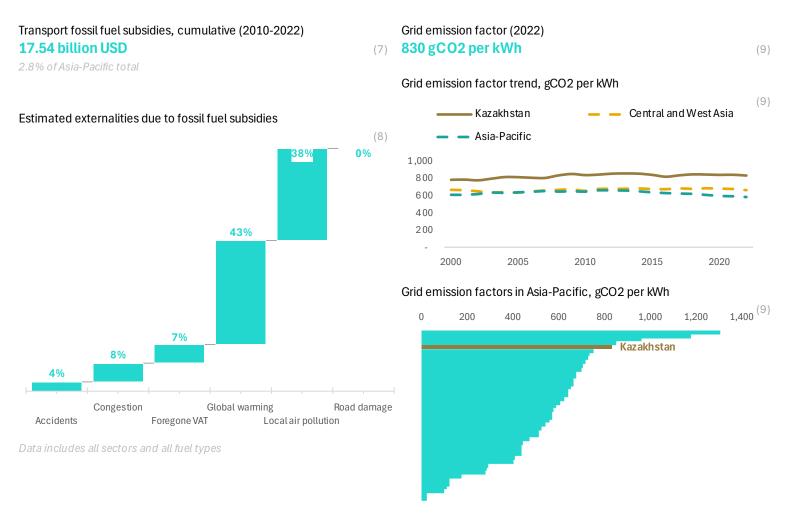


#### Transport energy intensity in Asia-Pacific, MJ per USD



(2,6)

(2,6)



## III. Adaptation and Resilience

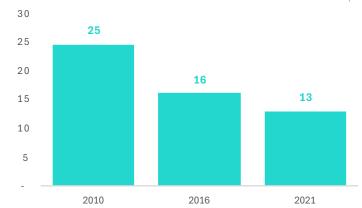
Average annual losses to transport infrastructure due to hazards Average annual losses to transport infrastructure due to hazards, (2023)as a share of GDP, in Asia-Pacific (2023) 0.5% (10) 32 million USD (10)0.0% 0.1% 0.2% 0.3% 0.4% |Road | Rail 35% **61%** | Ports | Airports 0% 4% National road vulnerability index ranking (2023) 28th out of 208 countries (11)Kazakhstan Share of population in low elevated coastal zones (2018) (12)

### IV. Other Externalities

### Road crash fatalities (2021)

2.3 thousand deaths

Road crash fatality rate per 100 thousand population



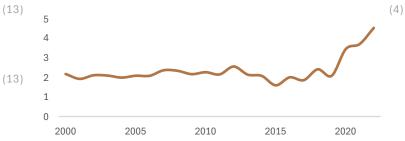
Asia-Pacific average is 16 fatalities per 100 thousand population

Rural access index (2023) 64%

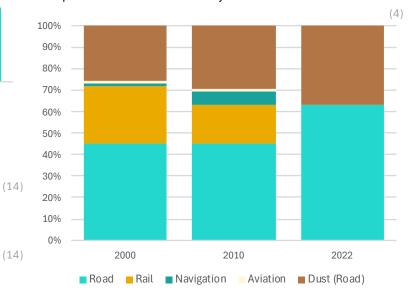
Rural population without access to all-season roads (2023) **2.9 million** 

Rural population without access to all-season roads (202

## Transport PM 2.5 emissions trend, thousand tonnes



### Transport PM 2.5 emissions share by source



### V. Vehicle Fleet

#### Road vehicles (2022)

4.4 million vehicles

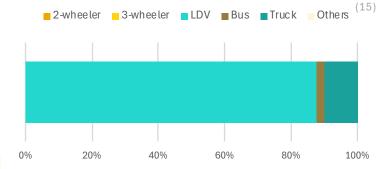
Road vehicle motorization rate (2022)

229 vehicles per thousand population

Road vehicles include 2- and 3-wheelers, LDVs, buses and other informal public transport, trucks, and other unclassified types

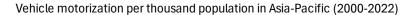
In 2000, Kazakhstan had 82 vehicles per thousand population. By 2022, this has increased to 229 compared with Asia-Pacific average of 577 in 2022.

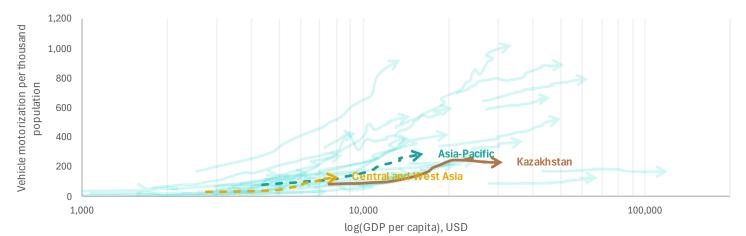
#### Share of vehicles by type



(15)

(1,15)



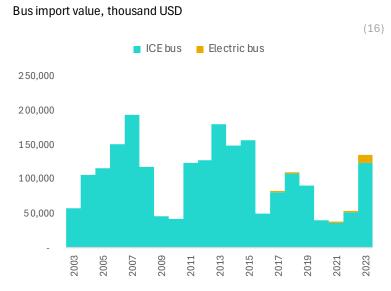


(16)

(16)

### Bus import value (2015-2023)

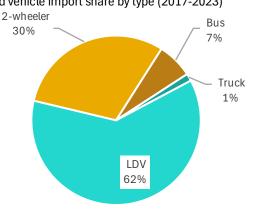
### 731.2 million USD



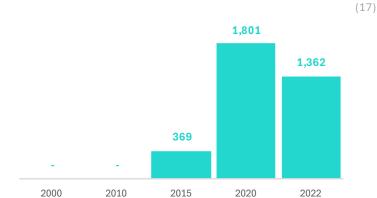
Electric road vehicle import value (2017-2023)

#### 208 million USD

Electric road vehicle import share by type (2017-2023)



#### Bus vehicle production, units



E-mobility Readiness Index (2024)

| Technology & Market<br>17/25 | Policy<br>5/25 | (18) |
|------------------------------|----------------|------|
| Energy <b>21/25</b>          | Financial      |      |
| Overall                      |                |      |
| 59/100                       |                |      |

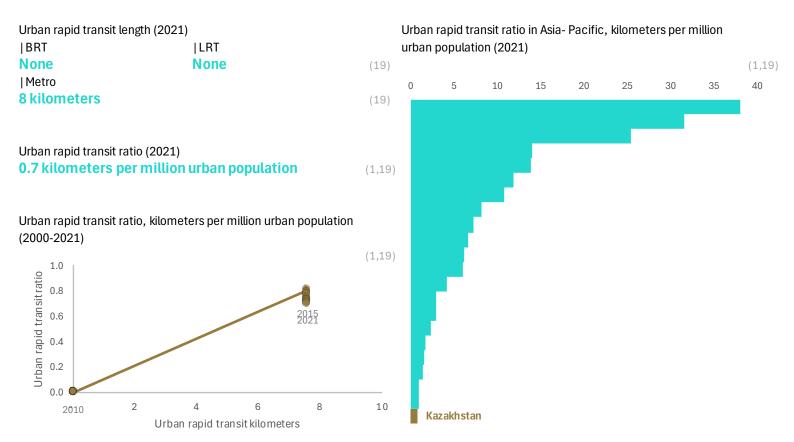
Electric road vehicle share in total road vehicle import value trend

(16)

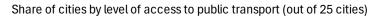
(16)

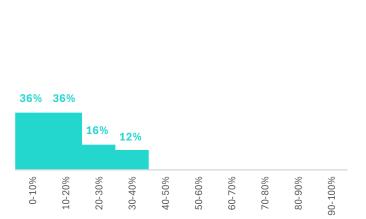
| 1.0% | 0.5% | 0.6% | 0.7% |      |      | 2.0% |
|------|------|------|------|------|------|------|
| 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |

### VI. Urban Transport

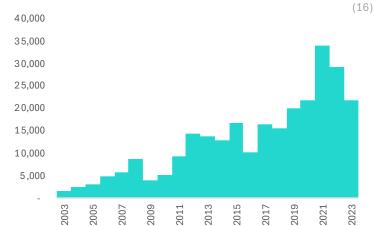


(20)



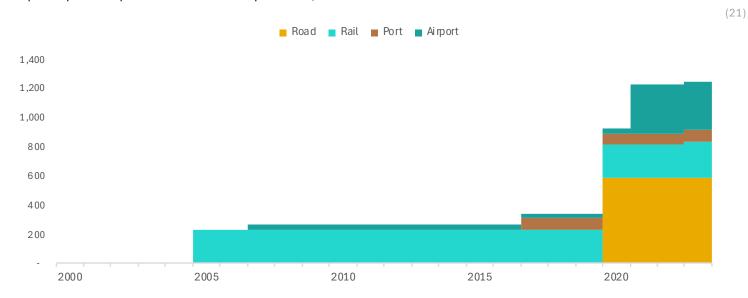


### Bicycle import value, thousand USD

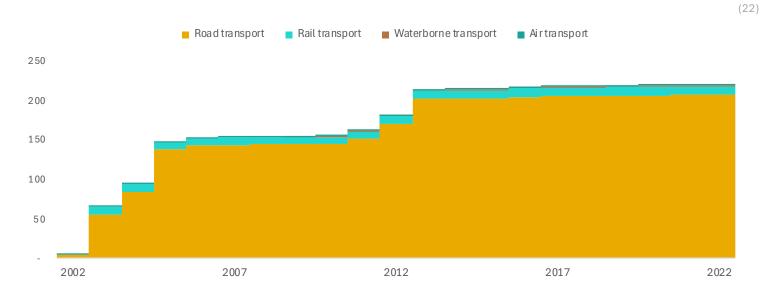


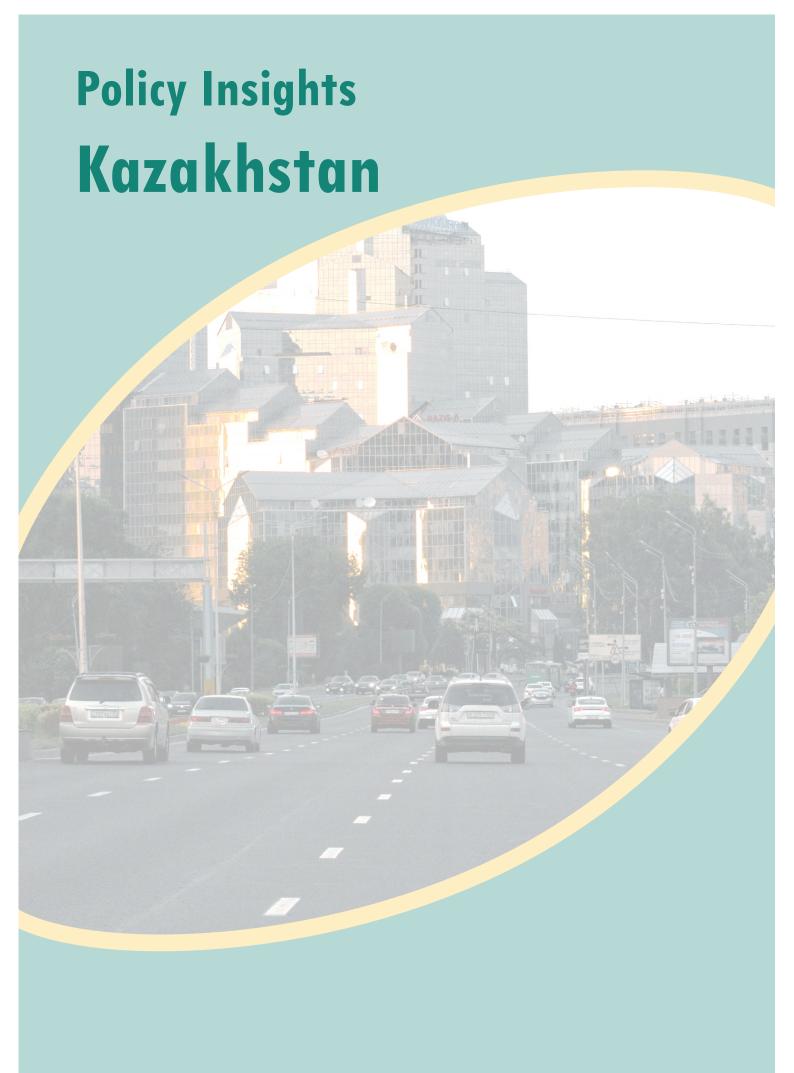
### **VII. Transport Investments**

### Public-private partnership investments in the transport sector, million USD



### Official development assistance in the transport sector, million USD





### **VIII. Transport and Climate Policy Documents**

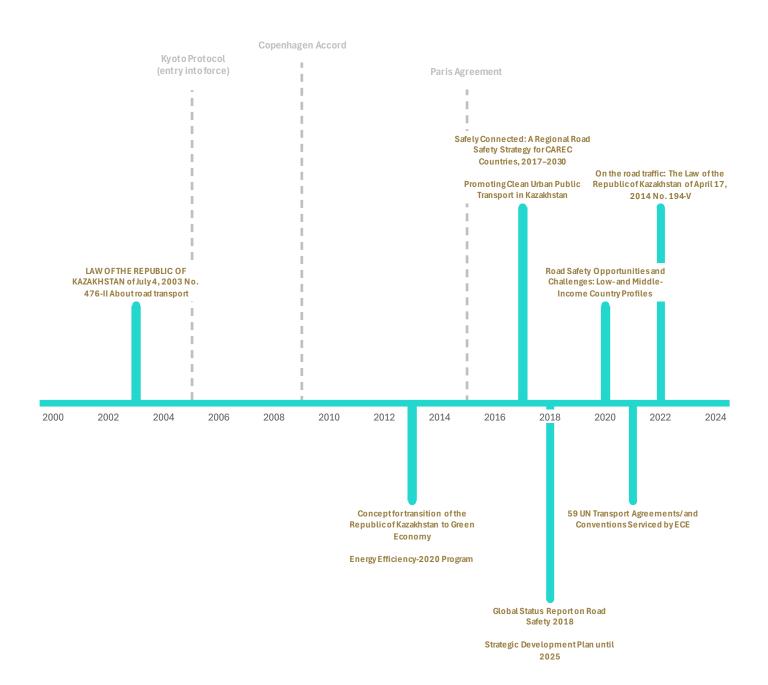
#### Transport-related policy documents in Kazakhstan

Selection made based on the number of climate change mitigation and adaptation policy measures

Nationally Determined Contributions of Kazakhstan

2015: KAZ-First Nationally Determined Contribution

2023: Updated Nationally Determined Contribution of the Republic of Kazakhstan



### IX. Representation of Transport in Key Climate Policy Documents

#### **Nationally Determined Contributions**

Updated Nationally Determined Contribution of the Republic of Kazakhstan (adopted in 2023)

Mitigation measures Mitigation targets Adaptation measures Adaptation targets

Rail transport

Road

transport

Yes

Road

Domestic navigation Domestic aviation

Urban transport

**Long-term Strategies** 

Mitigation measures None Mitigation targets

> Adaptation measures Adaptation targets

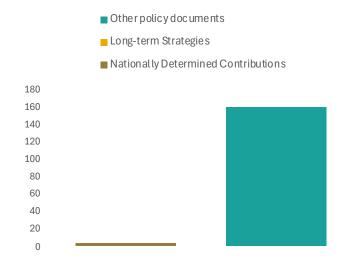
Domestic Domestic Urban Rail transport transport navigation aviation transport

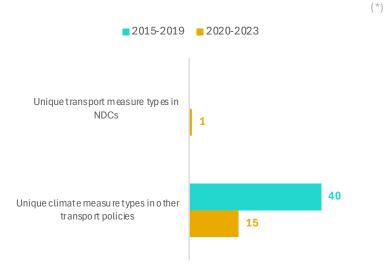
### X. Distribution of Transport and Climate Policy Measures in Policy Documents

Number of policy measures by source

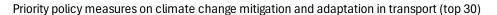
Integration of climate ambition, unique number of policy measures in

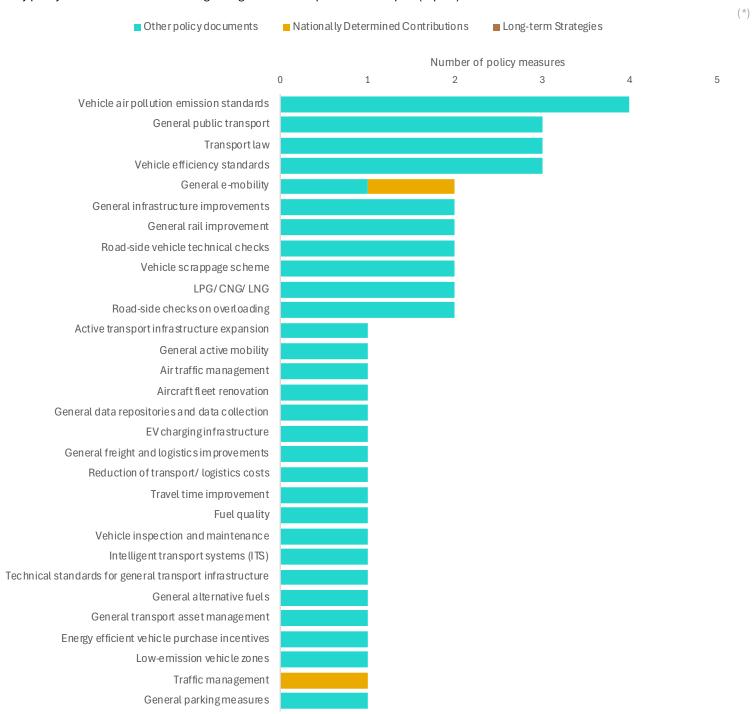
(\*) NDCs and other transport policies



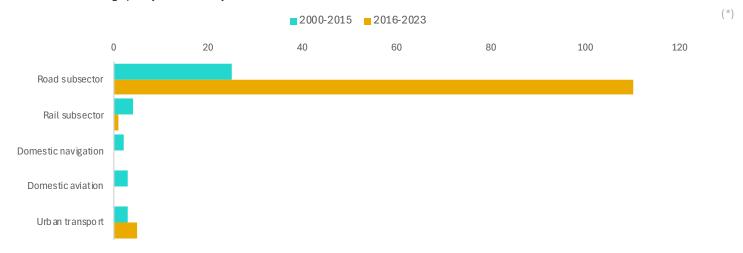


### XI. National Policy Priorities on Transport





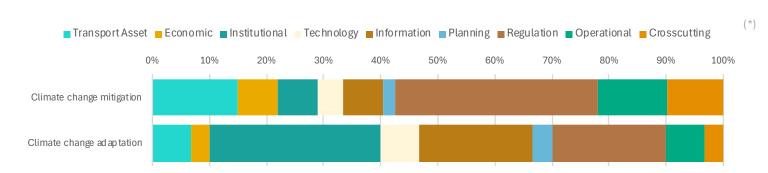
### Number of climate change policy measures by subsectors



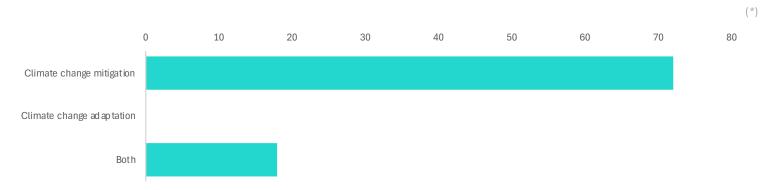
### Number of climate change policy measures by passenger vs. freight



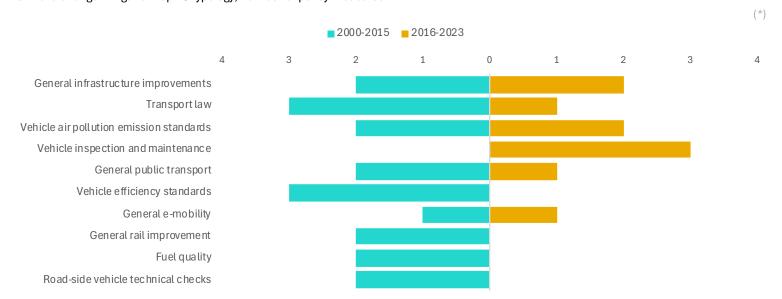
### Transport-related climate change policy measures by framework



### Number of climate change mitigation vs. climate change adaptation policy measures



### Climate change mitigation top 10 typology, number of policy measures



### Climate change adaptation top 5 typology, number of policy measures



# Kazakhstan

# XII. Direct GHG Targets

This table contains transport-relevant (e.g. economy-wide; sector-specific) GHG emissions targets as explicitly mentioned in the policy documents of Kazakhstan

|   | Year      |  | Target |
|---|-----------|--|--------|
| Document  | published | Target   | ye ar  |
| Economy-wide emissions  |           |  |        |
| KAZ - First Nationally Determined Contribution                  | 2015      | Unconditional - A 15% reduction in GHG emissions by 31 December 2030 compared to the base year Conditional - A 25% reduction in GHG emissions by 31 December 2030 compared to the base year, subject to additional international investments, access to low carbon technologies transfer mechanism, green climate funds and flexible mechanism for country with economy in transition. | 2030   |
| Net zero, carbon neutrality, and other long-term climate action |           |  |        |

**Transport GHG emission** 

# Kazakhstan

# XIII. Indirect Transport Climate Change Targets

This table shows non-GHG targets as specified in the policy documents in Kazakhstan which indirectly benefit climate change mitigation and adaptation in the transport sector

|  | Year      |  | Target |
|--|-----------|--|--------|
| Document   | published | Target   | year   |
| Target - Road crash fatalities   |           |  |        |
| Safely Connected: A Regional Road Safety Strategy for CAREC Countries, 2017–2030 | 2017      | the overall target of the CAREC road safety strategy would be to reduce the number of fatalities on CAREC road corridors by 50% in 2030 as compared with the 2010 base level | 2030   |
| Target - Transport energy consumption  |           |  |        |
| Concept for transition of the Republic of Kazakhstan to Green Economy            | 2013      | Economywide - Reduction of energy intensity of GDP from levels of 2008 = 30% (2030)  | 2030   |
| Concept for transition of the Republic of Kazakhstan to Green Economy            | 2013      | Economywide - Reduction of energy intensity of GDP from levels of 2008 = 50% (2050)  | 2050   |
| Vehicle air pollution emission standards   |           |  |        |
| Concept for transition of the Republic of Kazakhstan to Green Economy            | 2013      | SOX, NOX emissions into environment = European levels of emissions   | 2030   |

# **XIV. Transport and Climate Policy Measures**

| Document   | Year<br>published | Measure  | Road | Rail | Dome stic<br>Navigation | Dome stic<br>Aviation | Urban<br>Transport |
|--|-------------------|--|------|------|-------------------------|-----------------------|--------------------|
| General e-mobility   |                   |  |      |      |                         |                       |                    |
| Updated Nationally Determined Contribution of the Republic of Kazakhstan   | 2023              | infrastructure for electric and gas vehicles   |      |      |                         |                       |                    |
| ORDER OF THE MINISTER OF INVESTMENTS AND DEVELOPMENT OF THE REPUBLIC OF KAZAKHSTAN of March 31, 2015 No. 389 About establishment of requirements for transport energy efficiency | 2015              | Requirements for transport energy efficiency (further - requirements) are developed according to subitem 6-7) of article 5 of the Law of the Republic of Kazakhstan of January 13, 2012 "About energy saving and increase in energy efficiency" and determine normative indicators of energy efficiency of transport.  |      | X    | x                       | x                     |                    |
| Traffic management   |                   |  |      |      |                         |                       |                    |
| Updated Nationally Determined Contribution of the Republic of Kazakhstan   | 2023              | smart traffic management systems   | х    |      |                         |                       |                    |
| Accreditation of driver training agencies  |                   |  |      |      |                         |                       |                    |
| On the road traffic: The Law of the Republic of<br>Kazakhstan of April 17, 2014 No. 194-V  | 2022              | 1. The educational organization on training the drivers of vehicles shall created by individual entrepreneurs and legal entities and starts its activities from the date of submission the notification of the commencement of activities to the authorized body in accordance with the Law of the Republic of Kazakhstan "On Permits and Notifications".  |      |      |                         |                       |                    |
| Accreditation of vehicle inspection centers  |                   |  |      |      |                         |                       |                    |
| On the road traffic: The Law of the Republic of<br>Kazakhstan of April 17, 2014 No. 194-V  | 2022              | Authorized body in the field of transport and communications: 1) exercises the state control of observance of an order of the organization and carrying out obligatory technical inspection of mechanical transport vehicles and trailers to them operators of technical inspection; 2) develops a form of the diagnostic card of technical inspection; 3) develops an order of the organization and implementation by the legal entities and individual entrepreneurs occupied on irregular transportations of passengers and baggage, activities for safety of transportation of passengers and baggage; 4) keeps the register of operators of technical inspection; | x    |      |                         |                       |                    |
| Active transport infrastructure expansion  |                   |  |      |      |                         |                       |                    |
| On the road traffic: The Law of the Republic of<br>Kazakhstan of April 17, 2014 No. 194-V  | 2022              | 1) planning of land use taking into account an exception of risks during the movement of pedestrians by creation of the safe routes, interconnected and convenient for movement, used by them;  2) a construction of the safe, convenient, connected among themselves pedestrian ways with their artificial lighting; division of road traffic and pedestrian flows by construction of underground and elevated crosswalks;  4) existence of parkings, bicycle lanes or bicycle paths  | х    |      |                         |                       |                    |

# Kazakhstan

# XIV. Transport and Climate Policy Measures

| Document  | Year<br>published | Measure  | Road | Rail | Dome stic<br>Navigation | Dome stic<br>Aviation | Urban<br>Transport |
|---|-------------------|--|------|------|-------------------------|-----------------------|--------------------|
| Adoption of Harmonized Technical United Nations<br>Regulations for Wheeled Vehicles, Equipment and<br>Parts United Nations Regulations 1958   |                   |  |      |      |                         |                       |                    |
| 59 UN Transport Agreements/ and Conventions<br>Serviced by ECE  | 2021              | Ratification, accession, or definite signature by country  | х    |      |                         |                       |                    |
| Air traffic management  |                   |  |      |      |                         |                       |                    |
| I.O'S ORDER. MINISTER OF TRANSPORT AND COMMUNICATIONS OF THE REPUBLIC OF KAZAKHSTAN of May 16, 2011 No. 279 About approval of the Instruction on the organization and air traffic maintenance | 2011              | The instruction on the organization and air traffic maintenance is developed on the basis of the Law of the Republic of Kazakhstan "About use of airspace of the Republic of Kazakhstan and activities of aircraft", and also taking into account requirements of standards and recommendations of International Civil Aviation Organization (IKAO) stated in Annex 11 to the Convention on international civil aviation (Chicago, 1944), and the document of International Civil Aviation Organization "Air traffic management" (Doc 4444 ATM/501). |      |      |                         | x                     |                    |
| Aircraft fleet renovation   |                   |  |      |      |                         |                       |                    |
| Energy Efficiency-2020 Program  | 2013              | update the fleet of aircraft and railway locomotives provided for  |      |      |                         | Х                     |                    |
| Automated enforcement of speed limits   |                   |  |      |      |                         |                       |                    |
| Global Status Report on Road Safety 2018  | 2018              | Yes  | X    |      |                         |                       |                    |
| Convention on Road Traffic 1968   |                   |  |      |      |                         |                       |                    |
| 59 UN Transport Agreements/ and Conventions<br>Serviced by ECE  | 2021              | Ratification, accession, or definite signature by country  | х    |      |                         |                       |                    |
| Coordinate planning across government agencies  |                   |  |      |      |                         |                       |                    |
| Promoting Clean Urban Public Transport in<br>Kazakhstan   | 2017              | Inter-ministerial co-operation in greening the transport strategy  |      |      |                         |                       | х                  |
| <b>Customs Convention on Containers 1972</b>  |                   |  |      |      |                         |                       |                    |
| 59 UN Transport Agreements/ and Conventions<br>Serviced by ECE  | 2021              | Ratification, accession, or definite signature by country  |      |      |                         |                       |                    |
| Customs Convention on the International<br>Transport of Goods under Cover of TIR Carnets (TIR<br>Convention) 1975   |                   |  |      |      |                         |                       |                    |

# XIV. Transport and Climate Policy Measures

|  | Year      |   | D    | _    | Dome stic<br>Navigation | Do me stic<br>Aviation | Urban<br>Transport |
|--|-----------|---|------|------|-------------------------|------------------------|--------------------|
| Document   | published | Measure   | Road | Rail | Do.<br>Nav              | Do I<br>Avi            | Urb<br>Tra         |
| 59 UN Transport Agreements/ and Conventions<br>Serviced by ECE                       | 2021      | Ratification, accession, or definite signature by country   |      |      |                         |                        |                    |
| Define roles and accountabilities across agencies                                    |           |   |      |      |                         |                        |                    |
| LAW OF THE REPUBLIC OF KAZAKHSTAN of July 4,<br>2003 No. 476-II About road transport | 2003      | 1. State regulation in the field of road transport is performed by legal support, licensing, technical regulation, standardization, control of compliance with law of the Republic of Kazakhstan about automobile transport. 2. The state control of compliance with law of the Republic of Kazakhstan about road transport is exercised by authorized body and other state bodies within their competence established by the legislation of the Republic of Kazakhstan. 3. Control of driving of vehicles through the territory of the Republic of Kazakhstan is exercised at check points of vehicles through the Frontier of the Republic of Kazakhstan matching with customs border of the Eurasian Economic Union and also in other places of movement of goods through customs border of the Eurasian Economic Union and on posts of transport control in the territory of the Republic of Kazakhstan, highways public, highways within borders of the cities or other settlements. | x    |      |                         |                        |                    |
| Design standards for sidewalks and bicycle paths                                     |           |   |      |      |                         |                        |                    |
| Global Status Report on Road Safety 2018   | 2018      | Yes   | Х    |      |                         |                        |                    |
| Development of other transport-related plan/policy                                   |           |   |      |      |                         |                        |                    |
| Energy Efficiency-2020 Program   | 2013      | inclusion in the development programs of the territories of measures for the development of energy-efficient transport infrastructure   | х    |      |                         |                        |                    |
| Energy efficient vehicle purchase incentives   |           |   |      |      |                         |                        |                    |
| Energy Efficiency-2020 Program   | 2013      | develop mechanisms to stimulate the purchase of fuel-efficient cars   | Х    |      |                         |                        |                    |
| EV charging infrastructure   |           |   |      |      |                         |                        |                    |
| Concept for transition of the Republic of Kazakhstan to Green Economy                | 2013      | Developing alternative types of transport and respective infrastructure, in particular for electric cars and gas-fueled cars.   |      |      |                         |                        |                    |
| Fuel quality   |           |   |      |      |                         |                        |                    |
| Concept for transition of the Republic of Kazakhstan to Green Economy                | 2013      | Ensuring the use of high quality fuel.  | Х    |      |                         |                        |                    |
| International Energy Charter   | 2015      | encouraging the clean and efficient use of fossil fuels   | Х    |      |                         |                        |                    |
| General active mobility  |           |   |      |      |                         |                        |                    |

# Kazakhstan

# XIV. Transport and Climate Policy Measures

| Document   | Year<br>published | Measure  | Road | Rail | Do me stic<br>Navigation | Dome stic<br>Aviation | Urban<br>Transport |
|--|-------------------|--|------|------|--------------------------|-----------------------|--------------------|
| On the road traffic: The Law of the Republic of Kazakhstan of April 17, 2014 No. 194-V | 2022              | 3) at a design stage and construction of roads division of the movement of pedestrian and road traffic flows by antiemergency dividing barriers and protections.   | Х    |      |                          |                       |                    |
| General alternative fuels  |                   |  |      |      |                          |                       |                    |
| Concept for the Development of the Fuel and Energy Sector until 2030                   | 2014              | transfer of urban transport to alternative fuel (LPG, liquefied natural gas  |      |      |                          |                       | х                  |
| General capacity building  |                   |  |      |      |                          |                       |                    |
| INTEGRATED ANNUAL REPORT OF NATIONAL<br>COMPANY KAZAKHSTAN TEMIR ZHOLY JSC FOR 2021    | 2021              | development of the technical and technological expertise for ensuring the safety and reliability of the transportation process   |      |      |                          |                       |                    |
| Safely Connected: A Regional Road Safety Strategy for CAREC Countries, 2017–2030       | 2017              | Provide training for those responsible for management and coordination. Provide training for those responsible for the management of data systems. Provide training to highway engineers to support implementation of revised design standards for CAREC highways at the national level in each member country. Ensure that the skills of those maintaining and testing vehicles are at a level that maximizes the safety of vehicles on roads in CAREC countries. | х    |      |                          |                       |                    |
| General data repositories and data collection  |                   |  |      |      |                          |                       |                    |
| On the road traffic: The Law of the Republic of Kazakhstan of April 17, 2014 No. 194-V | 2022              | The intellectual transport system on the basis of a complex of the interconnected automated systems: collects basic data for an assessment of a transport situation;   | х    |      |                          |                       |                    |
| General freight and logistics improvements   |                   |  |      |      |                          |                       |                    |
| State Program for Industrial and Innovative Development for 2015-2019                  | 2015              | creation of a highly efficient transport and logistics system of Kazakhstan and ensuring its integration into the international transport system   |      |      |                          |                       |                    |
| General infrastructure improvements  |                   |  |      |      |                          |                       |                    |
| Concept for transition of the Republic of Kazakhstan to Green Economy                  | 2013              | Development of energy efficient transport infrastructure   | х    |      |                          |                       |                    |

# XIV. Transport and Climate Policy Measures

| Document   | Year<br>published | Measure   | Road | Rail | Dome stic<br>Navigation | Dome stic<br>Aviation | Urban<br>Transport |
|--|-------------------|---|------|------|-------------------------|-----------------------|--------------------|
| International Energy Charter   | 2015              | promoting the realisation of infrastructure projects important for providing global and regional energy security modernisation, renewal and rationalisation by industry of services and installations for the production, conversion, transport, distribution and use of energy promoting the developement and interconnection of energy transport infrastructure and the regional integration of energy markets facilitating access to transport infrastructure, for the international trnaist purposes in line with the objectives of this Charter coordination and where appropriate, harmonisation of safety principles and guidelines for energy products and their transport as well as for energy installations, at high level |      |      |                         |                       |                    |
| Safely Connected: A Regional Road Safety Strategy for CAREC Countries, 2017–2030 | 2017              | Establish an effective system for blackspot identification for the CAREC road network with a system of value for money assessment built in.   | Х    |      |                         |                       |                    |
| Strategic Development Plan until 2025  | 2018              | measures will be taken to ensure uninterrupted and safe transport links with an appropriate level of service between cities and the nearest settlements. long-term contracts with transport companies will be stimulated  | Х    | х    |                         |                       | х                  |
| General international conventions  |                   |   |      |      |                         |                       |                    |
| Safely Connected: A Regional Road Safety Strategy for CAREC Countries, 2017–2030 | 2017              | Establish a biennial CAREC Road Safety Conference that helps to build communications, co-operation and confidence amongst member countries towards tackling road safety issues with a regional focus.   | Х    |      |                         |                       |                    |
| General parking measures   |                   |   |      |      |                         |                       |                    |

# Kazakhstan

# XIV. Transport and Climate Policy Measures

| Document   | Year<br>published | Measure  | Road | Rail | Domestic<br>Navigation | Dome stic<br>Aviation | Urban<br>Transport |
|--|-------------------|--|------|------|------------------------|-----------------------|--------------------|
| On the road traffic: The Law of the Republic of<br>Kazakhstan of April 17, 2014 No. 194-V    | 2022              | 1. The places equipped with the special certified devices intended for collection of payment for the parking and accounting of time of the parking of vehicles are defined by local executive bodies of areas, cities of republican value and the capital.  2. The parking in the places provided by paragraph 1 of the real article is carried out according to rules of the parking in the places equipped with the special certified devices intended for collection of payment for the parking and accounting of time of the parking of vehicles, and tariffing approved by local executive bodies of areas, cities of republican value and the capital.  3. The special certified devices intended for collection of payment for the parking and accounting of time of the parking of vehicles have to conform to requirements of the legislation of the Republic of Kazakhstan in the field of technical regulation.  4. The parking in the places equipped with the special certified devices intended for collection of payment for the parking and accounting of time of the parking of vehicles without payment is forbidden, except for the cases provided by rules of the parking in the places equipped with the special certified devices intended for collection of payment for the parking and accounting of time of the parking of vehicles.  5. Control of observance of rules of the parking in the places equipped with the special certified devices intended for collection of payment for the parking and accounting of time of the parking of vehicles is carried out by local executive bodies of areas, cities of republican value and the capital |      |      |                        |                       |                    |
| General public transport   |                   |  |      |      |                        |                       |                    |
| Concept for transition of the Republic of Kazakhstan to Green Economy                        | 2013              | Increase in energy efficiency of local public transport due to its conversion to clean fuel (gas and electricity) Transportation control (transport infrastructure enabling efficient use of all transport types, increase of accessibility and quality of public transport).  |      |      |                        |                       |                    |
| Concept of Transition of the Republic of Kazakhstan to Sustainable Development for 2007-2024 | 2007              | transition to environmentally friendly public transport  |      |      |                        |                       |                    |
| Promoting Clean Urban Public Transport in<br>Kazakhstan                                      | 2017              | Tariffs should be designed to maximise the social welfare of both passengers and public transport providers, subject to budget and capacity constraints Shifting from shortterm contracts that encourage a short-term perspective among operators (and, therefore, discourage investments) toward a medium or longterm approach Fuel, and therefore cost, savings can be achieved by making the operation of public transport more efficient   |      |      |                        |                       | х                  |
| General rail improvement   |                   |  |      |      |                        |                       |                    |
| Concept for transition of the Republic of Kazakhstan to Green Economy                        | 2013              | Increase in railway transport efficiency   |      | х    |                        |                       |                    |

# Kazakhstan

# XIV. Transport and Climate Policy Measures

|  | Year               |   | _    |      | Dome stic<br>Navigation | Dome stic<br>Aviation | Urban<br>Transport |
|--|--------------------|---|------|------|-------------------------|-----------------------|--------------------|
| Document   | y ear<br>published | Measure   | Road | Rail | Do m<br>Navij           | Dome st<br>Aviation   | Urban<br>Transp    |
| Energy Efficiency-2020 Program   | 2013               | update the fleet of aircraft and railway locomotives provided for   |      | Х    |                         |                       |                    |
| General transport asset management   |                    |   |      |      |                         |                       |                    |
| On the road traffic: The Law of the Republic of Kazakhstan of April 17, 2014 No. 194-V | 2022               | Design, construction, reconstruction, repair, the maintenance of roads and management of them in the territory of the Republic of Kazakhstan have to be carried out on a basis and with observance of safety requirements of road traffic established by the real Law, technical regulations in the field of highways | х    |      |                         |                       |                    |
| General transport demand management  |                    |   |      |      |                         |                       |                    |
| Concept for transition of the Republic of Kazakhstan to Green Economy                  | 2013               | Improvement in the transport flows control system (smart traffic control system) is required.   | х    |      |                         |                       |                    |
| General transport institutional reform   |                    |   |      |      |                         |                       |                    |
| Safely Connected: A Regional Road Safety Strategy for CAREC Countries, 2017–2030       | 2017               | Create a CAREC Road Safety Working Group to monitor progress at the regional level.   | х    |      |                         |                       |                    |
| General vehicle improvements   |                    |   |      |      |                         |                       |                    |
| Concept for transition of the Republic of Kazakhstan to Green Economy                  | 2013               | monitoring, and ensuring that all requirements connected with fuel efficiency with respect to new cars appearing in the market are fulfilled  | х    |      |                         |                       |                    |
| Global Technical Regulations for Wheeled Vehicles,                                     |                    | ·   |      |      |                         |                       |                    |
| Equipment and Parts 1998   |                    |   |      |      |                         |                       |                    |
| 59 UN Transport Agreements/ and Conventions<br>Serviced by ECE                         | 2021               | Ratification, accession, or definite signature by country   | х    |      |                         |                       |                    |
| Intelligent transport systems (ITS)  |                    |   |      |      |                         |                       |                    |
| Strategic Development Plan until 2025  | 2018               | Intelligent systems will be introduced  | Х    |      |                         |                       |                    |
| Involvement of subnational government for  |                    |   |      |      |                         |                       |                    |
| transport activities   |                    |   |      |      |                         |                       |                    |
| LAW OF THE REPUBLIC OF KAZAKHSTAN of July 4, 2003 No. 476-II About road transport      | 2003               | Local representative bodies of areas, cities of republican value, capital: approve the complex scheme of development of passenger transport and projects of the organization of traffic within the competence   | х    |      |                         |                       |                    |
| Local production, services, contracting etc.   |                    |   |      |      |                         |                       |                    |
| Promoting Clean Urban Public Transport in<br>Kazakhstan                                | 2017               | Promoting local production of clean engines   |      |      |                         |                       |                    |
| Logistics hub  |                    |   |      |      |                         |                       |                    |
|  |                    |   |      |      |                         |                       |                    |

# Kazakhstan

# XIV. Transport and Climate Policy Measures

| Dt   | Year              | Management  | Road | Rail | Dome stic<br>Navigation | Do me stic<br>Aviation | Urban<br>Transport |
|--|-------------------|---|------|------|-------------------------|------------------------|--------------------|
| Document Strategic Development Plan until 2025   | published<br>2018 | Measure  creation of a modern logistics hub   | X    | ~    |                         | ΔĀ                     | ⊃F                 |
| Low-emission vehicle zones   | 2010              | creation of a modern togratics nub  | ^    |      |                         |                        |                    |
| ENVIRONMENTAL CODE   | 2007              | Local representative bodies of regions, cities of republican significance, the capital, in case of detecting a regular exceedance of air quality standards in the territories of relevant administrative-territorial units revealed on the basis of state environmental monitoring for three consecutive years, are entitled to adopt appropriate regulatory legal acts within their competence in coordination with the authorised environmental protection body to impose restrictions preventing entrance of transport and other mobile vehicles or their individual types into settlements or separate zones within settlements on the territory of recreation and tourism places, conservation areas, as well as regulate movement of transport and other mobile vehicles within such areas in order to reduce an anthropogenic load on ambient air. | х    |      |                         |                        | х                  |
| LPG/ CNG/ LNG  |                   |   |      |      |                         |                        |                    |
| Concept for transition of the Republic of Kazakhstan to Green Economy                  | 2013              | Switch public transport in Almaty to compressed gas; switch public transport to gas in other big cities (Astana, Karagandy, Shymkent) until 2020 depending on gas resources and decisions made on gas price subsidies   |      |      |                         |                        | х                  |
| Promoting Clean Urban Public Transport in<br>Kazakhstan                                | 2017              | Incentives for CNG/LPG vehicles   |      |      |                         |                        | х                  |
| National speed law   |                   |   |      |      |                         |                        |                    |
| Global Status Report on Road Safety 2018   | 2018              | Yes   | Х    |      |                         |                        |                    |
| Passenger and freight load limits  |                   |   |      |      |                         |                        |                    |
| Safely Connected: A Regional Road Safety Strategy for CAREC Countries, 2017–2030       | 2017              | Ensure that information on national load limit regulations is shared among CAREC countries.   | х    |      |                         |                        |                    |
| Reduction of transport/ logistics costs  |                   |   |      |      |                         |                        |                    |
| State Program for Industrial and Innovative Development for 2015-2019                  | 2015              | reduction of infrastructure costs (utilities, transport services, costs for tare and packaging, etc.) of production in the industry   |      |      |                         |                        |                    |
| Reporting, transparency, feedback mechanism  |                   |   |      |      |                         |                        |                    |
| On the road traffic: The Law of the Republic of Kazakhstan of April 17, 2014 No. 194-V | 2022              | 4) maintenance of statistical reporting and public accounting major targets of the road and ensure its safety   |      |      |                         |                        |                    |

# Kazakhstan

# **XIV. Transport and Climate Policy Measures**

| Document   | Year<br>published | Measure  | Road | Rail | Dome stic<br>Navigation | Dome stic<br>Aviation | Urban<br>Transport |
|--|-------------------|--|------|------|-------------------------|-----------------------|--------------------|
| Safely Connected: A Regional Road Safety Strategy for CAREC Countries, 2017–2030   | 2017              | Undertake regular monitoring of national road safety action plans and evaluate outcomes to provide feedback to improve road safety intervention development and delivery Review the effectiveness of the legislation framework for vehicle insurance requirements across CAREC countries   | Х    |      |                         |                       |                    |
| Request for financial support to develop transport   |                   |  |      |      |                         |                       |                    |
| Safely Connected: A Regional Road Safety Strategy for CAREC Countries, 2017–2030   | 2017              | Seek funding from external sources to augment road safety national budgets.  | Х    |      |                         |                       |                    |
| Road-side checks on overloading  |                   |  |      |      |                         |                       |                    |
| On the road traffic: The Law of the Republic of Kazakhstan of April 17, 2014 No. 194-V   | 2022              | If for the vehicle the allowed maximum weight is established, then the mass of the vehicle with loading shouldn't exceed the allowed maximum weight.   | Х    |      |                         |                       |                    |
| ORDER OF THE MINISTER OF INVESTMENTS AND DEVELOPMENT OF THE REPUBLIC OF KAZAKHSTAN of May 29, 2015 No. 671 About approval of regulations of the state service in the field of road transport | 2015              | The state service "Issue of the International Certificate of Weighing of Cargo Vehicles" (further - the state service) appears territorial authorities of Committee of transport of the Ministry for Investments and Development of the Republic of Kazakhstan on stationary posts of transport control on the territories of the Republic of Kazakhstan located along the line the vehicle (further - the service provider). 2. Form of rendering the state service: electronic (partially automated) and (or) paper. 3. Result of rendering the state service - the international certificate of weighing of cargo vehicles (further - the certificate). | х    |      |                         |                       |                    |
| Road-side vehicle technical checks   |                   |  |      |      |                         |                       |                    |
| Concept for transition of the Republic of Kazakhstan to Green Economy  | 2013              | Enforce annual inspection of motor vehicles to check exhaust fumes quality to complete one-time audit of the whole operational car fleet until 2020  | Х    |      |                         |                       |                    |

# XIV. Transport and Climate Policy Measures

| Document  | Year<br>published | Measure  | Road | Rail | Dome stic<br>Navigation | Do me stic<br>Aviation | Urban<br>Transport |
|---|-------------------|--|------|------|-------------------------|------------------------|--------------------|
| LAW OF THE REPUBLIC OF KAZAKHSTAN of July 4, 2003 No. 476-II About road transport | 2003              | When conducting checks of subjects of entrepreneurship on road transport the service employees of authorized body performing check within the competence check: 1) availability and condition of railway vehicles, repair and production depot, technical means, cargo handling gears, the control instrumentation, the equipped service spaces (exception the companies which do not have own repair and production depot and signed agreements on accomplishment of the corresponding work types with other companies constitute), and also observance by subjects of entrepreneurship on road transport of regulations of ecological requirements and requirements for traffic safety; 2) compliance of technical operation of vehicles to the established requirements; 3) availability and compliance of services and qualified personnel for carrying out pretrip technical inspection of vehicles, pretrip and posttrip medical examination of drivers or contracts with the relevant organizations performing such activities; 4) execution of requirements of Rules of public conveyances and baggage road transport when implementing public conveyances and baggage or rendering services of bus stations, bus stations and service points of passengers; | x    |      |                         |                        |                    |
| Speed limit on motorways <= 90 kph  |                   |  |      |      |                         |                        |                    |
| Global Status Report on Road Safety 2018  | 2018              | 140 km/h   | Х    |      |                         |                        |                    |
| Speed limit on rural roads <= 70 kph  |                   |  |      |      |                         |                        |                    |
| Global Status Report on Road Safety 2018  | 2018              | 110 km/h   | Х    |      |                         |                        |                    |
| Speed limits on urban roads <= 30 kph   |                   |  |      |      |                         |                        |                    |
| Global Status Report on Road Safety 2018  | 2018              | 60 km/h  | Х    |      |                         |                        | X                  |
| Technical standards for general transport infrastructure                          |                   |  |      |      |                         |                        |                    |
| LAW OF THE REPUBLIC OF KAZAKHSTAN of July 4, 2003 No. 476-II About road transport | 2003              | 1. When designing vehicles all possible dangers at all stages of lifecycle shall be identified, including in case of regular operation, emergency situations (refusals and external impacts), expected human errors and inadmissible use. 1. In case of production it is necessary to provide compliance of production of vehicles to requirements of the project documentation, this Law, technical regulations. 2. In case of production of vehicles the manufacturer shall execute all package of measures for safety control determined by the project documentation and provide possibility to control of accomplishment of all technological transactions on which safety depends.   | х    |      |                         |                        |                    |
| Safely Connected: A Regional Road Safety Strategy for CAREC Countries, 2017–2030  | 2017              | Conduct a legislative review of vehicle standards across CAREC countries to ensure that these are at a level that promotes safety  | х    |      |                         |                        |                    |
| Technical standards for road infrastructure                                       |                   |  |      |      |                         |                        |                    |

# XIV. Transport and Climate Policy Measures

| Document  | Year<br>published | Measure   | Road | Rail | Dome stic<br>Navigation | Domestic<br>Aviation | Urban<br>Transport |
|---|-------------------|---|------|------|-------------------------|----------------------|--------------------|
| Safely Connected: A Regional Road Safety Strategy<br>for CAREC Countries, 2017–2030       | 2017              | Review existing design standards for CAREC highways in the light of international good practice Develop and implement a system to improve design standards for CAREC highways to conform with internationally accepted standards of road safety engineering.  | х    |      |                         |                      |                    |
| Technology and knowledge transfer   |                   |   |      |      |                         |                      |                    |
| Safely Connected: A Regional Road Safety Strategy for CAREC Countries, 2017–2030          | 2017              | Provide opportunities for CAREC countries to share expertise and knowledge to ensure consistency of vehicle inspection and maintenance systems across CAREC countries   | х    |      |                         |                      |                    |
| Training of enforcement authorities   |                   |   |      |      |                         |                      |                    |
| Safely Connected: A Regional Road Safety Strategy for CAREC Countries, 2017–2030          | 2017              | Provide training for traffic police and engineers in crash investigation and blackspot identification.  | х    |      |                         |                      |                    |
| Transport law   |                   |   |      |      |                         |                      |                    |
| LAW OF THE REPUBLIC OF KAZAKHSTAN of<br>December 8, 2001 No. 266-II About rail transport  | 2001              | About rail transport - This Law governs the public relations between carriers, participants of transportation process, state bodies, passengers, senders, receivers, consignors, consignees, other physical persons and legal entities when implementing public conveyance, baggage, loads, cargo baggage and mailings by rail.   |      | х    |                         |                      |                    |
| LAW OF THE REPUBLIC OF KAZAKHSTAN of July 4, 2003 No. 476-II About road transport         | 2003              | This Law governs the relations arising between carriers, passengers, consignors, consignees, other physical persons and legal entities in the field of road transport.  | х    |      |                         |                      |                    |
| LAW OF THE REPUBLIC OF KAZAKHSTAN of July 6, 2004 No. 574-II About inland water transport | 2004              | This Law governs the public relations arising between state bodies, physical persons and legal entities in the field of inland water transport during the implementing navigation, public conveyance, baggage and loads, operation of small size vessels including on the reservoirs which are not relating to inland waterways and seawaters and also determines their rights, obligations and responsibility. |      |      | х                       |                      |                    |
| Safely Connected: A Regional Road Safety Strategy for CAREC Countries, 2017–2030          | 2017              | Strengthen legislative frameworks based on the findings of the review. Introduce modifications and amendments to the legislative framework in each CAREC country.   | х    |      |                         |                      |                    |
| Travel time improvement   |                   |   |      |      |                         |                      |                    |
| Strategic Development Plan until 2025   | 2018              | optimizing the transportation of goods and reducing the time and cost of delivery   | Х    |      |                         |                      |                    |
| Vehicle air pollution emission standards  |                   |   |      |      |                         |                      |                    |
| Concept for transition of the Republic of Kazakhstan to Green Economy                     | 2013              | Set air emission standards for road transportation vehicles compliant with EU norms from July 2016  | х    |      |                         |                      |                    |
| INTEGRATED ANNUAL REPORT OF NATIONAL<br>COMPANY KAZAKHSTAN TEMIR ZHOLY JSC FOR 2021       | 2021              | In the Republic of Kazakhstan, it is prohibited to manufacture transport and other mobile vehicles if the content of pollutants in their emissions does not meet requirements of the Eurasian Economic Union technical regulations.   | Х    |      |                         |                      |                    |

# XIV. Transport and Climate Policy Measures

| Document   | Year<br>published | Measure  | Road | Rail | Dome stic<br>Navigation | Dome stic<br>Aviation | Urban<br>Transport |
|--|-------------------|--|------|------|-------------------------|-----------------------|--------------------|
| On the road traffic: The Law of the Republic of<br>Kazakhstan of April 17, 2014 No. 194-V  | 2022              | 7. The emissions in the environment made by vehicles at their operation shouldn't exceed the admissible level established by technical regulations in the field of environmental protection.   | Х    |      |                         |                       |                    |
| Vehicle efficiency standards   |                   |  |      |      |                         |                       |                    |
| Concept for transition of the Republic of Kazakhstan to Green Economy  | 2013              | Deploy a modern transportation fleet together with improved practices, fuel formulations, and operational practices  | х    |      |                         |                       |                    |
| Energy Efficiency-2020 Program   | 2013              | adapt international energy efficiency standards vehicles Reduced fuel consumption in the transport sector  | х    |      |                         |                       |                    |
| ORDER OF THE MINISTER OF INVESTMENTS AND DEVELOPMENT OF THE REPUBLIC OF KAZAKHSTAN of March 31, 2015 No. 389 About establishment of requirements for transport energy efficiency | 2015              | Requirements for transport energy efficiency (further - requirements) are developed according to subitem 6-7) of article 5 of the Law of the Republic of Kazakhstan of January 13, 2012 "About energy saving and increase in energy efficiency" and determine normative indicators of energy efficiency of transport.  | х    |      |                         |                       |                    |
| Vehicle import inspections   |                   |  |      |      |                         |                       |                    |
| Road Safety Opportunities and Challenges: Low- and Middle-Income Country Profiles  | 2020              | Yes  | х    |      |                         |                       |                    |
| Vehicle inspection and maintenance   |                   |  |      |      |                         |                       |                    |
| On the road traffic: The Law of the Republic of<br>Kazakhstan of April 17, 2014 No. 194-V  | 2022              | 1. Motor vehicles and trailers, participating in road traffic on the territory of the Republic of Kazakhstan and registered with the authorized body, as well as those registered in other states, are subject to mandatory technical inspection, with the exception of vehicles of category M1, whose age does not exceed seven years, including the year of manufacture, not used in business activities in the field of automotive transport. 2. Compulsory technical inspection shall be carried out by operators of technical inspection, included by the authorized body in the field of transport and communications in the register of technical inspection operators, regardless of the place of registration of the vehicle and the residence of the owner of the vehicle. | х    |      |                         |                       |                    |
| Road Safety Opportunities and Challenges: Low- and Middle-Income Country Profiles  | 2020              | Periodic inspection is in effect   | Х    |      |                         |                       |                    |
| Safely Connected: A Regional Road Safety Strategy for CAREC Countries, 2017–2030   | 2017              | Review legislative framework for vehicle inspection and maintenance systems in CAREC countries.  | Х    |      |                         |                       |                    |
| Vehicle restrictions (import, age, access, sale, taxation)   |                   |  |      |      |                         |                       |                    |

# XIV. Transport and Climate Policy Measures

| Document  | Year<br>published | Measure  | Road | Rail | Dome stic<br>Navigation | Do me stic<br>Aviation | Urban<br>Transport |
|---|-------------------|--|------|------|-------------------------|------------------------|--------------------|
| Road Safety Opportunities and Challenges: Low- and Middle-Income Country Profiles | 2020              | Import is regulated up to 10-year old vehicles   | x    |      |                         |                        |                    |
| Vehicle scrappage scheme  |                   |  |      |      |                         |                        |                    |
| Concept for transition of the Republic of Kazakhstan to Green Economy             | 2013              | Developing an incentive program for car disposal aimed at transport fleet renewal within shorter terms (for example, in form of trade-in schemes for more eco-friendly cars) | Х    |      |                         |                        |                    |
| Energy Efficiency-2020 Program  | 2013              | renewal of the vehicle fleet   | х    |      |                         |                        |                    |

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- 3) Global Materials Flow Database (UNEP, 2023), https://www.resourcepanel.org/global-material-flows-database
- 4) Emissions Database for Global Atmospheric Research (EC, 2023), https://edgar.jrc.ec.europa.eu/
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