

# Sustainable development of transport systems and development of economic cooperation between countries

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**Abstract.** Sustainable transport is offered on the basis of sustainable development and is an important part of sustainable development. For all countries, transport is an important resource-intensive sector of socio-economic life. Russia and Kazakhstan pay special attention to the development of joint transport and logistics infrastructure and the removal of restrictions that hinder trade and investment exchanges. This is especially important for the economic development of the two countries. Kazakhstan and Russia have signed a memorandum of understanding on the coordination of prices for railway transportation and an agreement on cargo handling in terminals between the railway company of Kazakhstan and the joint stock company «Russian Railways».

## 1 Introduction

Russia is implementing ambitious measures to move its imports and exports to new markets. Work is underway to equip and improve the efficiency of the new international east–west and north–south corridors. Russian Federation (hereinafter - Russia) and Republic of Kazakhstan (hereinafter - Kazakhstan) have taken coordinated measures to improve the competitiveness and strengthen the country's transport system through capacity. The President of the Russia recalled that the project being implemented is aimed at expanding the capacity of automobile border crossings and creates conditions for increasing the transportation of goods by water, including through the Caspian Sea and the Irtys River. The issues of cross–border cooperation were regulated by the Agreement and the Program on Economic Cooperation for 1998–2007 of October 12, 1998, the intergovernmental Agreement and the Program of Cross–border cooperation of the regions of the RF and the RK for 1999–2007 of September 24, 1999, etc. [1–12].

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## 2 Material and methods of research

The purpose of this study is to analyze sustainable transport and the development of economic cooperation between countries in modern conditions, to identify directions for its further development and formation. The theoretical and methodological basis of the study was the scientific works of domestic and foreign researchers studying issues of economic cooperation. During the research, methods of general scientific analysis and comparison, tabular and graphical visualization techniques of calculations, methods of induction and deduction were used in the formation of conclusions of the study.

## 3 Results

Based on the main aspects of trade and economic cooperation between Kazakhstan and Russia, it can be concluded that the leadership of the two countries is interested in deepening cooperation that objectively reflects the national interests of the states [13–16].

Almost all trade and transport routes that allow Kazakhstan to conduct broad economic cooperation with other countries pass through Russian territory. Approximately 80 % of Kazakhstan's oil exports are also transported via these routes (figure 1).



**Fig. 1.** Environmental, based on the materials of the Internet resource.

This concerns the use and development of the potential of energy and transport and communication systems, mutual trade turnover, both within the framework of bilateral cooperation and at the global level, since the effectiveness of such systems is expressed precisely by achieving «economies of scale».

In the immediate vicinity of the territory of Kazakhstan, as well as through its territory, there are transport highways connecting the European and Asian parts of Russia [15–19].

Let's imagine the transportation of goods by means of transport (Table 1, 2).

**Table 1.** Let's present cargo transportation by modes of transport of the Kazakhstan and the Russia for 2016–2021 (million tons) [30].

A country	2016	2017	2018	2019	2020	2021
Kazakhstan	3 729,2	3 946,1	4 103,8	4 222,7	3 944,8	3 999,4
Russia	7 953,9	8 072,6	8 145,7	8 425,7	7 959,7	8 044,6

**Table 2.** Indices of cargo transportation by modes of transport of the Kazakhstan and the Russia for 2016–2021 (as a percentage of the previous year).

A country	2016	2017	2018	2019	2020	2021
Kazakhstan	99,9	105,8	104,0	102,9	93,4	101,1
Russia	100,7	101,5	100,9	103,4	94,5	102,5

Recently, «competitor projects» have come a long way and are not going to stop there. It is known that agreements have been reached on the pairing of this program with the Silk Road Economic Belt.

In a competitive environment, the speed and efficiency of the implementation of Russian projects is extremely important in order to maintain and increase their share in the growing transit cargo traffic. Lagging behind competing projects can lead to significant problems in realizing the transit potential.

The main indicators of passenger transportation by means of transport are presented in Table 3.

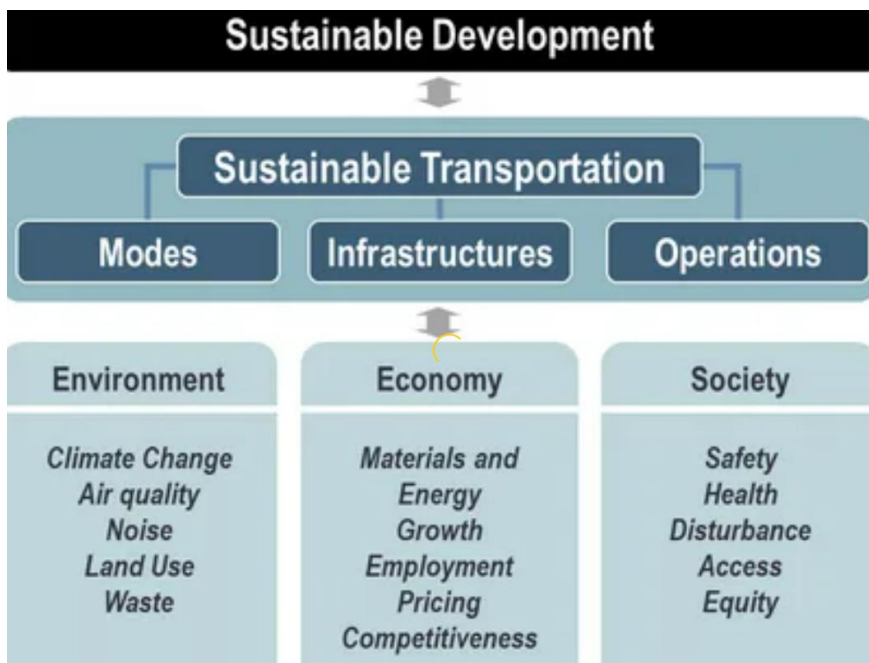
**Table 3.** Passenger transportation by means of transport of the Kazakhstan and the Russia for 2016–2021 (million tons).

A country	2016	2017	2018	2019	2020	2021
Kazakhstan	22 332,8	22 744,7	23 013,0	23 835,8	8 396,4	7 577,0
Russia	18 645,0	18 439,0	18 113,4	17 826,1	12 492,8	9 317,2

**Table 4.** Passenger transportation by modes of transport of the Kazakhstan and the Russia for 2016–2021 (as a percentage of the previous year).

A country	2016	2017	2018	2019	2020	2021
Kazakhstan	106,2	102,4	103,0	105,0	36,7	98,6
Russia	98,1	107,9	106,3	107,0	54,8	139,6

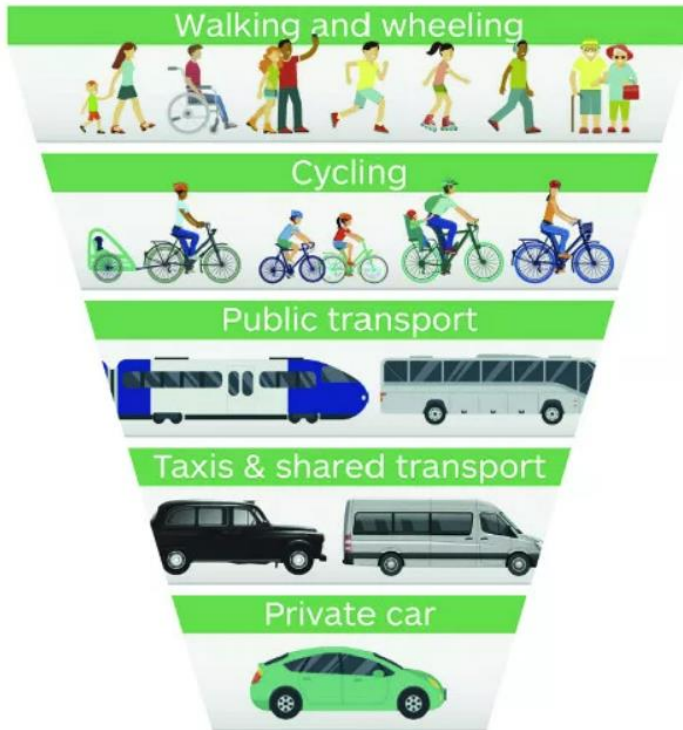
Thus, the analysis of the development of cooperation in the field of transport showed annual increases and decreases [30] (figure 2).

**Fig. 2.** Sustainability development.

The ongoing events will give new dynamics to bilateral interregional business relations, as well as open up new horizons of cooperation between Kazakhstan and Russia.

Prioritising Sustainability Transport shown on figure 3.

## Prioritising Sustainable Transport



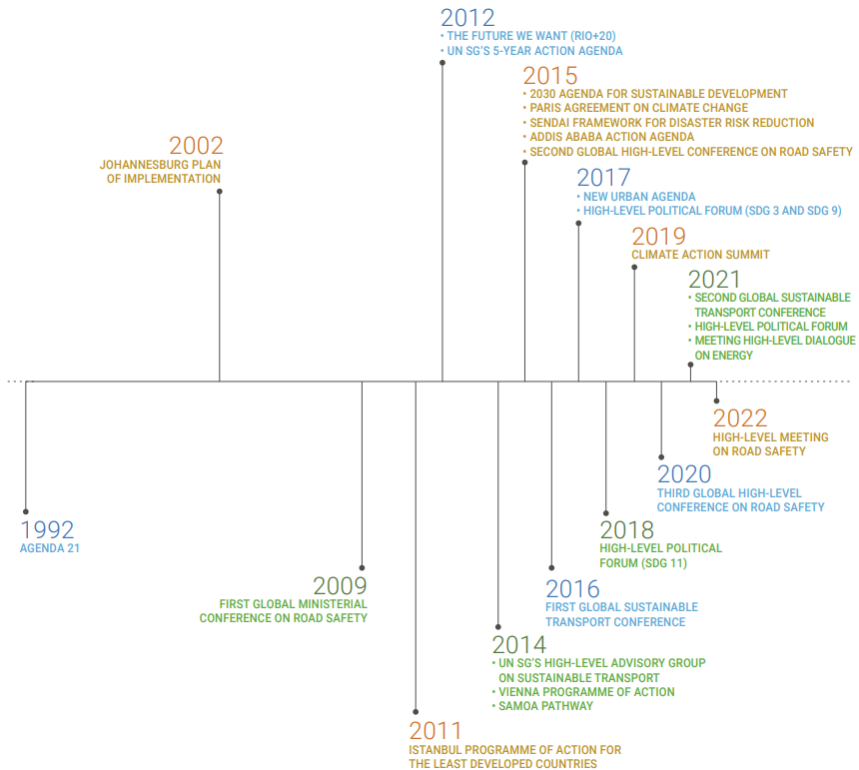
**Fig. 3.** Prioritising Sustainability Transport

It is necessary to create all conditions for the most comfortable passage of border control by tourists at the borders of Kazakhstan and Russia.

The creation of a sustainable transport system requires appropriate management, such as the development of the use of environmentally friendly and energy-efficient public transport, reducing the danger to the life and health of the population of countries.

## 4 Discussion

Sustainable transport has been gaining increasing momentum in global discussions and international forums.



**Fig. 4.** Sustainable transport international forums.

It should be noted that a Forum on the Sustainable development of China's Integrated Transportation within the framework of the "Double Carbon" goal was held in Beijing in 2022

Organized by the Chinese Communication and Transport Association, organized by the National High-class Analytical Center, the Innovation Center for Sustainable Transport and the Development Center of the Academy of Communication Sciences, the 40th anniversary of the founding of the Chinese Communication and Transport Association and the goal of the "Double Carbon" of the First Chinese Conference on Integrated Transport Development, the Chinese Forum on the Sustainable Development of Integrated Transport Online and Offline. Held in Fujian Building.

In the context of the "two-carbon" goal, this forum focused on such topical topics as the promotion of environmentally friendly and low-carbon transformation of transport, ways to introduce decarbonization in the transport sector and the effective performance of good work in the field of carbon-peak transport and carbon-neutral transport.

The issues of general coordination of resource development and bilateral energy binding to transport green energy, independent coordination of transport construction energy to solve the bottleneck of consumption and absorption of clean energy, as well as the transformation of clean industrial ecology into the benefits of green energy were raised [31, 32].

## 5 Conclusion

Thus, transport is an integral part of the overall trade process, an instrument for the movement of goods and the provision of services and has the characteristics of industry regulation. The promotion of integration in each of the transport sectors (road, water, air and rail) is based on the agreements stipulated in the Contract, as well as in the acts of the Union bodies.

Russia and Kazakhstan cooperate within the framework of the Eurasian Union, which forms a common energy market. Together with partners in the Eurasian Economic Union, they are striving to digitize transport and logistics routes and introduce artificial intelligence to accelerate the flow of goods. At the initiative of Russia and Kazakhstan, the Eurasian Economic Union is developing an ecosystem of digital transport corridors aimed at optimizing the exchange of information between economic operators.

Thus, the Government of the Republic of Kazakhstan and the Russian Federation were instructed to develop a joint action plan for the development of road, rail and aviation communications connecting the regions of the two countries in order to increase tourist flows.

It is necessary to create all conditions for the most comfortable passage of border control by tourists at the borders of Kazakhstan and Russia.

The creation of a sustainable transport system requires appropriate management, such as the development of the use of environmentally friendly and energy-efficient public transport, reducing the danger to the life and health of the population of countries.

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