

**THE GROWTH TENDENCY OF THE NUMBER OF VEHICLES IN THE  
KASHKADARYA REGION AND PRIORITY PROBLEMS IN THE NEXT DECADE**

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**Abstract**

This article analyzes the growth trends in the number of motor vehicles in the Kashkadarya region and provides a scientific justification of the infrastructural, environmental, and social challenges expected over the next decade. In addition, practical and strategic recommendations aimed at developing a sustainable transport system are proposed.

**Keywords**

motor transport, number of vehicles, infrastructure, ecology, transport policy, Kashkadarya region.

**Аннотация**

В статье анализируются тенденции роста количества автотранспортных средств в Кашкадарьинской области и научно обосновываются инфраструктурные, экологические и социальные проблемы, ожидаемые в ближайшее десятилетие. Также выдвигаются практические и стратегические предложения, направленные на формирование устойчивой транспортной системы.

**Ключевые слова**

автотранспорт, количество автомобилей, инфраструктура, экология, транспортная политика, Кашкадарьинская область.

**Introduction**

In recent years, Uzbekistan, including the Kashkadarya region, has been experiencing a steady increase in the number of vehicles. Increased economic activity, growth in population incomes, the development of private entrepreneurship, and the expansion of the need for logistics services are increasing the demand for vehicles. Therefore, the issues of planning the transport system at the regional level and its sustainable development are becoming increasingly important.[1]

**Trends in the number of vehicles**

As of 2024, the number of vehicles registered in the Kashkadarya region will amount to hundreds of thousands of units. Analyses show that passenger cars owned by individuals make up the bulk of the total share. The number of trucks and service vehicles owned by legal entities, although relatively small, is growing rapidly.

If the current trend continues, it is likely that the number of cars in the region will increase by 1.5–2 times over the next ten years. This situation leads to increased traffic density, increased fuel consumption, and an increase in the volume of harmful substances emitted into the atmosphere.

**Қашқадарё вилояти ҳудудида мавжуд Юридик ва Шахсий транспорт воситалари тўғрисида  
МАЪЛУМОТ**

*21.07.2024 йил ҳолатида*

№	Шаҳар туман	Умумий транспорт воситалари сон	Шундан		ЖАМИ	Шундан								
			Жисмоний шахсларга тегишли	Юридик шахсларга тегишли		Шахсий				ЖАМИ	Юридик			
						20-30 йилгача	30-40 йилгача	40-50 йилгача	50 йилдан даш нақори		20-30 йилгача	30-40 йилгача	40-50 йилгача	50 йилдан даш нақори
1	Ғузур	23 243	21 991	1 252	7 568	2222	3038	2108	200	328	104	172	45	7
2	Дехқонобод	14 795	13 530	1 265	6 224	1591	2698	1733	202	100	30	44	24	2
3	Қамаш	20 885	20 197	688	7 302	2562	2616	1922	202	176	51	92	29	4
4	Қарши т.	30 401	28 653	1 748	8 527	2990	3359	1942	236	489	92	293	95	9
5	Косон	29 480	28 414	1 066	9 412	3679	3262	2211	260	384	84	227	67	6
6	Китоб	27 209	26 229	980	7 222	3020	2162	1844	196	255	43	145	59	8
7	Муборак	13 410	12 067	1 343	2 687	839	924	827	97	451	155	247	43	6
8	Нинш	18 559	17 313	1 246	4 347	1734	1583	913	117	197	58	117	20	2
9	Қасби	21 034	20 200	834	5 665	2136	2087	1308	134	133	41	68	20	4
10	Миршиқор	13 806	13 330	476	2 318	1228	685	368	37	46	7	33	6	
11	Чироқчи	16 417	15 734	683	12 595	6483	2988	2831	293	183	40	99	39	5
12	Шахрисабз т.	28 312	27 256	1 056	9 627	3044	3395	2849	339	433	79	268	78	8
13	Яқсабоғ	27 920	27 020	900	6 368	2631	1900	1667	170	306	89	170	43	4
14	Қарши ш.	47 997	39 228	8 769	7 888	2653	2905	2070	260	2162	753	1072	293	44
15	Шахрисабз ш	12 329	11 578	751	1 807	854	520	378	55	129	41	67	19	2
16	Қўсдага	22 259	22 094	165	1 520	1082	283	132	23	14	1	10	3	
<b>Общий итог</b>		<b>368 056</b>	<b>344 834</b>	<b>23 222</b>	<b>101 077</b>	<b>38 748</b>	<b>34 405</b>	<b>25 103</b>	<b>2 821</b>	<b>5 786</b>	<b>1 668</b>	<b>3 124</b>	<b>883</b>	<b>111</b>

**Key challenges expected in the coming decade**

**Increasing load on road infrastructure**

Increasing load on road infrastructure is the increasing pressure on existing road networks as a result of the increase in the number of vehicles, traffic intensity, and the volume of freight and passenger transport [2]. This situation leads to rapid deterioration of roads, congestion, and safety problems.

The existing road network is not sufficient to fully cover all traffic flows. As a result of the increase in the number of cars, there is a high probability of traffic jams, a decrease in traffic speed, and an increase in the number of road accidents.

**Threats to environmental sustainability**

Environmental sustainability is the principle of using natural resources to meet the needs of the present generation without limiting the capabilities of future generations. It is aimed at protecting the environment, rational use of resources, and preserving biological diversity.

Gases emitted by vehicles with internal combustion engines have a negative impact on air pollution and public health. If the share of environmentally friendly vehicles is not increased, the environmental pressure will increase.

**Demand for fuel and energy resources**

The increase in the number of motor vehicles increases the demand for gasoline, diesel fuel and electricity. This, in turn, causes price volatility in the fuel market and the risk of supply disruptions.

**Transport management and safety issues**

**1. Insufficiently developed road infrastructure**

The rapid growth in the number of cars is overloading the existing road network. In some districts and cities, the quality of roads is poor, and expansion and reconstruction work is being carried out slowly.

**2. Lack of digitalization of transport flow management**

Intelligent transport systems (ITS), which allow real-time monitoring of traffic, forecasting and management of traffic jams, have not yet been fully implemented.

### **3. Low efficiency of public transport**

The bus and route network does not fully meet the needs of the population. The intervals are long, the technical condition is inadequate, which encourages the population to use private cars.

### **4. Lack of integration in transport planning**

Regional development, urban planning and transport policy are not coordinated. This leads to an incorrect distribution of transport loads in some regions.

**5. Weakness of the database.** A single and complete statistical database on transport traffic, accidents, and traffic jams does not exist or is not adapted for open access.

### **Problems in the field of transport safety**

#### **High level of road accidents**

As the number of cars increases, the number of accidents also increases. This is especially evident in densely populated cities and on main roads.

#### **Failure of drivers to comply with traffic rules**

Speeding, ignoring road signs, and not using seat belts are widespread.

#### **Inadequate conditions for pedestrians and cyclists**

There are few pedestrian crossings, crossings, and cycle paths. This increases the risk for vulnerable road users.

#### **Technically defective vehicles**

Some cars are used without a full technical inspection, which increases the risk of accidents through factors such as braking, lighting, and tire condition.

#### **Lack of safety elements in road infrastructure**

Inadequate lighting, barriers, traffic lights, and road signs contribute to road accidents.

The following science-based measures are recommended for the sustainable development of the road transport system in the next decade:

- promotion of electric cars and hybrid vehicles;
- modernization and expansion of road infrastructure;
- increase the share of public transport;
- strengthening of environmental norms and standards;
- introduction of "smart" transport management systems.

### **Conclusion**

The growth of the number of cars in Kashkadarya region is directly related to the socio-economic development of the region. However, this process can cause serious problems in the areas of infrastructure, ecology and transport safety. Therefore, the implementation of a sustainable and environmentally friendly transport policy and the introduction of innovative management technologies are urgent tasks.

From a scientific point of view, the uncontrolled growth of the level of motorization has a negative impact on the environment. CO<sub>2</sub>, NO<sub>x</sub> and particulate matter (PM<sub>2.5</sub>, PM<sub>10</sub>) emitted by fuel-powered vehicles worsen air quality and pose a threat to public health [3]. According to the theory of ecological economics, such negative externalities require state regulation, i.e. strengthening environmental standards, introducing tax and incentive mechanisms. The issue of transport safety is also of urgent importance, and an increase in the number of cars increases the likelihood of road accidents. This has a direct negative impact on human capital, the health system, and economic activity. Scientific research shows that the introduction of digitalization of management in the transport system, intelligent transport systems (ITS), "smart traffic lights," real-time monitoring, and traffic optimization technologies significantly reduces the number of accidents [4].

Therefore, a sustainable transport policy for the Kashkadarya region should include the following priority areas: first, the development of public transport and increasing its attractiveness; second, reducing emissions by encouraging electric vehicles and hybrid vehicles; third, reconstructing road infrastructure based on modern requirements; fourth, ensuring traffic safety through the introduction of digital management and innovative technologies.

In conclusion, although the growth of motorization is a natural stage in the development of the Kashkadarya region, it must be managed through a scientifically based, environmentally and socially balanced policy. Otherwise, short-term economic gains can turn into long-term environmental and social losses.

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