

THE IMPORTANCE OF TRANSPORT GEOGRAPHY

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Abstract: This article highlights the importance of Transport Geography, analyzes its interdisciplinary integration and stages of formation. The importance of green vehicles (electric buses, electric cars, and electrified railways) in the Navoi region, the projects being implemented, and their environmental and economic benefits were also studied.

Keywords: Transport Geography, green economy, automobile, passenger transport, territorial content, road transport, freight transport, passenger transport, green transport movement, ecology.

Without a highly progressive modern transport system, the basis of a developed society cannot be created. Because, transport is an important component of the country's productive forces. Transport is studied as an object and subject by a number of disciplines, including transport geography and transport economics, which study indicators by type. In geography, the transport system is studied from three perspectives.

- 1) As an integral part of regional complexes;
- 2) Formation of economic infrastructure (placement and development of productive forces);
- 3) Transport is one of the largest sectors of the national economy.

Transport geography is a branch of socio-economic geography that studies the level of transport provision of certain regions, the factors, characteristics, and patterns that influence their location, and the territorial structure of transport¹. As an object of Transport Geography, the location of transport lines (lines) and nodes in certain regions, the formation of transport networks, cargo and passenger flows, the settlement of transport and other networks issues related to the laws of interdependence, the role of transport in the formation of economic regions, and the zoning of the transport system are considered². In our opinion, the object of transport geography can include cargo and passenger transportation, the territorial location of cargo and passenger flows, communication routes, and transport networks. The concept of "transport geography" was first

¹ A.A. Isayev Transport Geography. Tashkent 2019.

² Бугроменко В.Н. Транспорт в территориальных системах. М.: Наука, 1987. – С.112.

³ Коль И.Г. Москва 1837-1841. Записки путешественника. М.: Русская жизнь, 2005, -С.311

⁴ Лалани Л. Очерк теории железнодорожных сетей, основанной на наблюдении фактов и основных законов, определяющих сгущения населения // Шупер В.А. Самоорганизация городского расселения. Приложение. — М.: Российский открытый университет, 1995.— С. 5-9.

⁵ Ратцель Ф. Политическая география (в изложении Л. Синицкого) // Геополитика: Хрестоматия / сост. Б. А. Исаев. СПб.: Питер, 2007. С.15-36.

⁶ Гладкий А.В., География в постнеклассическом мире: новые концепции и идеи географического пространства, Псковский регионологический журнал № 21 2015, С.7-8

⁷ Hassert K. Allgemeine Verkehrsgeographie. 2-te Auflage. Berlin-Leipzig: W. de Gruyter, 1931.-Bd.1. – S.408; Bd.2. – S.376.

introduced into practice by the German scientist Albert Goetz³. Johann Kohl, who is recognized as the founder of transport geography, developed a hierarchical model of transport⁴. Leon Lalann is credited with developing the theory of rail nets. Friedrich Ratzel ("Anthropogeography" 1897) specifically noted the importance of communication paths in the conquest of space and distances⁵. Alfred Gyttner, on the other hand, defines transport geography as the science of the geographical distribution (location) of transport facilities and the differences between them in different parts of the land area⁶. Later, Karl Dove (1905) and Kurt Hassert⁷ (1913) calculated the density of the transport network of different countries, the direction and size of traffic flows, took note of the level of transport availability and studied it scientifically. After all, transportation is one of the main factors affecting the geographical environment, changing it. Therefore, when studying transportation geographically, it will be necessary to analyze the natural conditions of the regions. At the same time, in turn, natural conditions also greatly affect the development of transport networks. In the construction of roads in particular, the relief properties of the joint, geomorphological state, etc. are taken into account⁸. At the same time, the influence of climatic factors, landslides, air temperature, rain, wind, etc. is great in the construction and use of cars and railways. Airports by air transport when placing, it is necessary to take into account atmospheric air, pressure, and climatic characteristics.

Transport geography is one of the most important and rapidly developing branches of economic and social geography, studying the movement of goods and passengers, the territorial distribution of transport types, and the laws of their development. In the context of globalization, it is impossible to imagine the integration processes between countries, foreign economic activity, and territorial division of labor without transport. This article provides an in-depth analysis of the formation of transport geography as a science, its subject, object, methods, and geographical characteristics of the main types of transport.

The Transport system is the "circulatory system" of the economy of any state. It not only connects territories with each other, but also ensures the continuity of production, trade and social relations⁹. The theoretical foundations of transport geography, the history of the development of road transport, its economic and environmental aspects, as well as transport infrastructure and international transit potential are also emphasized.

The means of transport is closely connected with the history of human society, and without the means of production and the movement of people from one place to another, it would be impossible to create any consumer product or any other rational activity. A developed society cannot be created without a highly developed modern transport system. It is no secret that today the transition to a global "green economy" is becoming a global trend. Uzbekistan is also taking bold steps in this regard on the basis of clear instructions. These decisions include: The project "Green City" transport, implemented in cooperation with the Ministry of Transport of the Republic of Uzbekistan and the United Nations Development Program Office in Uzbekistan, within the framework of the "Tashkent - Accelerating the Attraction of Investments in Low-Carbon Transport (tailor)"¹⁰ project.

⁸ Usmonov M.R SamSU Transport Geography.2021

⁹ Z.Isoqova, B.Valiyev, B.Tumanbayeva, H.Soliyev (transport general course) Namangan 2024

¹⁰ <https://lex.uz/docs/6389933>

The presentation of the corridor took place. It is known that in accordance with the decree of the president of the Republic of Uzbekistan dated February 16, 2023 "on measures to reform the public transport system" No. 59, until 2025, the total length of public transport continuously moving roads in the city of Tashkent was 475 km, the organization of 36 separate bus lanes was established¹¹.

The share of road transport in the economy of Uzbekistan is constantly growing. According to the National Statistics Committee:

- Freight In 2024, 1.4 billion tons of freight were transported by road, an increase of 4.8% compared to 2023.

- Passenger transport: In 2025, about 7 billion passengers (6.989 million people) were transported by road. This represents 95.7% of total passenger traffic, an increase of 5.2% compared to the previous year.

Dynamics of freight transportation by road in Uzbekistan

T/r	Years	Load displacement volume (tonne)
1	2020 year	1 238,2 mln
2	2021 year	1 282,0 mln
3	2022 year	1 284,1 mln
4	2023 year	1 322,0 mln
5	2024 year	1 385,5 mln

Manba: <https://stat.uz/uz/matbuot-markazi/go'mita-yangiliklar>¹²

According to preliminary data from the National Statistics Committee, in 2024, 1.4 billion tons of cargo were transported by road. This figure has grown by 4.8% compared to 2024. According to the Decree of the President of the Republic of Uzbekistan No. 158, the "Uzbekistan - 2030" strategy extensively covers the areas of ecology and sustainable development. The decree calls for ways to abandon vehicles that emit a lot of smoke and switch to clean and modern transport. special attention is paid to learning. It can be seen from it that it is becoming of particular importance in our country to prevent the deterioration of its ecological condition and to take measures that affect it. In particular, in a region with a large concentration of industrial enterprises, such as the Navoi region, modernizing the transport system based on environmentally friendly technologies is not only economically, but also a vital necessity. The Navoi region is the "industrial heart" of our country. The activities of Navoiazot JSC, Navoi Mining and Metallurgical Combine and other large enterprises have a certain impact on atmospheric air. In such circumstances, abandoning traditional fuel vehicles and switching to electric vehicles would dramatically reduce harmful emissions (CO₂, NO_x) into the air. The fact that each electric car prevents an average of 1.5 tons of carbon dioxide emissions per year shows how important this direction is. Large-scale work on the reform of the public transport system began in Navoi. The launch of the modern, air-conditioned and noise-free Chinese "Yutong" electrobus on the streets of the city provided great comfort for the population. 42 new "Yutong" buses will operate in the center of Karmana district and the city of Navoi. 18 buses delivered in April are currently operating on the Navoi bus station - Autoyol administration and Tinchlik Kurgan - Malika bus station routes on a gross contract basis¹³. As a result, energy efficiency (electric buses reduce

¹¹ <https://lex.uz/docs/6600412>

¹² <https://stat.uz/uz/matbuot-markazi/go'mita-yangiliklar>

¹³ <https://kun.uz/news/2025/06/10/navoiy-uchun-xitoydan-42-ta-zamonaviy-avtobus>

¹⁴ <https://het.uz/oz/lists/view/78>

operating costs by 3-4 times compared to conventional buses), comfort (low noise levels and smooth movement make the urban ecosystem more pleasant). The use of personal and service electric vehicles in Navoi region is expanding year by year. In 2024, the transfer of 25 electric cars¹⁴ to the Navoi branch by JSC" regional electric networks " indicates that state organizations are setting an example in the field. This is the modernization of the energy system and is an important practical step towards increasing environmental sustainability. Fast charging stations (Fast Charge) are being installed in Navoi city and on inter-district roads to develop infrastructure. Fast Charge fast charging protocols are a method of transmitting increased power (fast charging stations) via a standard usb port¹⁵. Tax incentives for entrepreneurs are provided until January 1, 2028 to apply property and land taxes to electric vehicle power stations in the amount of 1 percent, exemption from profit and turnover tax (19.12.22. PQ-444)¹⁶. These decisions serve to expand the network of power stations at a quick opportunity. Navoi is a region located at an important transport junction, and the project to electrify the Navoi-Bukhara railway will increase the efficiency of freight and passenger transportation. Electric trains are considered much more environmentally friendly and economical than diesel locomotives. This will elevate the logistics potential of the province on the basis of "green" principles. The establishment of bicycle lanes in modern cities such as Navoi and Zarafshan is another important link in the "green transport" chain. The use of bicycles and scooters not only reduces traffic jams, but also promotes a healthy lifestyle among the population. The transition of internal affairs personnel to the service of a velopatru¹⁷ is also one of the positive changes in this regard. In conclusion, it can be said that Uzbekistan is taking important steps towards a green economy and sustainable development. The Uzbekistan-2030 strategy places special emphasis on the transition to environmentally friendly transport, reducing harmful emissions, and preserving the environment. Navoi region plays a special role in this process as the "industrial heart" of the country. In the area where large industrial enterprises are located, the modernization of public transport has become a vital necessity to mitigate environmental problems. In Navoi region introduction of green vehicles is not just a technological innovation, but a strategic step towards leaving a clean environment for future generations. The benefits provided by the state, the improvement of infrastructure, and the modernization of public transport will help turn Navoi region into one of the most environmentally sustainable and "smart" regions of our country.

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¹⁶ https://api.mf.uz/media/filestore/Sharx_26-11.pdf

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