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A bridge between science and innovation



**TOSHKENT DAVLAT  
TRANSPORT UNIVERSITETI**

Tashkent state  
transport university



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**“WOMEN IN INNOVATION AND SCIENCE”  
XALQARO ILMIY-AMALIY KONFERENSIYA VA FORUMI  
ILMIY ISHLARI TO‘PLAMI**

Toshkent davlat transport universitetida 2026-yil 27-mart kuni “Women in Innovation and Science” xalqaro forumi ilmiy ishlari to‘plami chop etildi.

Mazkur nufuzli tadbirlar O‘zbekiston Respublikasi Oliy ta’lim, fan va innovatsiyalar vazirligi hamda Transport vazirligi hamkorligida tashkil etilib, mamlakatimizda ilm-fan, innovatsiyalar va zamonaviy texnologiyalarni rivojlantirish, shuningdek xalqaro ilmiy hamkorlikni yanada kengaytirishga qaratilgan muhim platforma hisoblanadi.

Konferensiya ochilish marosimida davlat organlari, xalqaro tashkilotlar va yetakchi oliy ta’lim muassasalari vakillari ishtirok etdi. Jumladan, Toshkent davlat transport universiteti rektori G‘ulomov Abdulaziz Abdullayevich, O‘zbekiston Respublikasi Transport vazirligi vakili Ulmasova Lobarkhon Adilovna, Osiyo taraqqiyot banki eksperti Claire Charnac, Istanbul Aydin universiteti vasiylik kengashi raisi Mustafa Aydin, Belarus davlat transport universiteti rektori Kazakov Nikolay Nikolayevich hamda Qirg‘iziston Respublikasi Transport vazirligi vakili Dinara Moldokalieva ishtirok etdilar.

Konferensiya ilmiy dasturi doirasida plenar va panel sessiyalar, shuningdek ilmiy ma’ruzalar taqdimoti o‘tkazilib, ularda sun’iy intellekt va raqamli texnologiyalarni iqtisodiyot va ta’limga joriy etish, transport va aviatsiya sohasida innovatsion yechimlar, sanoat va IT sohasida texnologiya transferi, shuningdek ta’limda raqamli platformalar va intellektual tizimlar kabi dolzarb masalalar yoritildi.

2026-yil 27-mart kuni o‘tkazilgan “Women in Innovation and Science” xalqaro forumi ayollar yetakchiligi, innovatsiyalar va STEM sohalariga bag‘ishlangan bo‘lib, mamlakatimizda ayollarning ilm-fan va texnologiya sohalaridagi ishtirokini kengaytirish, ularning yetakchilik salohiyatini rivojlantirish hamda xalqaro hamkorlikni mustahkamlashga qaratilgan strategik maydon sifatida tashkil etildi.

Forum doirasida ayollar yetakchiligini rivojlantirish va rag‘batlantirish, xalqaro tajriba almashinuvi va ilmiy tarmoqlarni kengaytirish, yosh tadqiqotchi ayollar va PhD talabalarni qo‘llab-quvvatlash hamda innovatsion ekotizimlarda gender tenglikni ta’minlash kabi ustuvor vazifalar amalga oshirildi. Shuningdek, forumda ayollar yetakchiligi va STEM, gender tenglik va ilm-fan institutsional rivoji, ayollar tadbirkorligi va innovatsion startaplar, innovatsiya ekotizimlari va xalqaro hamkorlik, yosh ayol tadqiqotchilarni rivojlantirish, mentorlik va akademik tarmoqlar yo‘nalishlarida tematik sessiyalar tashkil etildi.

Forumda davlat organlari, xalqaro tashkilotlar, yetakchi oliy ta’lim muassasalari va ilmiy markazlar vakillari, jumladan “OLIMA” uyushmasi raisi Murtazayeva Raxbar Hamidovna, “Sharq ayoli” xalqaro ayollar jamoat fondi raisi Tursunbayeva Saodat Gafurovna, Osiyo taraqqiyot banki eksperti Claire Charnac, O‘zbekiston Respublikasi Transport vazirligi vakili Ulmasova Lobarkhon Adilovna, Toshkent davlat transport universiteti rektori G‘ulomov Abdulaziz Abdullayevich, Qirg‘iziston Respublikasi Transport vazirligi vakili Dinara Moldokalieva hamda Indoneziyadan universitet dekani Yoga Prihatin ishtirok etdilar.



Shuningdek, forumda Yevropa va Osiyo davlatlaridan yetakchi olimlar, ekspertlar va yosh tadqiqotchilar keng qatnashdi.

Forum dasturiga ochilish marosimi, panel muhokamalar, ilmiy chiqishlar hamda professional rivojlanish bo'yicha workshoplar kiritilgan bo'lib, ular doirasida gender tenglik, ayollar karyerasini rivojlantirish, ilmiy tadqiqotlar va innovatsion boshqaruv bo'yicha amaliy seminarlar tashkil etildi.

Mazkur tadbirlar Osiyo taraqqiyot banki (ADB), "OLIMA" — O'zbekiston xotin-qizlar olimlari uyushmasi, "Sharq ayoli" xalqaro ayollar jamoat fondi, Germaniya xalqaro hamkorlik jamiyati (GIZ), shuningdek Rossiya, Turkiya, Indoneziya va Qirg'iziston oliy ta'lim muassasalari hamda Belarus Milliy fanlar akademiyasi ilmiy institutlari hamkorligida o'tkazildi.

Mazkur xalqaro ilmiy-amaliy konferensiya va forumning ahamiyati shundaki, ular xalqaro ilmiy hamkorlikni mustahkamlash, innovatsion ishlanmalarni amaliyotga joriy etish, raqamli va barqaror rivojlanishni ta'minlash, shuningdek ayollarning ilm-fan va innovatsiya sohalaridagi rolini kuchaytirishga xizmat qiladi. Shu bilan birga, mazkur tadbirlar yosh olimlar va tadqiqotchilarni qo'llab-quvvatlash, ilmiy tajriba almashish hamda global ilmiy makonga integratsiyalashuvni jadallashtirishda muhim ahamiyat kasb etadi.

Mazkur xalqaro ilmiy-amaliy konferensiya va forumning maqsadi zamonaviy ilmiy tadqiqot yo'nalishlarini muhokama qilish, innovatsion yondashuvlar va ilg'or texnologiyalar bo'yicha ilmiy natijalar almashuvini ta'minlash, shuningdek xalqaro ilmiy hamkorlikni rivojlantirishdan iboratdir.

Tadbirda O'zbekiston Respublikasi hamda xorijiy mamlakatlarning oliy ta'lim muassasalari va ilmiy-tadqiqot institutlari olimlari, shuningdek amaliyotda muhim natijalarga ega bo'lgan mutaxassislar o'z ilmiy ishlari bilan ishtirok etdilar.

Ushbu ilmiy to'plamda muhandislik, transport, raqamlashtirish, sun'iy intellekt, innovatsion boshqaruv, gender tenglik va barqaror rivojlanish sohalarida faoliyat yuritayotgan yetakchi olimlar, professor-o'qituvchilar va tadqiqotchilarning ilmiy ishlari jamlangan. To'plamda dolzarb ilmiy muammolar, zamonaviy yechimlar, nazariy va amaliy tadqiqot natijalari yoritilib, ushbu yo'nalishlarning bugungi holati va istiqboldagi rivojlanish tendensiyalari aks ettirilgan.

Mazkur nashr mamlakatimizda ilm-fan va innovatsion rivojlanishni ta'minlash, xalqaro ilmiy aloqalarni mustahkamlash hamda yosh olimlar va tadqiqotchilarni qo'llab-quvvatlash yo'lidagi muhim qadamlardan biri sifatida e'tirof etiladi.

Shuningdek, mazkur ilmiy to'plamda keltirilgan natijalar kelgusida ilmiy tadqiqotlar samaradorligini oshirish, amaliyotga yo'naltirilgan innovatsion yechimlarni keng joriy etish hamda sohalararo integratsiyani chuqurlashtirish uchun muhim ilmiy asos bo'lib xizmat qiladi. To'plam materiallari nafaqat ilmiy jamoatchilik, balki ishlab chiqarish sohasi mutaxassislari, doktorantlar va talabalar uchun ham foydali manba hisoblanadi.

Mazkur nashrda yoritilgan ilmiy g'oyalar va ilg'or yondashuvlar asosida yangi ilmiy izlanishlar olib borilishi, xalqaro ilmiy aloqalarning yanada rivojlanishi hamda innovatsion rivojlanish strategiyalarining takomillashishiga xizmat qilishi kutilmoqda.



# The role and importance of transport corridors in Uzbekistan

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**Abstract:** This article provides information on the transport corridors that have passed through the territory of Uzbekistan and are now planned for construction. It studies the strategic importance of international railway corridors passing through Uzbekistan, in particular, with a focus on the China-Kyrgyzstan-Uzbekistan (CKU) railway and its associated multimodal transport routes. The study identifies the role of these corridors in strengthening regional connectivity, reducing transport costs, and strengthening Uzbekistan's position as a transit hub.

**Keywords:** transport corridors, Uzbekistan, international railway corridors, China-Kyrgyzstan-Uzbekistan railway, Trans-Afghan corridor, regional connectivity, transit potential, logistics hub, freight transportation, eurasian transport network

## 1. Introduction

Globalization has increased the need for efficient transport systems, in particular, international railway corridors connecting landlocked regions with global markets. Uzbekistan, due to its central location in Central Asia, plays an important role in the development of transcontinental transport networks.

Transport corridors are complex transport routes connecting territories, countries or regions, aimed at efficient freight and passenger transportation, and their role in the transport sector is very important. Transport corridors include the following tasks:

- Ensuring the uninterrupted movement of freight and passengers
- Effective management of transit flows
- Reducing freight transportation time
- Optimizing the flow of wagons and locomotives
- Creating favorable conditions for the formation of interstate trade routes
- Increasing the volume of exports and imports
- Increasing the transit potential of the state
- Strengthening regional influence

Today, transportation is established through Uzbekistan through the following international corridors:

Corridor 1 - ports of the Baltic states (in transit through Kazakhstan and Russia) - in the direction of the ports of Klaipeda (Lithuania), Riga, Liepaja, Ventspils (Latvia), Tallinn (Estonia);

Corridor 2 – in the direction of the European Union countries, through Belarus and Ukraine (in transit through Kazakhstan and Russia) – the border points of Chop (Ukraine) and Brest (Belarus);

Corridor 3 – with access to the Black Sea to the Ukrainian port of Ilyichevsk (in transit through Kazakhstan and Russia);

Corridor 4 – with access to the Black Sea (in transit through Turkmenistan, Kazakhstan and Azerbaijan) in the direction of the Transcaucasian corridor, known as the TRACECA corridor;

Corridor 5 – with access to the Persian Gulf to the Iranian port of Bandar Abbas (in transit through Turkmenistan);

Corridor 6 – to the east through the Kazakhstan-China border crossing (Dostik / Alalshankou) to the eastern ports of China, as well as to the ports of the Far East such as Nakhodka, Vladivostok and others;

Corridor 7 – to Chinese ports with access to the Yellow, East China and South China Seas (in transit through Kyrgyzstan);

Corridor 8 – through the ports of Bandar Abbas, Chahbahar (IRI), Gwadar and Karachi (IRP) of Iran and Pakistan in connection with the solution of the Afghan problem.

## 2. Materials and methods

Recent initiatives such as the China-Kyrgyzstan-Uzbekistan railway have revived the Silk Road concept and positioned Uzbekistan as a key logistics hub in Eurasia.

This study is based on the following methods:

- qualitative analysis of transport corridor projects
- comparative assessment of regional logistics systems
- synthesis of academic and policy-based sources
- application of a systematic approach to assessing the interaction between infrastructure, economics and geopolitics.

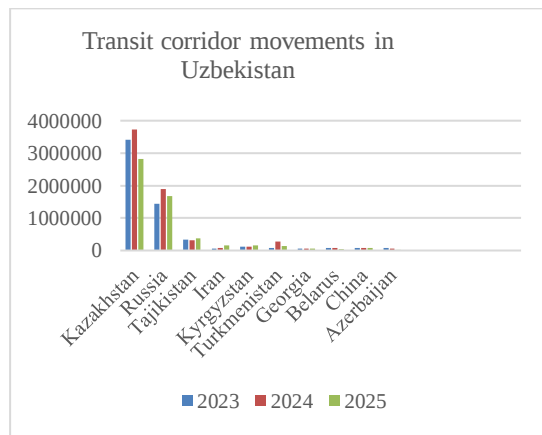
## 3. Results and discussion

Existing studies emphasize that transport corridors have a significant impact on economic growth and regional integration. Transport corridors increase the transit potential of Uzbekistan.

Our President Sh. Mirziyoyev, at the Shanghai Cooperation Organization summit in Qingdao in June 2018, noted that Uzbekistan supports the construction of the Mazar-i-Sharif-Herat, China-Kyrgyzstan-Uzbekistan railway lines, as well as the development of the Central Asia-Persian Gulf, North-South and East-West trans-regional corridors.

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**Fig.1. Transit corridor movements in Uzbekistan from 2023 to 2025**

Currently, work has begun on the construction of this corridor, which is expected to increase trade competitiveness and stimulate GDP growth through improved logistics efficiency. Moreover, Uzbekistan's participation in these corridors will strengthen its role as a regional transport hub and facilitate integration into global markets.

The China-Kyrgyzstan-Uzbekistan Railway (CKU) is a transport corridor that has been under construction since 2025, and its length is approximately 532 km. If this corridor is operational, it is expected to reduce transit time between China and Europe by 7-10 days.

The Trans-Afghan Corridor will provide access to seaports through Pakistan, transforming Uzbekistan from a landlocked country into a landlocked country.



**Fig. 2. TRANSAFGAN corridors**

Together, these corridors strengthen Uzbekistan's integration into global supply chains.

## 4. Conclusion

Transport corridors passing through Uzbekistan are of great importance for economic development and regional integration. The country's transport infrastructure can be further developed by studying the existing railway corridors and the newly constructed China-Kyrgyzstan-Uzbekistan and Trans-Afghan highways. This study will help in making strategic decisions in the transport sector and will serve to increase the economic potential of our country. In addition, it will allow diversifying transit routes, reducing dependence on a single transport axis, and strengthening regional cooperation.

## References

- [1] Z.G. Mukhamedova, M.R. Dilbarova "The research of modern methods for choosing a rational selection of cargo flow by railway." The scientific journal vehicles and roads, 2022 №2
- [2] Textbook Qobulov J.R, Barotov J. S "Technology, organization and management of international transportation" T-2023
- [3] Balbaa, M. et al. Fostering Economic Growth through Transport Corridors, 2024
- [4] Khitakhunov, A. China-Kyrgyzstan-Uzbekistan Railway: Causes and Consequences, 2024
- [5] <https://railway.uz/en/gazhk/statisticheskiedannye/>.

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