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ELIMINATING TRAFFIC CONGESTION ON THE ROADS OF TASHKENT CITY AND INCREASING THE ATTRACTIVENESS OF PUBLIC TRANSPORT

Ikramov Akmaljon
Khushvaktov Sardar
Shovkatov Khumoyun
Otaganov Sarvar
Tashkent State Transportation University

ABSTRACT

Public transport and reducing the harmful effects of motor vehicles on the environment were critically studied in Tashkent city .

it was found that the following systemic problems remain in reducing the harmful effects of motor vehicles on the environment :

private vehicles in Tashkent has increased dramatically Traffic jams on the streets have a negative impact on the air quality .

As of April 1 of this year, the population of Tashkent is more than 2,979,000 , and there is one motor vehicle for every 25 people .

Today there are 736 in the capital 0 0 1 ta (950 596 3 94 individuals and 117 812 in a thousand families The organization has 139,607 motor vehicles.

According to the analysis, this 736 0 0 1 327.4 thousand or 44 percent of motor vehicles It was issued in the name of 118,800 people, and 2 or more (up to 238) in the name of one person is organizing.

19% of the available motor vehicles belong to the organizations, and 37% belong to the remaining families (1 motor vehicle for every 3 families) .

The flow of traffic and passengers entering the city of Tashkent from the main 5 YPX locations distribution is not established effectively .

For information: more than 911 thousand (today 736 thousand exist in Tashkent city and 175 thousand arrive from the regions per day) motor vehicles move in the city of Tashkent.

Due to the lack of parking spaces in the city, drivers are leaving their cars on the side of the road;

For information, at a time when there was a need to build 62 multi-story parking lots for 911 thousand cars in the city , today only 8 of them have been completed.

According to the statement of the Cabinet of Ministers, a total of 62 plots of land were designated for the construction of multi-storey parking lots, but today 5 of them have been allocated for the construction of commercial complexes and 14 for the construction of multi-storey residential buildings.

60.8% of the participants (891 people participated) were car drivers.

41.8% of the participants said they use the bus, 27.5% the subway, 24.1% the taxi, 1.7% the minibus, and 4.9% the walk. It was found that more women (33.1%) and young people (36.5%) use public transport , and men (33.1%) use private transport.

62.2% of drivers, violations of rules, incorrect parking, 57.6% of road defects, 46.8% of students and 41.2% of people who go to work mentioned increased activity as the main causes of traffic jams.

According to the results of the survey, 97 percent reported that they faced difficulties in moving due to improper parking on the roadside. Most of the opinions expressed were about improving the infrastructure for public transport (buses), properly forming parking lots, building multi-story parking lots, overpasses and bridges for pedestrians, expanding metro lines, He proposed to ensure strict implementation of traffic rules and switch to digital management.

total harmful substances released into the atmosphere in Tashkent city 90 percent i corresponds to the share of cars;

the worst cities in the world in terms of the level of atmospheric air pollution;

For reference: AirVisual , a "Switzerland-headquartered company specializing in the development of air pollution protection, air quality monitoring and air purification tools, providing real-time air quality information" platform, IQAir was studied on the basis of information provided by a large operator center (also present in Germany, USA and China).

438 tons of harmful substances are released into the atmosphere annually , of which 398 tons are emissions from vehicles. (One car annually absorbs more than 4 tons of oxygen from the atmosphere, produces 800 kg of carbon dioxide, about 40 kg of nitrogen oxide and 200 kg of various oil particles).

The capital ranked 20th with 96 points in terms of air pollution in 2022 , according to the IQAir rating .

50 out of 80 among the environmentally friendly cities of 2023 is located in lower places, varying up to points . A total of 131 countries are included in the rating, and the pollution level of the countries is updated daily. Pollution level PM2.5 is the smallest fine particles (0.001 to 2.5 μm) , normally 1 15-30 micrograms per m ^{3} of air, PM10 particles with a diameter greater than 10 microns , the amount of ozone in the air , NO_2 free (IV) oxide , SO_2 sulfur (IV) oxide , CO carbon monoxide determined by the amount.

According to the calculations , when driving on roads with high traffic jams, the car is 10 0.9 more than the norm to reach a distance of 0.9 km consumes 2.01 liters of fuel, more environmentally friendly kg emits toxic gases.

Necessary conditions have not been created for riding a bicycle, which is considered an effective means of transportation in strengthening the health of citizens and ensuring the purity of the atmosphere ;

The total length of the capital highway is 2,707 km , the total length of bicycle lanes (separate lanes) is 147 km .

The lack of sufficient underground or surface pedestrian crossings on the capital's highways is a major factor in traffic jams and air pollution;

965 pedestrian crossings in the city of Tashkent , 757 of which are unregulated, 157 ta regulated, of which 41 underground , 10 one of them is an overground pedestrian crossing. .

Enterprises, institutions, organizations the fact that the work mode is not optimally defined , almost all organizations work in the daytime work mode is a factor in traffic jams;

117,812 in the capital There are enterprises, institutions and organizations that operate mainly during daytime hours . Evening two-shift working hours are established in some enterprises engaged in business .

FYI: Currently 117,812 in Tashkent ta the number of vehicles in enterprises , organizations and institutions is 139,607 .

The use of a private (service) vehicle for commuting to work (study) has a significant impact on the occurrence of traffic jams and air pollution ;

For example: the number of students and employees at the Tashkent State University of Economics is 22,100 (more than 21,000 students, more than 2,100 professors and teachers and employees). The University has 7 vehicles (6 cars , 1 truck).

About 1,180 people or 5.3 percent of people traveling to the university use taxis , 8 thousand people or 36.7 percent, and 12.9 thousand people or 58.0 percent use public transport (routed taxi, bus and subway) .

of educational institutions and production enterprises and other organizations are located in Tashkent city ;

For information: 43 percent of higher education institutions in Uzbekistan are located in Tashkent, where about 360,000 students study. According to official data, students in the city of Tashkent account for 33 percent of the traffic causing an increase .

119 thousand people or 46.0% of 254 thousand students and pupils use public transport , 135 thousand people or 54.0% use light vehicles during the morning rush hour .

An effective mechanism for attracting citizens to public transport has not been created;

For information, in the city of Tashkent level of public transport use only 38 percent, this indicator is in developed countries 60-80 percent constitutes

Traffic of trucks in Tashkent city is insufficiently regulated;

For information, there are about 50,000 trucks (26,300 individuals and 22,300 legal entities) in Tashkent. Also, about 7,000 trucks enter and leave the city every day.

Transport flow (public transport, taxi, etc.) not transferred to "smart management";

For information: currently there is no single national aggregator that coordinates traffic on city streets (for example, Yandex and other non-national aggregators are currently being used).

The lack of flights and routes of local trains and planes coming to Tashkent from the regions, as well as the high cost of tickets, is the reason for artificially increasing the number of cars coming to the capital"

For information: to Tashkent for a week from local airports A total of 71 flights are made on 9 routes . The most flights are 17 Tashkent -Nukus is carried out according to Currently, aircraft utilization is low due to high prices .

SUMMARY

1. In order to prevent pollution of the natural environment by reducing the impact of vehicles on the environment , based on advanced foreign experience, to introduce restrictions on the driving time and year of manufacture of old and trucks in the city of Tashkent.

For information: Starting from 2008 , a low-emission area sticker has been introduced for cars driving in Berlin, Germany (the sticker price is 13.95 euros). Stickers are divided into 3 types: red, yellow in green colors.

There are specific requirements for each color sticker, and if the vehicle does not receive a low emission zone sticker , the vehicle must be registered outside the zone. have to leave in parking

lots . If the car does not meet the requirements of the low emission area sticker , the car will be taken to the penalty area and will have to pay a fine of 100 euros .
two or more motor vehicles.
2. Reducing traffic by changing business hours .
- Setting the working hours of the Ministry, enterprise, organization, office and educational institutions for the city of Tashkent on the basis of separate schedules .
For information: the city of Delhi (population 30 million) reduced traffic by 10-15 percent, using the cheapest method of reducing traffic congestion on the roads .
3. Wide implementation of the system of "smart traffic lights" and "smart intersections" due to digitalization of traffic management in Tashkent city .
For information: in the city of Moscow, "smart traffic lights" reduced traffic time by 40%, and in the cities of the USA and Canada, the creation of "smart intersections" reduced traffic by 26%.
the introduction of the " Surtrac " technology in the city of Pittsburgh, USA (population 1.8 million) reduced the waiting time at intersections by 40%, traffic congestion by 25%, and toxic gases emitted by vehicles by 20%.
4 . Reducing traffic congestion by building additional underground and surface pedestrian crossings based on the need .
For information: in Ankara , the capital of Turkey the flow of vehicles was high by increasing the number of pedestrian crossings on the streets (with elevators), it was possible to reduce traffic jams.
5 . Reduce congestion by increasing bus lanes and bike lanes .
For information: In the city of Auckland, New Zealand, there are Bus and T2 or T3 transit corridors for public transport , the length of which is 128 km . It is forbidden to stop and park cars on the corridor during the specified times.
violation of the rules of parking and parking of vehicles on the sidewalks (except for specially authorized FFV, ambulance, police, firefighting vehicles), a fine of up to 150 dollars will be charged.
The total length of developed bicycle lanes in Vienna, Austria is 1,654 km .
In the cities of Singapore and Sydney, two types of bus lanes (yellow / red) are intended only for buses , and other vehicles are allowed to move on these lanes only during certain times . Buses have more stability than cars when starting from stops, intersections and traffic lights
6. In order to increase the attractiveness of public transport, separate special public transport (connecting the institution and transport nodes) for educational institutions, enterprises and organizations ;
For information: In order to reduce traffic in the capital of Bangladesh (10 billion dollars a year due to traffic), Dhaka (one of the most congested cities in the world with a population of 20 million) , special public transport for educational institutions was involved.
Based on the European experience, the introduction of a system of issuing special monthly vouchers for public transport at the expense of the organization to public servants, students and those under the age of 18 for gradual free use of public transport ;

For information: free public transport in Estonia and Luxembourg, the introduction of a system of cheap tickets in Berlin and the introduction of a system of distributing free vouchers to government employees in Milan help to reduce traffic jams.

7. Construction (relocation) of free modern parking lots (on the basis of public-private partnership) and bus stops around the main 5 YPX facilities entering the city, as well as a fast modern connection with the metro establishment of public transport services .

For information: Currently, all of the more than 10 bus stops in Tashkent are located within the city.

Close to existing public transport hubs in the major cities of Singapore, Tokyo, Seoul and Moscow modern multi-storey digitized parking lots have been built.

8. In order to reduce the use of private vehicles, increase the number of railway trains (high-speed) and airplanes, buses with modern amenities moving from the regions to Tashkent city, and launch modern public transport from that place;

For reference: In the Dutch city of Utrecht, free public transport passes or private bus services (to connect stations to workplaces) to workers and employees reduced private car use by up to 37% .

Transferring parking lots of state offices to a paid system ;

For example, Rotterdam in the Netherlands and Nottingham in the UK have reduced employee car journeys by 20-25% with schemes that require employees to park outside their offices while offering them the option to 'pay' for parking. The collected income is directed to support the public transport network.

Widespread introduction of "national aggregator" and "national platform" for transport flow management.

FYI: A platform of digital national aggregators has been created to coordinate public transport and taxi activities in Seoul. These aggregators control the traffic on city roads and show the most convenient routes to the residents.

REFERENCES

1. Eisymont_Y . , Auchynnikau , Y., Avdeychik , S., Ikramov , A., & Grigorieva , T. (2015). Mechanochemistry processes in the formation of engineering materials based on polymers. materials science. Non-Equilibrium Phase Transformations., 1(1), 36-41.

2. Avdeychik , S., Goldade , V., Struk , V., Antonov , A., & Ikromov , A. (2020). THE PHENOMENON OF NANOSTATE IN MATERIAL SCIENCE OF FUNCTIONAL COMPOSITES BASED ON INDUSTRIAL POLYMERS. Theoretical & Applied Science, (7), 101-107.

3. Eisymont , Y., Ikramov , A., Avdeychik , S., Auchynnikau , Y., & Struk , V. (2015). ENERGY ASPECTS OF STRUCTURE FORMATION OF NANOCOMPOSITES BASED ON THERMOPLASTIC. materials science. Non-Equilibrium Phase Transformations., 1(1), 42-47.

4. Ro'zievich , R. M., & G'ofurjonovich , I. A. (2022). Determination of the Minimum Time of the Permission Signal of Traffic Lights at Intersections. Journal of Pedagogical Inventions and Practices, 12, 40-44.

5. Ruzievich , R. M., & Gofurjonovich , I. A. (2022). Actual Problems in the Field of Road Traffic Safety. Eurasian Journal of Engineering and Technology, 8, 107-109.

6. Ikramov , A., Khurshid , K., & Ismailjan son , SL (2022). FAILURES OF THE DIESEL FUEL SUPPLY SYSTEM IN HOT AND DUSTY CONDITIONS. Conference , 122-124.
7. Ikramov , A., Khurshid , K., & Ismailjan son , SL (2022). "ISUZU NP37" BUS POWER SYSTEM FAILURE AND. Conference , 74-77.
8. Avdeichik , SV, Sorokin, VG, Struk , VA, Antonov , AS, Ikromov , AG, & Abdurazakov , AA (2017). Methodology for the selection of functional modifiers for composites based on high-molecular matrices. Mountain Mechanics and Engineering, (1), 76-95.
9. Gofurjonovich , IA, & Ruzievich , RM (2022). A NEW LEVEL OF ENSURING ROAD TRAFFIC SAFETY IN UZBEKISTAN. European Journal of Interdisciplinary Research and Development, 8, 203-207.
10. Nurmetov , K., Riskulov , A., & Ikromov , A. (2022, August). Physicochemical aspects of polymer composites technology with activated modifiers. In AIP Conference Proceedings (Vol. 2656, No. 1, p. 020011). AIP Publishing LLC.
11. Gofurjonovich , I. A. (2023). METHODS FOR DETERMINING THE NEED TO USE THE METRO IN TRANSPORT SYSTEMS OF BIG CITIES BY MATHEMATICAL SIMULATION. Spectrum Journal of Innovation, Reforms and Development, 12, 234-240.
12. Nasimdjanovich , M. G., Xayitbekovich , A. L., Tursunovich , U. Z., & Gofurjonovich , I. A. (2023). ROAD SAFETY PERFORMANCE.
13. Nasimdjanovich , M. G., Khumoyun , S., & Gofurjonovich , I. A. (2023). ENSURING SAFETY THROUGH THE MANAGEMENT OF SPEED LIMITS IN PEDESTRIAN CROSSING ZONES. British Journal of Global Ecology and Sustainable Development, 12, 116-125.
14. Ikromov , A. (2023, March). Components modifying methods with the using of energy technologies. In AIP Conference Proceedings (Vol. 2612, No. 1). AIP Publishing.
15. Ikromov Akmaljon Gofurjonovich , Makhmudov Galib Nasimdjanovich , Usmonov Zafar Tursunovich , & Abdurakhimov Lochinbek Xayitbekovich . (2023). ANALYSIS OF THE QUANTITY OF EXHAUST GASES EMITTED FROM VEHICLES IN A CROSS SECTION THROUGH COMPUTER SIMULATION PROGRAM. Web of Discoveries: Journal of Analysis and Inventions, 1(2), 24–32. Retrieved from https://webofjournals.com/index.php/3/article/view/61
16. Avdeichik , SV, Gol'dade , VA, Struk , VA, Antonov , AS, & Ikromov , AG (2022). Implementation of the Nanostate Phenomenon in Materials Science of Functional Nanocomposites Based on Industrial Polymers. Surface Engineering and Applied Electrochemistry, 58(3), 211-220.
17. Gofurjonovich , I. A., Xayitbekovich , A. L., Shaxbos , A., & Sardor , X. (2023). TRENDS IN ROAD SAFETY IN UZBEKISTAN. American Journal of Interdisciplinary Research and Development, 20, 52-57.
18. Gofurjonovich , I. A., Nasimdjanovich , M. G., Tursunovich , U. Z., & Xayitbekovich , A. L. (2023). ANALYSIS OF THE QUANTITY OF EXHAUST GASES EMITTED FROM VEHICLES IN A CROSS SECTION THROUGH COMPUTER SIMULATION PROGRAM. Web of Discoveries: Journal of Analysis and Inventions, 1(2), 1-9.
19. Avdeichik , SV, Gol'dade , VA, Struk , VA, Antonov , AS, & Ikromov , AG (2022). Implementation of the Nanostate Phenomenon in Materials Science of Functional

Nanocomposites Based on Industrial Polymers. Surface Engineering and Applied Electrochemistry, 58(3), 211-220.

20. Gofurjonovich , I. A., Nasimdjanovich , M. G., Shakhbos , A., & Sardar , K. (2023). Cooperation of the State Road Safety Service with The Sectoral Services of Internal Affairs Bodies in Road Safety Activities. Global Scientific Review, 19, 25-31.

21. Ikromov , A. (2023, March). Components modifying methods with the using of energy technologies. In AIP Conference Proceedings (Vol. 2612, No. 1). AIP Publishing.

22. Gofurjonovich , I. A., Nasimdjanovich , M. G., & Xumoyun , S. (2023). ROAD SAFETY TRENDS IN UZBEKISTAN 2015–2021.

23. Gofurjonovich , I. A., Nasimdjanovich , M. G., Xumoyun , S., & Shaxboz , A. (2023). State Of Road Safety on The Roads of Kazakhstan. Global Scientific Review, 21, 60-67.