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## SCIENTIFIC BASIS OF DISPOSAL OF OLD AND BROKEN MOTOR VEHICLES IN ENVIRONMENTAL PROTECTION

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**Abstract:** *Reducing environmental pollution from harmful emissions of vehicles, recycling outdated and unfit automobiles, and replacing them with modern alternative vehicles that comply with Euro standards remain pressing issues requiring scientific solutions.*

**Keywords:** *obsolete, motor vehicles, electric buses, electricity, scooters, hazardous waste, recycling, "green", "yellow", "red", rent.*

### INTRODUCTION

The number of vehicles in the country is increasing every day in various brands, the infrastructure of highways, transport services to the population, short and long-distance cargo transportation by vehicles is developing, and recently, positive developments have been made in the effective use of alternative electric vehicles and scooters in order to prevent air pollution. There are about 47 million vehicles in Russia, and according to the Ministry of Internal Affairs, 38,781 obsolete vehicles were deregistered in 2024. The average service life of deregistered vehicles was 27 years.

According to data, more than 4.3 million vehicles are currently operating in Uzbekistan.

At the same time, environmentalists are concerned about the emission of harmful substances into the atmosphere from vehicles that have been in operation for 50 years, and the lack of systematic disposal of obsolete and unusable vehicles. According to M. Kholmatov, when studying the emissions from vehicles moving on the main streets of Andijan, it was noted that nitrogen dioxide exceeded the established norm (0.085 mg/m<sup>3</sup>) by 4.2 times (0.36 mg/m<sup>3</sup>), and formaldehyde exceeded the norm (0.0035 mg/m<sup>3</sup>) by 17.7 times (0.062 mg/m<sup>3</sup>). [10., p. 30]

The analysis shows that in Andijan region in 2023 more than 178.0 thousand vehicles were registered, in 2024 179.2 thousand, in 2025 195.4 thousand and as of March 1, 2026 29.7 thousand vehicles. Of these, 47,772 passenger cars run on gasoline, 200,636 on compressed gas, 98 on diesel fuel, and 4,768 on electricity. [6.] According to Yuldashev A.A., Pulatov X.L., Yigitov F.B., Sharipova U.L., the world production of motor vehicles is expanding. for example:

cars, trucks and cars;

motor trains;

motorcycles, mopeds, scooters, mopeds, cultivators, electric tricycles, etc.;

tractors and other agricultural machines;  
trams and trolleybuses. [5.]

At the same time, after a certain period of use of vehicles, it is necessary to adhere to the scheme of separation into separate parts according to the technological process for their disposal. In particular, attention should be paid to the separation of electrolyte batteries, waste oils (motor oil, antifreeze) and fuel waste (residues), used tires, electronic devices, non-ferrous metal wires, brake pads and remnants of worn brake linings, used air and oil filters, brake fluid, coolant, gasoline and engine oil, muffler solutions, remnants of decommissioned vehicles and their individual parts, vehicle washing waste (petroleum products from the treatment of waste water from car washing, etc.). In addition, all waste from motor vehicles should be divided into two groups.

The first group - waste generated during the maintenance and repair of motor vehicles must be delivered to collection points for secondary raw materials and hazardous waste or collected by the owner of the waste and sent to users/recycling. The second group - vehicles deregistered after the end of their service life are considered a waste resource.

We believe that it is necessary to organize collection systems for these vehicles. In this case, end-of-life vehicles from individuals and legal entities should be systematically accepted according to an individual scheme. To do this, depending on the type of waste, tires, used oils, batteries and their electrolyte acids, car windows, non-ferrous wires (metals), scrap metal should be compulsorily delivered to secondary processing enterprises. [5.,8.] Currently, the following systems are operating in the republic: “Uzikkilamchi Kara Metal” JSC for ferrous scrap, “Uzikkilamchi Rangli Metal” JSC for non-ferrous metals, “Jizzakh Akkull Zavodi” LLC for accumulators, and “Uz Pista Recycling” joint venture in Angren, Tashkent region for technical oils. In addition, the main areas of comprehensive tire processing and disposal should include:

1. Whole tires can be reused;
2. Crushing to obtain rubber crumb;
3. Production of regenerant;
4. Burning to obtain energy;
5. Using the pyrolysis method.

Scientific research shows that the collection, collection, temporary storage, transportation or involvement of tow trucks, special technical equipment (hydraulic cranes) of end-of-life or unusable vehicles are not sufficiently established. As a result, environmental pollution, human life and health are threatened.

In 2024, 4,609 state license plates were found in car repair shops that were not removed at the state expense. This situation led to violations by some citizens. [7.]

Solutions to problems.

In some countries disposal of old and unusable motor vehicles has been started.

For example, in Russia, the disposal fee for cars was introduced in 2020, the disposal fee is on average 5-15 thousand rubles. In Europe, the car disposal fee is around 100-200 euros, in Germany it is 100 euros. Kazakhstan has a program to attract old cars to disposal.

Results. According to world scientists, motor vehicles are in first place in the list of anthropogenic factors that pollute the air. This means that 40% of the annual atmospheric emissions are accounted for by cars.

In Uzbekistan, there were 3.26 million private cars in 2022,  
of which: 73.6% or 2.4 million units were gas-powered;  
24.4% or 796 thousand units were gasoline-powered;  
2.0% or 71 thousand units were diesel-powered.

In 2023, the number of motor vehicles is expected to reach 4.6 million units, an increase compared to previous years.

More than 730 thousand vehicles are moving in Tashkent, 160-300 thousand vehicles arrive from the regions per day.

Analyses show that in Uzbekistan there are 100-120 vehicles per 1,000 inhabitants, 200 in Tashkent city, and 90 in the Andijan region.

Conclusion.

Establishment of an operator management system for the gradual disposal, systematic collection, transportation, disassembly, re-use of some spare parts, transfer of ferrous and non-ferrous metals as a secondary resource of auto transport vehicles over 50 years old and unusable.

#### LITERATURE:

1. Ўзбекистон Республикаси Президентининг 2026 йил 25 мартдаги “Яшил макон” умуммиллий лойиҳани самарадорлигини янада ошириш чора-тадбирлари тўғрисида”ги ПФ-47- сон Фармони.

2. Ўзбекистон Республикаси Вазирлар Маҳкамасининг 2021 йил 9 июндаги “Ғилдиракли транспорт воситалари, ўзи юрар машиналар ва уларнинг тиркамалари учун утилизация йиғимини ундириш, қайтариш ва ундан фойдаланиш тартиби тўғрисидаги низомни тасдиқлаш ҳақида”ги 358-сон қарори.

3. Ўзбекистон Республикаси Вазирлар Маҳкамасининг 2024 йил 29 мартдаги “Атмосфера ҳавосига транспорт воситаларининг салбий таъсирини камайтириш бўйича чора-тадбирлари тўғрисида”ги 166-сон қарори.

4. Ўзбекистон Республикаси Вазирлар Маҳкамасининг 2025 йил 28 ноябрдаги “Автотранспорт воситаларининг атмосфера ҳавосига зарарли таъсирини камайтириш мақсадида “экологик транспорт” тизимини жорий этиш чора-тадбирлари тўғрисида”ги 750- сон қарори.

5. Юлдашев А.А., Пулатов Х.Л, Йигитов Ф.Б., Шарипова У.Л. “Чиқиндиларни бошқариш технологияси”. Ташкент-2022.

6. Андижон вилоят Экология ва иқлим ўзгариши бош бошқармаси материаллари. 2025 й.

7. Ogoh. uz 19.09.2025., Kun.uz 11.01.2020.

8. Мағдиев Ш. “Автомобилларни техник эксплуатацияси”. Ташкент 2004. Транспорт соҳасида муаммолар.3(2), Feb.,2023. Шерматов Ў.Х. Orientae ,Renaissance Innovative, educationeal, nature and social sciences.

9. Н.В.Вахитова UNDP Экологическое воспитание и образование в начальных классах общеобразовательной школы. Ташкент 2007,( 80-81 стр.)

10.Холматов М.М. “Атмосферадаги зарарли моддаларнинг манзарали дарахтларга таъсирини ўрганиш”(Андижон шаҳри мисолида). Диссертация. Ўзбекистон Республикаси Фанлар академияси Қорақалпоқ бўлими Қорақалпоқ табиий фанлар илмий тадқиқот институти. Нукус 2021 йил.(30 бет)