

**AN EMPIRICAL ANALYSIS OF THE ATTITUDES OF NUKUS RESIDENTS AGED
18-25 TOWARDS THE ENVIRONMENTAL IMPACT OF WASTE**

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Abstract: This study investigates the attitudes of Nukus residents aged 18 to 25 towards the environmental impact of waste through an empirical analysis. Against the backdrop of increasing resource depletion and environmental degradation, understanding young adults' perceptions is essential for developing sustainable waste management strategies. The research explores how this demographic perceives waste-related environmental issues, their awareness of ecological challenges, and their willingness to adopt environmentally responsible behaviors. Findings highlight the critical role of youth engagement in addressing local environmental problems and provide insights for policymakers to foster sustainable development in Nukus. This study contributes to the broader discourse on balancing economic growth with environmental protection in Uzbekistan.

Key words: youth attitudes, environmental impact, waste management, empirical analysis, sustainable development, resource depletion, ecological awareness, Uzbekistan.

In economic theory, “economy” is often defined as the study of scarce resources among competing uses. The modern path of extensive resource depletion may satisfy current needs but also causes complex, often unnoticed problems. Over time, we realize that this progress brings irreversible environmental damage.

This awareness demands careful and comprehensive responses from consumers and producers to ecological challenges. Without methodological, economic, legal, and technical solutions, the Earth's capacity will fall short of human demands, leading to inevitable consequences.

The Constitution of Uzbekistan, Article 62, requires citizens to treat the environment with care, highlighting the importance of environmental responsibility. Understanding how local populations, especially youth, perceive environmental issues is vital for sustainable development.

This study provides an empirical analysis of the attitudes of Nukus residents aged 18–25 towards the environmental impact of waste. It examines how this demographic engages with waste management and environmental protection, addressing what legacy we inherit, what changes we make, and what future we leave behind. The findings aim to inform strategies for reducing environmental harm and promoting sustainability in Nukus.

In the Decree of the President of the Republic of Uzbekistan on the State Program for Implementing the “Uzbekistan – 2030” Strategy in the Year of Environmental Protection and the “Green Economy,” Objective 72 of the program envisages improving the infrastructure for municipal waste management, introducing a licensing procedure for the transportation of household, construction, medical, industrial, hazardous, and toxic waste, conducting scientific research on waste generation norms, morphological composition, and carbon footprint, as well as encouraging users of recycled secondary raw materials.

Additionally, the following tasks have been identified as necessary to address:

- Improving the ecological appearance of neighborhoods, increasing greenery in streets, and creating an ecologically comfortable and prosperous living environment;

- Enhancing public health, fostering an ecological lifestyle, and creating conditions for realizing human potential;
- Saving natural resources and using them rationally to ensure ecological stability;
- Protecting, multiplying, and passing on plant and animal life to future generations, and preserving biodiversity;
- Broadly implementing the principles of the “green economy” and sustainably financing projects aimed at adapting the economy to climate change;
- Increasing the share of renewable energy in the country’s energy balance, including constructing large “green energy” plants based on public-private partnerships, expanding networks of small and micro hydroelectric power plants in regions, and encouraging the installation of solar panels in households;
- Reducing the “carbon footprint” in the economy through the widespread application of modern energy-saving technologies in economic sectors and social spheres;
- Ensuring coordination between regions and sectors aimed at ecological sustainability.

One of the most pressing economic issues at present is the effective reintegration of waste into the economy. In this regard, the decree issued by our President Shavkat Mirziyoyev on March 24, 2025, titled “On Measures to Further Improve and Systematize the Waste Recycling Sector,” underscores the urgency of the problem that we are conducting a systematic analysis of.

The decree highlights that alongside several successful initiatives in this area, there remain a number of systemic challenges that need to be addressed (see Figure 1).

The inadequate infrastructure and insufficient coverage of population centers with services related to household waste management have resulted in insufficient implementation of public-private partnerships in this sector.	The utilization of secondary material resources, which leads to inefficient use of natural resources, as well as the household waste recycling system, does not meet modern requirements.	Excessive use and widespread distribution of polymer film materials, which contribute to pollution in residential areas, have been observed; furthermore, there is no system in place for using alternative biodegradable materials.	Illegal activities, including the lack of accountability for environmental pollution, contribute to a weak sense of responsibility, while the system for addressing environmental violations and mitigating their consequences remains ineffective.	The sector lacks modern innovative and information-communication technologies that would enable an accurate assessment of the country’s true sanitary and ecological condition.
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Figure 1. Some Systemic Problems in Creating Favorable Conditions for Environmental Safety and Ensuring Adequate Sanitary Conditions in Residential Areas¹

The problem we investigate is addressed within the framework of the decree and approached methodologically through an empirical analysis aimed at proposing solutions to existing issues. The Decree of the President of the Republic of Uzbekistan on the Development Strategy of

¹Prezident Sh. M. Mirziyoev tomondidan 2018 yil 18 may sanasida “Maishiy chiqindilar bilan bog’liq ishlarni amalga oshirish tizimini yanada takomillashtirish chora-tadbirlari to’g’risida” chiqarilgan qarori asosida mualliflar guruhi tomonidan ishlab chiqildi. (xalq so’zi gazetasi 2018 y. 22 may, 103 (7061) soni)

New Uzbekistan for 2022–2026 (PF-60 dated January 28, 2022) was adopted. Objective 80 of this decree sets the goal of “improving ecology and environmental protection, enhancing ecological conditions in cities and districts, and implementing the national ‘Green Space’ project.” It includes the task of increasing the collection of household waste to 100% and raising the recycling rate from 21% to 50% by 2026.

However, it should be noted that in this sector, there is a lack of scientifically grounded methodological approaches for the statistics and geographic mapping of waste, which exacerbates the urgency of the problem.

As mentioned above, we conducted an in-depth study on the environmental and economic negative impacts of waste, including its harmful effects on people’s lifestyles. For this purpose, a survey was administered to 850 respondents aged 18 to 25.

A total of 850 participants took part in the survey, and based on the results, the following findings were obtained.

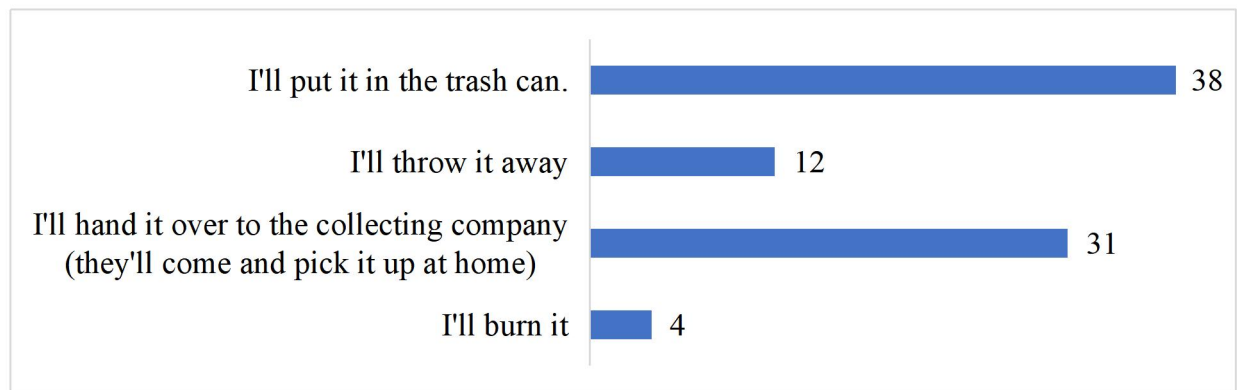


Figure 2. What Do You Do with Used Polyethylene Bags at Home?

The first question inquired about what households do with used polyethylene bags (see Figure 2). The results showed that 58% of respondents reported handing them over to designated collection bins or specialized service companies. However, the remaining 42% demonstrated a disregard for the environmental harm caused by improper waste disposal.

Analysis of responses to the second question revealed participants’ perceptions regarding the “hazardous” and “non-hazardous” nature of different types of waste. On average, around 40% of respondents classified various waste types as “hazardous.” The survey listed 12 categories of waste items, of which only two were considered to have minimal environmental impact. Nevertheless, the study indicated a general lack of awareness among respondents about the harmful effects of various used household wastes.

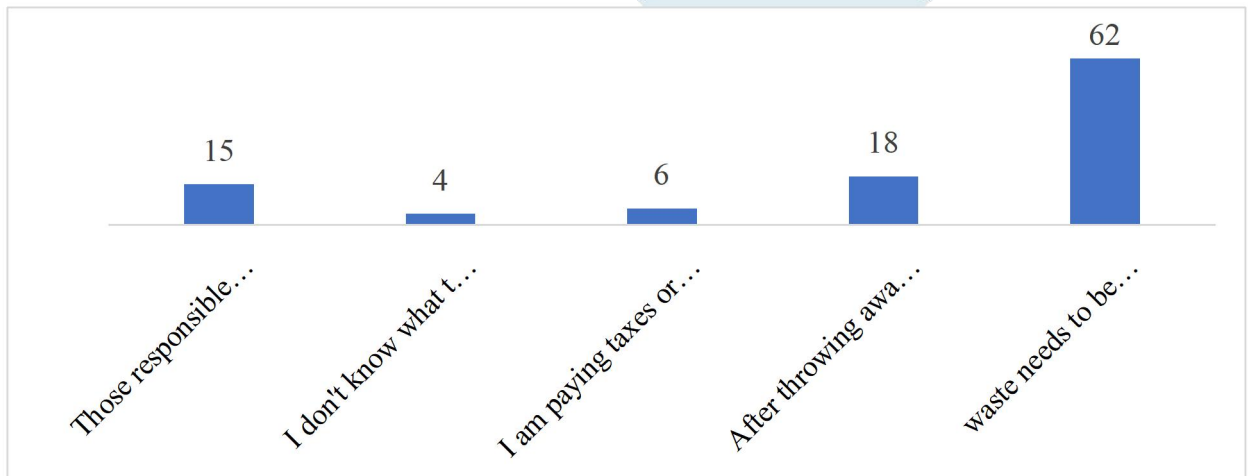


Figure 3. People's Attitudes Toward Waste Disposal in the Environment

In response to the third question, which examined people's attitudes toward waste disposal in the environment, it was found that 30% of respondents were indifferent to waste issues, while 70% expressed concern about waste disposal and its harmful effects (see Figure 3).

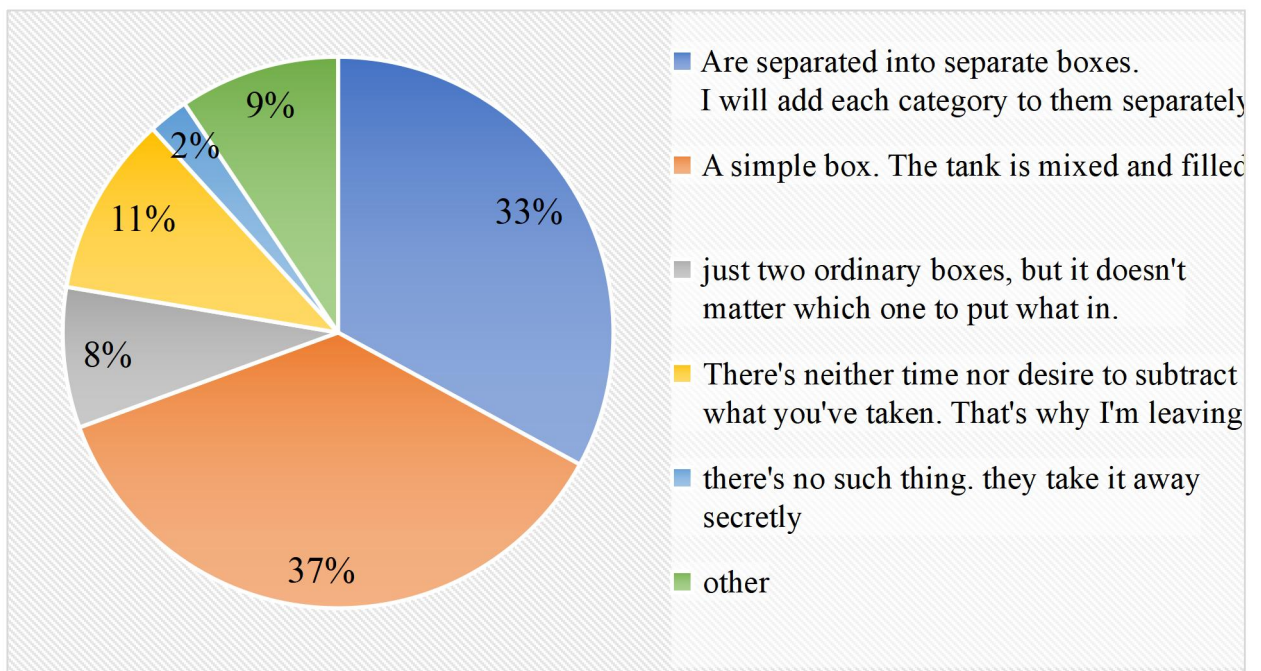


Figure 4. What Kind of Waste (Disposal) Container (Cistern) Do You Use?

The fourth question examined the condition of waste containers and people's attitudes toward disposing of waste in designated bins, yielding the results shown in Figure 4. Responses indicated that 33% of respondents practice waste segregation, while the remaining 37% do not separate waste, resulting in mixed disposal. This complicates the recycling process and incurs additional costs.

Overall, 78% of residents aged 18 to 25 living in Nukus demonstrate a positive attitude toward the environment and exhibit a developed subculture of maintaining cleanliness in their city.

1-table

Question 5. What is your attitude toward encouraging the collection and disposal of waste into designated bins?

Answers to the questions	Number of respondents	Share in percentages
I would separate and collect waste into designated containers according to the established requirements.	640	76%
It depends on the amount of financial incentive.	210	24%

In response to question 5, nearly 100% of respondents expressed support for initiatives encouraging proper waste disposal if an incentive system were in place.

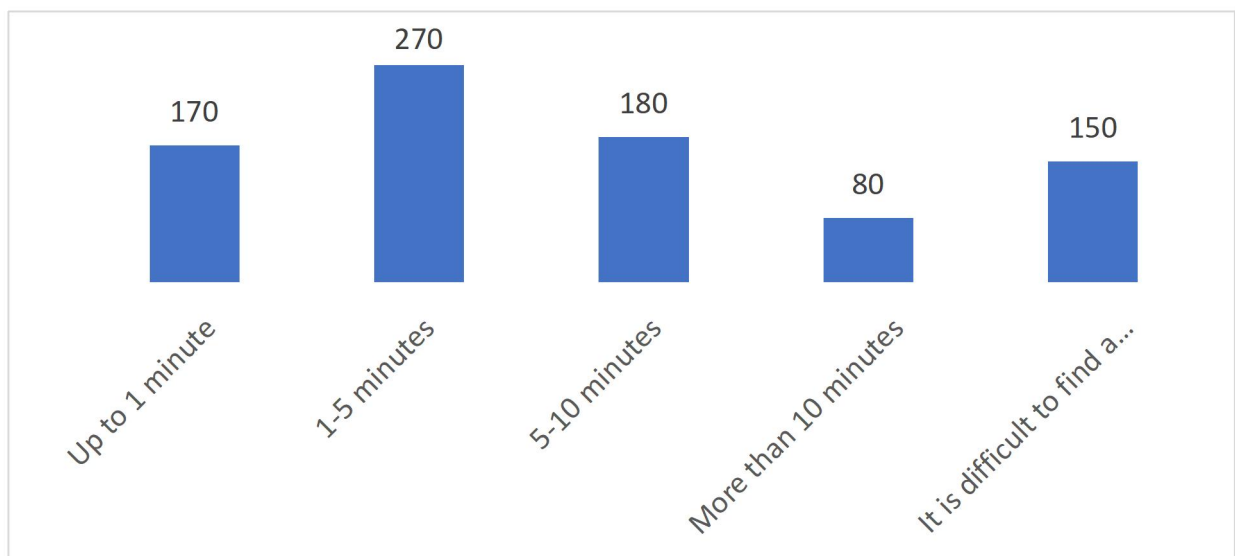


Figure 5. If You Need to Dispose of Waste (From Food or Drink) on the Street, How Much Time on Average Would You Spend Taking It to a Designated Bin?

Question 6 investigated the time respondents spend walking to waste containers, an important factor influencing proper waste disposal (see Figure 5). Approximately 20% reported spending about one minute, while 31% indicated spending between one and five minutes. The availability and proximity of waste containers significantly affect waste disposal behavior; greater distances or lack of containers often lead to improper disposal, increasing environmental pollution.

According to the survey results, the majority of residents aged 18–25 in Nukus show a generally positive attitude toward environmental cleanliness and ecological responsibility. Specifically:

58% reported handing over used polyethylene bags to specialized services, while 42% disregarded the environmental risks.

Around 40% classified certain waste types as “hazardous,” though overall awareness of household waste’s environmental impact remains limited.

70% recognized the necessity of proper waste disposal, while 30% were indifferent.

33% practiced waste segregation, but 37% mixed their waste, complicating recycling efforts and increasing costs.

Nearly all respondents expressed support for incentive systems to encourage proper waste disposal.

Despite the emerging ecological culture among youth, challenges persist: a significant portion of the population remains unaware of environmental risks, and infrastructure issues like insufficient or distant waste bins hinder proper waste management.

Waste mismanagement is among the most pressing environmental threats today, contributing to soil, water, and air pollution, ecosystem disruption, and health risks. Persistent plastic, chemical, and industrial waste exacerbate ecological imbalances. Therefore, improving waste segregation, reducing waste generation, enhancing recycling, raising environmental awareness, and upgrading waste infrastructure are critical tasks. Each citizen’s environmental responsibility and daily attention to waste management are vital steps toward a sustainable and healthy future.

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