UTDC: 504.03 (621.798)

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ISSUES OF USING ENVIRONMENTALLY FRIENDLY PRODUCTS TO REPLACE HARMFUL POLYETHYLENE BAGS IN THE SOCIAL SPHERE

Abstract: *The article provides a detailed overview of global geoecological problems in the world, their impact on Uzbekistan, in particular the problem of Waste landfills in our country and polyethylene pollution. It also examines the research of local and international scientists on this issue, and provides various solutions and recommendations to prevent this problem.*

Keywords: *Polyethylene bag, Eco-bag, plastic waste, greenhouse effect, ecology, Kalika (Calico), toxic substances, Waste landfills, polyethylene.*

Introduction: There are many geo-ecological problems on our planet today, and they are increasing day by day. The 15 biggest geo-ecological problems of 2024 were recently announced. The list is headed by problems such as global warming, poor governance (in relation to the climate crisis), food waste, biodiversity loss, and plastic pollution.

Of the above problems, one of the most urgent in today's rapidly developing industry is plastic pollution. After all, this product is not only a cheap raw material in industrial sectors, but also increasingly becomes the most commonly used product in people's daily lives. Plastic products enter people's daily lives in various forms.

Methods: The article examines in detail the causes of this problem, develops several proposals and recommendations for its prevention and the use

of substitute products. In particular, the article uses methods such as geographical comparison and statistical analysis.

Results: Every year, 3 trillion tons of plastic bags are used worldwide. If we tied all the plastic bags on earth together, it would be enough to wrap the Earth 4,200 times. In one second, 160,000 plastic bags are used and thrown away worldwide. This is certainly not a small number! Different countries have come up with their own solutions to solve the problem. For example, in the UK, a plastic bag tax was introduced, which resulted in 15 billion plastic bags being taken out of circulation [4].

This problem is not new for Uzbekistan, but it is still one of the problems that has not yet found a solution. Therefore, if we do not find a solution to such problems now, it may have a negative impact on the future of young generations. In Uzbekistan, 30 million cubic meters of household waste is generated annually, which is collected at more than 230 sites. The sites where waste is collected are mostly lowlands, ravines, and quarries outside cities.

Figure 1. Waste landfills in Uzbekistan

According to official data, for every million tons of household waste, there are 360,000 tons of food waste, 160,000 tons of paper and cardboard,

55,000 tons of rags, up to 45,000 tons of plastic, etc. They also contain large amounts of materials such as metal (especially non-ferrous metals), glass, wood, and rubber [1].

Currently, there are 221 Waste landfills across the country, ranging in size from 0.5 hectares to 70-80 hectares. The lifespan of most Waste landfills is 20-30 years. These Waste landfills were built without due attention to waste disposal requirements [2].

In addition, there are also illegal Waste landfills, and in 2024, 1,928 illegal Waste landfills were identified on an area of about 721 hectares in the country [3].

Table-1

Regions with the largest illegal Waste landfills in Uzbekistan

Name of regions	Number of landfills	Area of landfills
Tashkent region	363	98,6 hectares
Republic of Karakalpakstan	243	63,2 hectares
Navoi region	216	112,4 hectares
Namangan region	195	65,2 hectares
Andijan region	180	42 hectares
Khorezm region	168	22 hectares

Note: The table was compiled by the authors based on information from the official website of "Uzbekkosmos".

Plastic bags release toxic substances from themselves with the help of heat. For example: the water inside the polyethylene shell has been exposed to the sun at least 3-4 times before it reaches your hands from the factory, and under the influence of the sun, the plastic releases toxic substances into the water. When you drink it, it can lead to factors that can cause cancer. Or, you put hot bread in a plastic bag and go home and eat it, but by the time you get home, the plastic will have transferred its toxic substances to the bread, and as a result of consuming it, the human body can be poisoned.

The following can be noted as a solution to prevent and solve this existing problem. Prove that everyone uses organic shoppers, eco-bags, paper bags and

boxes instead of plastic bags, and that this is both environmentally and financially preferable (Figure 2).

Figure 2. Polyethylene bags replacement shoppers

It is also necessary to show that in our daily lives we should not bring plastic close to the products we consume. It is advisable to do this in two stages:

In the first stage, the importance and convenience of eco-bags will be promoted among the population (articles and abstracts on this topic will be published in newspapers, magazines, and other types of media).

In the second stage, our domestic markets will be saturated with these products.

Eco-bags can be used for a variety of tasks, and importantly, since they are 100% organic, they do not require recycling. Many times when we go to markets or various shopping malls, we ask vendors to put our purchased products in plastic bags. This certainly poses a great threat to our ecology.

Now imagine how much resources we would save and how beneficial it would be for the environment if each of us went shopping with our own organic shoppers. Especially in our country, it is much cheaper. For example, the price of 1 meter of cotton calico fabric is 16,100 soums (fabric width 160 cm.) From 1

meter of this fabric, you can sew 4-5 organic shoppers. Bags for storing dry products can be made from 10-15 meters of calico fabric.

An approximate calculation of the economic and environmental benefits of an eco-bag and the costs for its implementation has also been made, and the costs for each eco-bag, of course, depend on its size. An eco-bag with dimensions of 30 cm. height and 20 cm. width will cost an average of 14,830 soums. Of course, it is cheaper than a 5-kilogram 30x50 cm. polyethylene bag (1 package is 400 soums). But one person uses 365 plastic bags during the year and spends 146,800 soums. Since eco-bags are reusable, they can serve you for up to 2 years. For this reason, reusable eco-bags are a much cheaper and more convenient solution.

So, eco-bags will help us save 131,970 soums per year. If we initially produce 1,000 eco-bags for the domestic market, we will need a total of 15 million soums. At the same time, it is advisable to allocate funds for advertising eco-bags. After all, later, when the project begins to yield positive results, we will be able to transfer the production of eco-bags to private entrepreneurs. We can also produce local brands of eco-bags and export them.

If Eco-bags are introduced into mass consumption, the following can happen:

- Unemployed people, especially women, can be employed to sew eco-bags;
- Small businesses and private entrepreneurship can further develop;
- Ecological culture among the population will develop;
- Natural resources will be saved;
- Anthropogenic impact on the environment will be reduced;
- The outskirts of cities and villages will be cleaned of waste;

Conclusions: Whatever you do, you do it for your own health and the future of your children. Because the plastic bag you use does not leave your life even after it goes to the landfill. There, during decomposition, it breaks down into microplastics and can end up in all the vegetables, fruits and even water you

eat. Burning them is also not an option to solve the problem, because when you burn it, substances that deplete the ozone layer rise into the air.

References:

1. A.N. Xodjimatov, N.R. Alimqulov “Ekologiya va tabiatni muhofaza qilish” darslik. Toshkent: “Inovatsion rivojlanish nashriyot – matbaa uyi” 2020. - 228 bet

2. https://kun.uz/news/2019/07/24 The problem of waste in Uzbekistan: overflowing landfills, unprotected nature, the need for a new mechanism

3. https://uzspace.uz/oz/news/view/563 Information from the official website of the Agency for Space Research and Technologies under the Ministry of Digital Technologies of the Republic of Uzbekistan.

4. https://earth.org/the-biggest-environmental-problems-of-our-lifetime.

5. Resolution of the State Committee of the Republic of Uzbekistan for Ecology and Environmental Protection No. 3197 “On approval of the Instructions for the design and use of solid household waste landfills”. 19.11.2019. Tashkent. https://lex.uz/uz/docs/-4600882

6. Акабоев, И. З. (2019). Важность картирования населения в географических исследованиях. *Экономика и социум*, (12 (67)), 162-164.

7. Akaboyev, I., & Tokhtanazarov, A. (2022). Geoecological problems caused by anthropogenic activity at the varzik reservoir. Theoretical & Applied Science, 116, 764-768.

8. Akaboyev, I. Z. (2024). Iqlim o‘zgarishi va uning oqibatlarini o‘rganishda GATdan foydalanish imkoniyatlari. *Hamkor konferensiyalar*, *1*(3), 303-306.

9. Akaboyev, I. Z. (2024). Possibilities of using geographic information systems in the study of mountain glaciers. *Экономика и социум*, (5-2 (120)), 1632-1636.

10. Акабоев, И. З., Хакимов, М. М., & Турдалиев, И. Э. (2023). ЗНАЧЕНИЕ ЭКОЛОГИЧЕСКИХ КАРТ В ОХРАНЕ ПРИРОДЫ И ОКРУЖАЮЩЕЙ СРЕДЫ. *Экономика и социум*, (6-1 (109)), 593-598.

11. Akaboyev, I. Z., & Qarorov, Z. R. Iqlim o'zgarishi natijasida yuzaga kelgan ayrim geoekologik muammolar.". *Янги Узбекистонда география фани ва таълимидаги муаммолар" мавзусидаги республика илмий-амалий конференцияси материаллари, Жиззах-2022*, 431-433.