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ON THE STATUS OF WASTE PROCESSING IN THE FRAMEWORK OF THE CONCEPT ON THE TRANSITION OF KAZAKHSTAN TO A GREEN ECONOMY

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Abstract. One of the most important strategic goals of Kazakhstan is the transition to a green economy. The article provides data on waste disposal problems. The relevance of this article is not in doubt, because at the moment the problem of waste processing is considered not only at the national level, but also on a global scale. The article identified problems that arise during the implementation of the Concept of transition to a green economy, which was shown by statistics for 2017-2018. Changes in the Environmental Code of the Republic of Kazakhstan are considered.

Keywords: green economy, hazardous waste, household waste, natural resources, industrial waste, radioactive waste.

Currently, Kazakhstan has faced the problem of serious deterioration of the state of natural resources and the environment for all the most important environmental indicators.

It is for this reason that Kazakhstan has adopted national development programs and strategies in order to transition to a green economy.

On May 30, 2013, the “Concept for the transition of the Republic of Kazakhstan to the green economy” was adopted. The tool is the Environmental Code of the Republic of Kazakhstan introduced in 2007 [1].

The concept considers a wide range of problems and measures to solve them. In this article we will consider one of the problems noted in the Concept as waste processing.

The current situation in the field of waste management in Kazakhstan can be characterized by the following problems:

1. The legacy of historical industrial waste.

Over the previous decades, significant historical volumes of waste from heavy industry, agriculture, and mining have been accumulated. A significant part of such waste is toxic, and part of it is radioactive. The consequence of such waste is a negative impact on human health. 97% of municipal solid waste is disposed of in uncontrolled landfills and in landfills that do not meet sanitary standards.

First of all, the local authorities need to tighten control over the amount of waste disposal of enterprises. The use of reclamation and the strengthening of sanitary and epidemiological control will also be acceptable.

In 2018, 295.5 million tons of non-hazardous waste, 149.96 million tons of hazardous waste and 0.13 million tons of radioactive waste were generated in the Republic of Kazakhstan.

Table 1-Volumes of generated waste for 2017-2018 (million tons)

№	Types of waste	Volume	
		2017	2018
1	Hazardous waste	126,9	149,96
2	Non-hazardous waste	278,2	295,95
3	Radioactive waste	0,16	0,13

The volume of hazardous waste generated decreased in 2017 and increased in 2018 by 23.1 million tons.

1. The growing volume of household waste.

The volume of household waste in urban areas (330 kilograms per inhabitant per year) mainly corresponds to comparable indicators for countries with comparable GDP per capita. With an increase in wealth, an increase in solid waste of more than 50% is projected by 2025 [2].

The organization of public services does not meet the standards. Outside large cities, on average, only a quarter of the population has access to solid waste collection services. There are also significant regional differences in service coverage. The methods for transporting and disposing of municipal solid waste do not meet the standards.

97% of municipal solid waste without processing and extraction of valuable secondary resources is disposed of at uncontrolled landfills and landfills that do not meet sanitary requirements.

In 2018, according to the Committee on Statistics, the Republic of Kazakhstan generated 4.3 million tons of municipal solid waste, of which 2.8 million tons were municipal waste collected by specialized enterprises and individual entrepreneurs for the collection and transportation of waste, the number of which was 601 units.

2. Undeveloped infrastructure for the collection, processing and disposal of waste.

Technologies and infrastructure do not meet modern requirements due to the lack of economic incentives, as well as other motivating aspects - for example, some standards and requirements exist, but their level of implementation is low due to insufficient control by the state.

In addition, there are not enough incentive measures for local authorities and businesses in the waste management sector to increase the level of value added extraction by processing and composting or generating energy from municipal waste. Thus, the recycling volume is less than 5% of the total volume of municipal solid waste. In fact, Kazakhstan needs to rebuild an integrated waste management system, since the organizational and legal framework, in fact, are absent [3].

The formation of this system should be implemented using the following approaches:

a) the creation of an agreed waste management system with the provision of a full range of services and comprehensive landscape protection;

b) reduction in the number of landfills with the transition to widespread use of processing and recycling, as well as the extraction of useful substances and materials, fuel production through waste management;

c) development of a closed-loop economy with multi-turn use of products both within and outside the value chain;

d) improving the environmental situation and reducing the technological impact on the environment.

In this regard, in order to develop the sphere of processing of municipal solid waste, the regulatory framework has been improved. In particular, amendments were made to the Environmental Code:

- the concepts of “separate collection of municipal waste”, “secondary raw materials” were introduced, requirements for them were established;

- extended obligations of manufacturers (importers) have been introduced;

- A ban on the disposal of certain types of waste at landfills has been introduced.

So, since 2016, the disposal of mercury-containing lamps and scrap metal, waste oils and liquids, batteries, electronic waste has been prohibited at landfills.

From January 1, 2019, a ban on the disposal of waste paper, cardboard, plastic, paper and glass wastes comes into force, and from 2021 on the burial of construction and food waste. The introduction of these standards allowed to stimulate and develop small and medium-sized businesses in the field of waste processing. In 2018, in coordination with the Ministry of Energy, akimats approved a package of measures for the modern utilization and recycling of municipal solid waste with the wide involvement of small and medium-sized businesses and established deadlines for the implementation of measures.

The Ministry of Energy (Ministry of Ecology of Geology and Natural Resources) coordinates and monitors their implementation. In the field of waste management, there are the following achievements:

- the share of recycled and disposed industrial waste in 2018 amounted to 32.2%, municipal solid waste - 11.5%;

- 72% of the country's population are provided with waste collection and disposal services. Separate collection has been introduced in 51 settlements, sorting of municipal solid waste is carried out in 30 cities and large settlements with obtaining high-quality recyclables for processing/

There are more than 150 enterprises that sort and process waste and produce more than 20 types of products. The number of enterprises is growing annually[4].

Summing up the results of 2018, it should be noted that work is being carried out in the Republic of Kazakhstan on the greening of all sectors of the economy and social sphere. State bodies, enterprises, public, scientific and other organizations have implemented a number of measures in the field of environmental protection [5].

In 2018, the Ministry of Energy of the Republic of Kazakhstan carried out the formation and implementation of state policy in the field of environmental protection, nature management, protection, control and supervision of the rational use of natural resources, the management of municipal solid waste, the development of renewable energy sources, and the government's development policy for green economics".

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