
Geographical and seasonal issues of waste utilization in Sochi before, during and after the Olympic Games

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Abstract

Worldwide the problem of municipal solid waste (MSW) management is one of the highest priority, ranking in the urban economic system the second highest costs and investments after the sector of water supply and sewerage. After the World Conference on the Environment (Rio de Janeiro, 1992) in all industrialized countries, transition countries and in many developing countries began to develop national, regional and local plans for the protection of the environment, an important component of which is the waste management problems. It poses a particular problem of solid waste in the south and especially the resort towns. The structure of waste is a source of danger to the public because of the large amount of plastic and polymers in their structure as well as increasing the rate of degradation and the appearance of specific substances, caused by high temperatures. Seasonality waste also creates additional problems, because the equipment load levels of processing vary widely in winter and summer.

In this regard, in the cities of Russia also began to develop a strategy for Waste Management. An important impetus for change in this area was the decision to hold the 2014 Winter Olympics in Sochi. Among the other points of the Winter Olympics in Sochi - stands out for its contrast: it combines mountains, humid subtropics and the sea coast.

Each of these Olympic centers were their features and even innovations in the processing of municipal solid waste. In recent decades, every Olympic capital is trying to make the Olympic Games the most "green", that is, to introduce new standards, aimed at combating climate change, maximize the use of environmentally friendly transport, and use of waste recycled.

The problem of processing of municipal solid waste in Sochi is already several decades. Waste disposal in Adler and Loo are in operation 20 and 50 years respectively, their capacity has long been exhausted, and the possibility of expansion and development is limited due to lack of additional space. Officially, they are closed, but actually continue to have serious negative impact on the environment and living conditions of the population. Their impact is compounded by the unfavorable location of landfills. Both of them are located in close proximity to residential areas and recreation areas, at a distance less than 500 meters from the river beds Bith (Loo) and Small Herota (Adler).

Prior to the 1990s in Sochi Navaginsky operated landfill. Ten years ago it was closed, but not remediated, and therefore continues to have a negative impact on the environment.

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Also, in 1984, he was commissioned in Sochi incineration plant, but in December 1991 was completely closed at the request of the environmental authorities.

Back in 2007, two crowded landfill existed in Sochi and dozens of illegal dumps in rural areas and in the city. But the decision to hold the Winter Olympics in Sochi in 2014 was the impetus for change in the situation in the field of solid waste management. The city authorities have decided to close the landfill in Adler and emergency remediation of landfills in the Loo and the construction of fundamentally new for Russia complexes for processing solid waste.

. Waste processing complex 1 with the stated capacity of 200 thousand tons of solid waste per year by 2012 should completely solve the problems of the eastern part of Sochi - from Krasnaya Polyana to Dagomys. Wastes of Lazarevskoe district offered, according to the plan for the city cleaning process on the complex 2, capacity of 100 ths. tons in Buu. The structure of both complexes include waste processing plant, where waste will be pre-sorting and processing. Processed into useful products will be (according to different sources) from 10 to 50% of all MSW. The remaining part of the unprocessed offer briquette and safely disposed of in a specially equipped training ground complex harmful effluents are going to neutralize wastewater treatment plants, and gas is removed, avoiding the emission into the atmosphere, polymers - processed into secondary raw materials, organic waste - composting. Such a waste-processing complex works in the Spanish resort of Alicante. The morphology of the materials in Sochi in Alicante similar: The resort is not large accumulations of hazardous industrial substances, and the compost can, as in Spain, serve as fertilizer and give new impetus to the development of the Sochi agriculture. But in 2012 the new complexes had a problem: sorting plant 1 opened, and landfill for the disposal of briquettes yet. Another, also a temporary problem lies in the fact that the garbage that had took on landfill in Adler, driven across town to the landfill in Loo, closed. Also caused serious doubts claimed for 2 years prior to the Olympic Games at a high percentage of recycling of solid waste recycling in Sochi. It's been more than 3 years after the Olympic Games, but, unfortunately, the "zero waste" concept in the Greater Sochi in fact not realized. 100% of waste disposed of in the territory of the municipalities of Krasnodar Region.

Keywords: Olympic Games, urban ecology, waste utilization, solid waste management