

## THE PROBLEM OF PET-WASTE UTILIZATION

*M.P. Samokhovets*

*Pinsk Branch of Belarusian State Economic University*

PET-was discovered before the Great Patriotic war in 1941 by the Soviet chemists only for military needs. They did not assume that their development will get such popularity and become a subject for discussions about influence on the environment and people's health. When summer begins we start to sink in a «plastic ocean». Many different empty bottles from „Sprite“, „Coca-cola“ and beer fill in streets, beaches, parks and places of recreation, forests and fields. When we add to this amount plastic glasses and packages from other products we shall receive a real picture about the size of plastic invasion.

Only for drinks PET-container is used by 89 enterprises of our republic. And there are the importers of thousands of packages with drinks from other countries. According to the calculations of the experts of Protection of the Environment and Natural Resources Ministry 15 thousand tons of PET-waste are accumulated up in Belarus annually. It is easy to count up that there are 25 plastic bottles per each inhabitant every year whether he buys drinks or not. This number is growing fast from year to year but the gathering and processing of waste are not actually conducted.

However, constant growing amount of polymeric waste products is only one side of a „medal“. The second one is connected with more serious problems because these waste products contain danger materials for our environment. The bottle can lie in an open air from 20 till 100 years. PET-container is steady against the influence of sun light and practically does not decay in the natural way. Therefore, soon we can speak about the ecological catastrophe if there are no urgent and cardinal steps in this direction.

There is a technology describing the destruction of plastic waste products by their decomposition in high-temperature ovens with a difficult system of clearing of departing gases. In fact, while burning PET-waste toxic and especially harmful for people's health substances allocate. For this reason PET-bottle is the most difficult type of plastic in repeated processing. This technology is very expensive and nowadays such equipment is absent in Belarus. For example, a Korean line that processes PET-bottles (and not only them) with all their attributes costs \$1 m.

Therefore, it is necessary to find other ways how to solve this problem. It is recycling of PET-waste and building of specially constructions. At the moment polymeric waste products are placed directly open-air. So harmful substances can get to the ground, water and air. They can enter other connections, and it is difficult to assume the consequences of these processes.

Some Belarusian enterprises studied the technology of using waste products and they produce objects necessary for daily life (cases for telephone sets, films for agricultural needs, dust containers, etc). By the way, there are corresponding domestic lines in our republic.

The only problem is gathering and processing of this plastic garbage. As always, the main obstacle today is absence of necessary financial resources. The price for one ton of PET-bottles is 240 thousand roubles or 10 roubles for one bottle. In this situation it is impossible to interest neither private people in gathering, nor producers in repeated use. Who will agree to bring 100 bottles to earn only one thousand roubles? Besides, calculations show that it is necessary to spend, at least, 350 thousand roubles for the organization of gathering and transportation of one ton of PET-waste to the places of their processing.

Surprisingly, it is impossible to make good profits from waste in our country. According to Vitaly Radukevich, Belvtorpolimer director, only in Grodno up to 1500 tons of polymer waste are dumped annually. The losses bound with it can be estimated approximately in \$18–20 million. Chiefs of recycling firms, both state and private, declare the necessity of changing of the tariff policy, creation of favorable conditions for investments in this sector as it has already happened in Russia. Without that the potential raw materials go straight to a common dump (by the way, the term of decomposing of polymer waste is boundless). Eventually, we risk to transform the huge areas around our cities in reservoir of polyethylene waste.

## **ПЕРСПЕКТИВЫ РАЗВИТИЯ СЕЛЬСКОГО ТУРИЗМА В БЕЛАРУСИ**

*М.П. Самоховец*

*Филиал УО «Белорусский государственный  
экономический университет» в г. Пинске*

По мере экономического роста, наряду с материальным производством, все большее значение для экономики Республики Беларусь приобретает сфера услуг, где особое место занимает сельский, или