

RECYCLING OF POLYMER WASTE IN THE CONTEXT OF DEVELOPING CIRCULAR ECONOMY

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Abstract

The paper deals with the problem of recycling and a review of the problem field of handling polymeric materials is carried out, on the basis of which commonality for the European space of their disposal and recycling problems is shown. Ways of solving them are identified and the leading dynamics of European approaches to waste management compared to national ones are revealed. It is shown that the tempos of formation of polymeric wastes practically coincide with the tempos of their processing, which indicates an increase in the technogenic load on the environment as a result of the continued influx of polymeric materials into it. The structure and species priorities of polymeric wastes and damage to the most vulnerable sectors of the economy and ecosystems are identified, and the dangerous impact of their destruction on the environment is estimated. Comparison of the main methods of disposal of polymeric wastes used in the world made it possible to evaluate approaches to solving the problem of cyclical handling of polymeric materials wastes, the results of which would be a socio-economic and ecological effect, reducing the impact of the consequences of the destruction of polymer fractions of landfills on environmental quality, as well as significant saving non-renewable fossil raw materials. The expected performance is expressed quantitatively by calculating the integral indicator of the efficiency of polymer waste processing, taking into account the ratio of the sum of recycling effects, expressed in terms of value, to the capital and current costs of the project.

Keywords: Recycling; Ecology; Environment; Polymer waste; Environmental economics.