# The Development of an Environmentally Safe Waste Management System Regarding Socio-Economic Factors

**E. S. Tshovrebov**

*All-Russian Research Institute on Problems of Civil Defense and Emergency Situations of the Ministry of Emergency Situations of Russia, Moscow, Russia*

**Keywords:** waste; forecasting; industrial symbiosis; resource saving; social aspect; man-made accidents; technologies; environmental safety; economic efficiency.

**Abstract:** Scientific and methodological approaches are used to assess the social and economic efficiency of creating an environmentally friendly waste management system, including the formation of a network of eco-industrial symbioses or innovative facilities in the field of resource conservation and the involvement of secondary resources in economic circulation. The subject of the study is the process of technogenic impact of generated waste on the environment. The purpose of the paper is to develop scientific approaches to the formation of a system of environmentally safe waste management, taking into account socio-economic factors, aimed at preventing man-made emergency situations. As a basic principle, a systematic approach to the environmentally safe handling of resource components of end-of-life, used construction and other products has been adopted - not in the form of hazardous waste, but as secondary material and energy resources in demand by society. An analysis of methods for assessing the economic efficiency of projects in the field of resource conservation, waste treatment and disposal was carried out. Approaches to the formation of a cost-effective, environmentally friendly infrastructure for waste processing have been developed. The socio-economic efficiency of creating industrial symbioses of waste processing infrastructure is shown. The obtained research results are intended for use in the process of forming a resource-saving system for environmentally safe handling of used products when developing territorial schemes and regional waste management programs, organizing an integrated system for forecasting and preventing man-made emergencies and their adverse consequences for the environment, territories, and population, economic entities.