

WASTE MANAGEMENT

The Ministry of Environment and Water plays a leading role in collection, publishing and dissemination of information for the state of the environment and in particular the information related to waste management. The Ministry performs these functions through the Executive Environmental Agency and through the system of Regional Inspectorates of Environment and Water, in compliance with the Waste Management Act.

In the centre of the sustainable economic approach is the improvement of environmental effectiveness and the effectiveness of the use of materials, which is of specific importance to waste management. Profitability and efficient use of raw materials, recycling and the substitution of conventional raw materials with bio-materials from renewable sources become increasingly important. At the same time, better solid waste management would also lead to greenhouse gas emission reduction.

In retrospect, waste landfilling has been the most frequently used solid waste treatment method in the EU, but a significant drop has been recorded in its use during the last two decades. From an environmental point of view this is also the least preferred possibility in the waste management hierarchy. According to European Environment Agency, 47 % of the total waste amount in the EU has been land filled in 2004. This trend is expected to be kept and landfilling to reach 35 % in 2020. Utilization and recycling are also expected to rise from their present level of 36 % and reach about 42 % in 2020. Incineration is used only for 17 % of the solid waste in 2004 and the trend is this percentage to reach 25 % in 2020.

These past and expected trends are partially due to dedicated policies directed towards raise in recycling and utilization of packaging waste (ex. Directive on packaging and packaging waste) and divert biodegradable municipal waste away from landfills (ex Directive on the landfill of waste). Reduction as a whole of the solid waste intended to landfilling as a result of the efforts at national and European level to achieve the goals predicted in the 6th Environment Action Programme is observed.

In implementation of the EU commitments of Bulgaria, related to the establishment of a system of facilities ensuring environmentally sound treatment and disposal of the total waste generated in the country and closing of all existing facilities which are not in conformity with the requirements of the legislation and the modern technical standards, the National Waste Management Programme 2009-2013 defines a long term sustainable waste management strategy and a framework of decision making in compliance with the EU legislation and policy.

Packaging waste

Pursuant to the Waste Management Act a hierarchy of waste management has been introduced as a first priority. The second priority is utilization of waste through recycling,

reuse and / or extraction of secondary raw materials and energy. At the end of 2006, the organized solid waste collection has covered 90 % of the population of the country. The stage by stage introduction of a separate packaging waste collection started in 2003. Projects in 7 municipalities were started by 2005 with co-financing from the Enterprise for Management of Environmental Activities. In 2006, projects for separate packaging waste collection of 4 municipalities were approved.

At present six packaging waste recovery organization are operating on the territory of the whole country.

Pre-treatment facilities

In the period of action of the National Waste Management Programme the construction of 23 facilities for pre-treatment, including separation, composting and mechanical and biological treatment to be placed on the territory of the regional landfills or at separate sites depending on the specific conditions in the municipalities is planned.

Hazardous Wastes

Information on hazardous waste on the territory of the country is collected only by the structures of the MOEW.

The generated hazardous wastes quantities for the period 2003-2006 are presented in Table 4. The presented data are based on the annual reports submitted by the companies that generate or treat hazardous waste.

Table 4. Hazardous wastes quantities reported by groups for the period 2003 – 2006

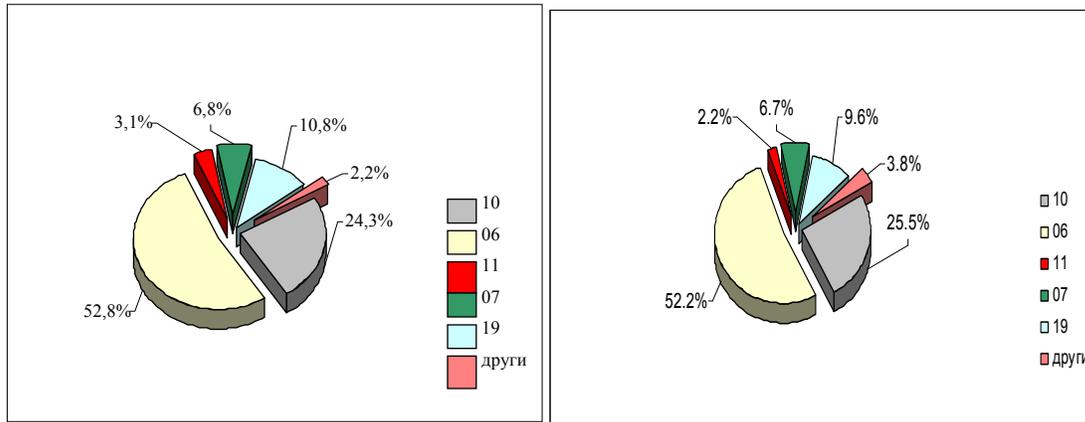
	Waste quantities			
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year	2003	2004	2005	2006
Generated hazardous waste	625 167	526 087	1 113 160	859 875

Source: ExEA

The data reported by the industrial enterprises show that in 2006 the hazardous wastes generated from the inorganic chemical processes take the largest share /52,2 %/, followed by waste resulting from thermal processes /25,5%/ and from the equipment of the waste water treatment plants and the water industry (drinking and process water) /9,6 %/. For

the year 2000 their share was respectively– 52,8%, 24,3% and 10,8%, which shows relatively constant waste quantities, generated by these activities.

Hazardous waste - Groups with the largest share in 2005 and 2006



Group 10 – waste from thermal processes

Group 06 – waste from non-organic chemical processes

Group 11 – waste from surface chemical treatment and coverings on metals and other materials; from non-ferrous hydrometallurgy

Group 07 – waste from organic chemical processes

Group 19 – waste from facilities for treatment of waste from WWTP and from facilities for preparation of drinking water and water for industrial use.

In medium and long terms it can be expected that the quantities of hazardous waste will be reduced as a result of the implementation of the measures envisaged in the corporate programs related to prevention and reducing the content of hazardous substances in waste.

Transport of hazardous waste is carried out mainly by the waste owners or by persons with licence for carrying out activities with that type of waste. The transportation is carried out in compliance with the international legal acts for transportation of hazardous loads, ratified by the Republic of Bulgaria, and in compliance with the national legislation.

Import, export and transit of waste on the territory of the Republic of Bulgaria is carried out in accordance with Regulation 1013/2006/EO

Landfilling of hazardous waste

By the end of 2008 11 landfills for hazardous waste are operating in the country, 8 of which comply with the regulatory requirements for environmental protection.

The main part of the hazardous waste landfills in operation are constructed by the enterprises, generating the waste, accepting only their own waste. The exceptions are only the cells for hazardous waste in the regional landfills of Rousse and Sevlievo as well as the hazardous waste cell on the landfill of “KCM – Plovdiv”, which will accept certain types of waste from other generators.

Hazardous waste disposal facilities

Taking into account the requirement for ensuring an adequate system of disposal installations and facilities it is necessary to construct a National centre for disposal of hazardous waste generated mainly by the activities of small and medium waste generators. The Centre will consist of a hazardous waste landfill and respective auxiliary sites. The national infrastructure for hazardous waste disposal will also include the hazardous waste cells of some of the regional waste landfills.

The companies generating large quantities of hazardous waste, mainly from oil processing and non-ferrous metallurgy, have constructed or are constructing their own disposal facilities, in compliance with the issued Integrated Permits for Pollution Prevention and Control and the endorsed Plans for bringing the existing landfills in compliance with legislative requirements.

In order to ensure the hazardous waste disposal in the country before the establishment of the national system, the export of hazardous waste will be implemented, mainly in the EU observing the requirements of the legislation in force – Regulation 1013/2006 on shipments of waste and the Basel convention on the control of transboundary movements of hazardous wastes and their disposal.

Eighteen installations for disposal of infectious waste from hospitals are operating in the country. Most of them treat their own waste by using autoclave and microwave technologies and some of them work as separate installations collecting and receiving waste for treatment from different hospitals.

Solid (Non-hazardous) waste and sewage

Solid waste disposal facilities

The National Waste Management Programme covers measures and activities on reconstruction and construction of 55 regional landfills for solid waste disposal, some of which with separate hazardous waste cells. These landfills should have the necessary capacity to receive the whole quantity of subject to landfilling waste in the country. By 2008, 27 regional landfills have been constructed and operated which are in compliance with Directive 1999/31/EC on the landfill of waste. They service about 55 % of the

population of the country. Six regional landfills are in a process of construction and 23 regional waste landfills are at different stage of preparation for construction.

Industrial non-hazardous waste disposal facilities

The construction of new facilities for disposal and/or recovery of industrial non-hazardous waste, which to substitute the existing landfills in the enterprises, is an obligation of the respective operators, according to the deadlines in the endorsed Plans for bringing the existing landfills in compliance with the legislative requirements or the issued Integrated Permits for Pollution Prevention and Control. The big generators of industrial non-hazardous waste, mainly from thermal power plants, chemical industry and ferrous metallurgy, are in a process of construction of their own waste disposal facilities.

The smaller generators of industrial non-hazardous waste will use the system of regional waste disposal landfills.

Waste water management (Sewage)

As a result of the climate change the water resources in Southern Europe will decrease. Bulgaria is one of the countries in Europe which are most deficient in water resources. The annual quantity per capita is about 2300 – 2400 m³, and the usable part of it is 800 – 1000 m³/capital/year. The use of accessible water is limited by its worsened quality as a result of pollution with urban and industrial waste water as well as contamination by diffusion sources. Taking into consideration the tendency towards increasing of water consumption, it is expected that the deficit of water will grow and will become a very serious social, economical and environmental problem for the country. That is why the waste water treatment is very important.

The main act for water protection at European level is Directive 2000/60/EC establishing a framework for Community action in the field of water policy (Water Framework Directive). It unifies the requirements of different Directives in order for a general objective to be reached, i.e. the achievement of good condition of the water no later than 31.12.2015 through implementation of the requirements of the single Directives.

One of the most important Directives, included in the Water Framework Directive as an instrument for achievement of good condition of water is Directive 91/271/EEC concerning urban waste water treatment. The engagements of Bulgaria under this Directive are related to the construction of sewage networks and the provision of biological treatment of the urban waste water for all agglomerations with more than 2000 population equivalent.

For carrying out the Directive, Bulgaria elaborated an Implementation Programme. It indicates the needed investments and the terms for construction of the sewage networks and the wastewater treatment plants for every one of all the 430 agglomerations.

The Republic of Bulgaria negotiated the following transitional periods for implementation of the Directive with the European Commission:

- For construction of wastewater treatment plants and construction of sewage networks within agglomerations of settlement with over 10 000 population equivalent – no later than 31 December 2010;
- For construction of wastewater treatment plants and construction of sewage networks within agglomerations of settlement with population equivalent between 2 000 and 10 000 – no later than 31 December 2014.

At this stage there are 80 wastewater treatment plants in the country – 16 of them provide only mechanical treatment and 64 provide both mechanical and biological treatment. In some of the wastewater treatment plants technologies for removing the biogenic elements – nitrogen and phosphorus are applied. Many of the wastewater treatment plants have to be expanded, reconstructed and modernized, because they were put into operation more than 20 years ago and their capacity or used technologies do not meet the current requirements.

Fifteen river valleys are identified in Bulgaria, but almost 1/3 of all existing urban waste water treatment plants are located within only one of them - the Black sea river valley, that corresponds to the national priorities in the field of tourism. With respect to the sewage system, settlements with the fully constructed sewage systems are few of the total number of settlements in Bulgaria. In a big part of the country the sewage system has to be constructed.

In order to implement the commitments for sewage network construction, as well as waste water treatment construction, Bulgaria uses different financial sources. In the period before Bulgaria's EU accession, construction of the sewage network and urban waste water treatment plants was implemented with financial support from the State budget, Enterprise for Management of Environmental Protection Activities (EMEPA), as well as from the pre-accession EU instruments – ISPA and PHARE.

As a full member of the European Union, Bulgaria can use its structural and cohesion funds. In this respect Operative Programme "Environment 2007-2013", was elaborated and approved by the European Commission at the end of 2007. "Improvement and development of water and wastewater infrastructure in settlements with over 2000 PE and in settlements below 2000 PE within urban agglomeration areas" was fixed as its first priority axis. The real implementation of the Programme started in 2008 with the announcement of three procedures for project proposals selection in the Water sector, one of them for technical support for project preparation and two for construction.

Due to the fees, collected by EMEPA under the Tariff of fees for the right of water use and/or permitted use of water body, approved by the Council of Ministers in 2000, different ecological projects have been financed, including projects for construction of a sewage system in the settlements and small fresh water supply networks and treatments for the population at a local level.

However, National Funds and EU financial support can not cover the necessary costs of infrastructure for collection, treatment and disposal of wastewater, that is why in the coming years Bulgaria will rely significantly on funding opportunities through public-private partnerships.