

The method of waste management

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Article presents the issues of municipal waste management in Poland. It is in the EU regulations, which the Polish system must meet, the goals that must be achieved by the directive within the prescribed time. Also presented briefly Polish regulations on municipal waste management, how to ensure the implementation of the European guidelines.

Keywords: municipal waste, waste management, waste disposal, recycling.

I. Introduction

Poland occupies the sixth position in the ranking of EU countries in the category of waste. In 2011, the rate of waste production per capita was 315 kg per person per year. Poland is a country that has very little use new technologies in the economy of waste. Most of the waste (in 2011 - 71%, in 2009 - 78.2%) going to landfill, which is not a desired action by the European Union.

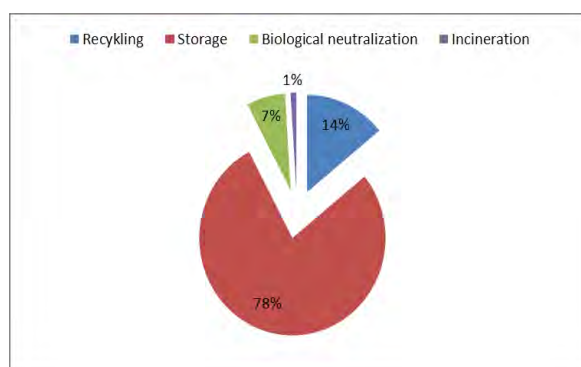


Fig. 1. Source Environmental statistics and accounts in Europe

II. National Waste Management Plan

The Framework Directive requires EU Member States an obligation to achieve certain levels of waste disposal and recovery. It requires that:

- 2015 to introduce separate collection of waste
- 2020 to achieve re-use or recycling of waste paper, glass, metal, plastic, a minimum level of 50% by weight,
- 2020 to prepare for re-use, recycling and other material recovery, including backfilling operations using waste to substitute other materials for non-hazardous construction and demolition waste, with the exception of material occurring in nature.

Landfilling Directive, the second of these requires all member states to reduce the amount of biodegradable municipal waste landfilled to 35% of the total weight of municipal waste generated in 1995 in the country. This is done within up to 16 July 2016.

Directive 2000/76/EC on the incineration of waste introduced operating conditions and emissions from

thermal plants transform the waste in order to reduce their harmful effects on the environment. Based on the Framework Directive National Waste Management Plan 2014 (KPGO 2014) obliges Poland to reduce the amount of biodegradable municipal waste landfilled to 35% (1.5 million tonnes) by 2020, relative to the weight of the waste produced in 1995. This implies the need to develop more modern methods of disposal and use of waste. More than that, this document also provides other purposes, among others. acquisition in 2015 of all Polish citizens organized system of selective waste collection and the collection, reducing by 2014 the mass of municipal waste landfilled to 60% of this type of waste generated, reducing the number of landfills in 2014 to 200 by 2020, reaching a minimum of 50% in field preparation for reuse or recycling of waste such as paper, glass, metal, plastic, produced by households. The need to achieve the intended objectives of municipal waste management affected the percentage increase in recycling (3.6% in 2007 to 6.7% in 2009), while the fall in the landfill. However, to fully achieve the provisions of NWMP in 2014 to increase the contribution of investment and organization, apply new technologies. The most desirable recycling waste installations listed in the National Waste Management Plan 2014 are betting incineration of municipal waste (ZTPOK) commonly called incineration plants and factories mechanical-biological treatment (MBT).

ZTPOK not only provides environmentally friendly waste management, but also allows for electricity and heat.

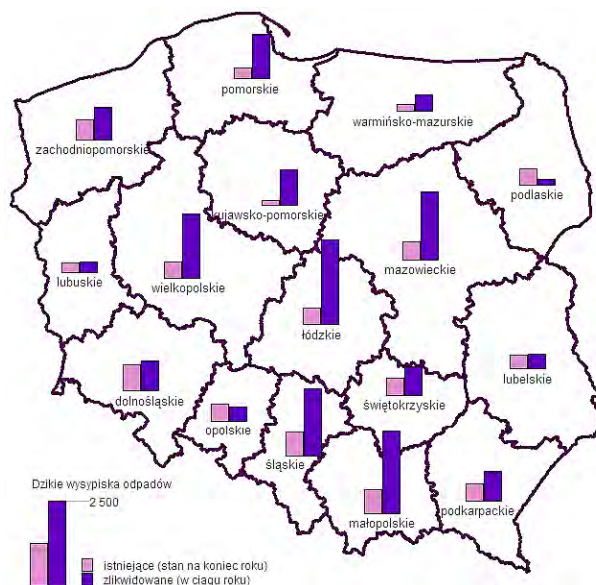


Fig. 1. Source of Municipal Infrastructure in 2011, Information and Statistical Papers, GUS, Warsaw 2012

Regional waste management plans (VWMP) detail the investment plans in this area: the construction or modernization of a total of 87-97 composting and fermentation plants, 28-30 and 27 MBT plants sorting. In the case of plant construction ZTPOK, require detailed

analysis and huge investments . Therefore, the revision and updating of regional waste management plans prepared in 2007-2010 for now decided to invest in six buildings of this type in Cracow , Konin, Poznan , Bydgoszcz, Szczecin and Bialystok.

Provided by the NWMP in 2014 reducing the number of landfills to 200 may encounter considerable difficulties. As mentioned at the beginning of this article , the vast majority of municipal waste to landfill in Poland . It is possible that the implementation of the said plans would not be so troubling if not for the fact that in Poland there are a lot of illegal dumping . Conducted in April 2010 revealed the presence of NIK control illegal waste dumps in 92 % of municipalities in the sample being under control . Here are data on the number of illegal dumps in different provinces in 2011:

Region	Landfills controlled	Illegal landfill sites	
		Existing	Eliminated
Dolnośląskie	42	326	414
Kujawsko-Pomorskie	48	19	541
Lubelskie	62	113	116
Lubuskie	19	66	73
Łódzkie	27	152	2463
Małopolskie	28	284	2355
Mazowieckie	65	176	1686
Opolskie	25	167	117
Podkarpackie	26	169	398
Podlaskie	36	150	27
Pomorskie	35	71	787
Śląskie	27	278	1676
Świętokrzyskie	14	165	393
Warmińsko-mazurskie	25	33	146
Wielkopolskie	68	151	1530
Zachodnio-pomorskie	31	219	480

Fig. 2. Source of Municipal Infrastructure in 2011, Information and Statistical Papers, GUS, Warsaw 2012

After checking many of these illegal landfills have been closed. However, this does not give assurance that it is not established or not to create a new one.

Summary

Poland , as a member of the EU is obliged to implement the provisions of the EU directives . The most important acts related to waste management in our country may include the Law of 14 December 2012 on Waste and the Law of 13 September 1996 on maintaining cleanliness and order in the communities. To fully implement the EU guidelines Poland needs to invest funds in the development of enterprises for the disposal and recovery of waste . It is important to also educate people on waste segregation . Current regulations require owners of waste required to separate waste , but citizens are provided with means for doing so . Although the issue of appropriate containers for different types of waste , their number is too small.

The introduction of new technologies in the field of waste management has a positive impact on the environment. The previously mentioned ZTPOK have less impact on the contamination of soil or groundwater , destruction of flora and fauna , noise and vibration than traditional power plants. They also help reduce carbon emissions and pollutants to the environment [1].

Act on maintaining cleanliness and order in municipalities, which was amended on several occasions, defines the roles of the different actors related to waste management. According to this act of community residents will incur a fee for the management of its waste. This fee is the product of the rate fixed by the municipality and the number of residents of the property, the quantity of water consumed or area of a dwelling. Economic agents or receiving waste in order to take part in a tender organized by the offices of the municipality, must be entered in the register of regulated activity. In addition, given the strategic objectives of the Polish on waste management, this law requires municipalities to fulfill the following levels by weight of biodegradable waste transferred for disposal .

REFERENCES

- [1] Directive Dz. U. Nr 132, poz. 622 z późn. zm.