


Country Factsheet Slovakia (SK)

Slovakia 	
<i>Recent achievements</i>	<p>[Ernst & Young 2011] [EUROSTAT] [SK APOH 2012] [SK NATUR-PACK 2012]</p> <ul style="list-style-type: none"> – 100 % collection coverage – the majority of EU legal requirements are well implemented in national waste legislations – sufficient treatment capacity available (landfill, incineration, recycling plants) – producer responsibility scheme in place for packaging, WEEE, ELV, batteries, and payment system for producers and importers of paper/cardboard, glass, plastics, mineral oils, tyres, aggregates – PAYT has been introduced, with the lowest fee of MS with PAYT and not covering the whole of the country; – full compliance of existing landfills with the Landfill Directive
<i>Population</i>	<ul style="list-style-type: none"> – Total population in 2011: 5,435,273 [EUROSTAT 2012c] – ~ 55 % of total population living in urban areas in 2010 [CIA 2012]
<i>Population density</i>	<ul style="list-style-type: none"> – 111 inhabitants per km² [EUROSTAT 2012c]; [CIA 2012]
<i>Geographical particularities</i>	<p>Slovakia is a land-locked country, largely located in the mountainous territory of the north-western Carpathian arch with the central part formed by the Tatra Mountains. Lowlands extend into the southwest of Slovakia. Most inhabitants are concentrated in the lowlands and valleys [EEA 2010]. The largest city and capital of Slovakia, Bratislava (428,000 inhabitants, 2009) is located at the Danube. No islands or isolated settlements are present in the territory of Slovakia [EUROSTAT 2012c][CIA 2012][EC 2012e].</p>
Features of the national waste management system	
<i>Competent authorities</i>	<ul style="list-style-type: none"> – Ministry of Environment (MoE) – Department of Waste Management: preparation and implementation of waste legislation – Regional Environmental Offices – prepare Waste Management Plans for regions, second-level authorisation – District Environmental Offices: issue permits to waste management operations and activities, approve Waste Management Plans of municipalities and waste producers, control activities Slovak Environment Inspectorate (and some other institutions): inspection on waste legislation – Local municipalities – Slovak Environmental Agency: expert organisation of the MoE, support to MoE by data analysis and preparation of Waste Management Plans of SR

<i>Informal sector</i>	Informal sector participating in the collection of metal waste with a certain market value in Slovakia include Roma population and also people from lower social groups who depend on that activity as a source of income.
<i>State of public awareness</i>	<p>The state of the general environmental awareness of the public is on the low level and need substantial improvement. Thus, awareness rising shall be one of the main priorities to involve the citizens. Promote awareness raising and environmental education addressing all population groups which not only includes the topic of waste prevention and environmental sound waste management, but which includes all issues related to the protection of the environment and therefore natural resources. [BiPRO 2007-2011]. Both SK NGO Priatel'ia Zeme - SPZ as one of the packaging scheme organisations – Natur-Pack – Indicate that households still burn or dump their waste, even not being fully aware of the environmental harm caused by these actions.</p> <p>Initiatives educate about waste concerns especially addressing the stage of early childhood like schools and kindergartens. An example is the realisation of the “Ecologic Olympics” [BiPRO 2007-2011]. The Ministry of Environment organises international festival of films, TV programmes, and video programmes on the topic of the environment (ENVIROFILM) and is issuing ENVIROMAGAZÍN, national periodical magazine to support the environment protection¹.</p> <p>Communication on the separate collection of packaging waste is financed by the Recycling Fund [EC 2012c], the Environmental Fund, European Funds and by municipalities .</p> <p>According to environmental NGO “Priatel'ia Zeme - SPZ”, most awareness campaigns are organised by NGO's and authorised organisations as ENVI-PAK and Natur-Pack (see further “informative instruments”). More initiative from the MoE for big, national campaigns is expected [SK Priatel'ia Zeme - SPZ Interview 2012].</p>
<i>Occurrence of structural dumping, fly tipping and littering</i>	<p>A register containing up-to-date information on illegal dumpsites could not be presented. 8,000 illegal dumpsites were counted within a survey in 1991 and the number could be decreased to an estimated 300 dump sites in the year 2007, although this number is contested by Slovak authorities. However, the problem of old and illegal dump sites still exists and has not been adequately addressed yet [BiPRO 2007-2011]. According to Priatel'ia Zeme, 12,000 (or even more) illegal dump sites still exist [SK Priatel'ia Zeme - SPZ Interview 2012].</p> <p>The past years, new regulations and programs have been implemented to ensure stepwise removal of contaminated sites and minimisation of the risk resulting from them [Meeting report of the COMMON FORUM on Contaminated land in the European Union, 14 & 15 April 2011, Nottingham, United Kingdom, http://www.commonforum.eu/Documents/Meetings/2011/Nottingham/CommonForum_Meeting_Nottingham2011_report_final.pdf]:</p> <ul style="list-style-type: none"> – On 1 November 2009, the Act No. 569/2007 Coll. on geological works (Geological Act) and its amendments came into force. It represents the main legal framework for contaminated land management. – The Decree of the MoE SR No. 51/2008 Coll. implementing the Geological Act came into force on 1 September 2010, and defines certain details on contaminated sites. – In the period 2006-2009, the Slovak Environmental Agency coordinated the inventory process “Systematic Identification of Contaminated sites” with the establishment of the register of contaminated sites (with several classes – potentially contaminated sites, contaminated sites, and remediated sites). – The State programme of Remediation of Contaminated Sites represents the basic strategic document for management of contaminated sites for period of 2010 – 2015. The State programme

¹<http://www.sazp.sk/public/index/go.php?id=1347&lang=en> accessed on 27 February 2012

	<p>was approved by the Government of the Slovak Republic in March 3rd, 2010.</p> <p>In 2010, funds for rehabilitation of 144 landfills were provided by the European Cohesion Fund. Each year, A 'Clean Slovakia' project is set up to solve the problem, but new illegal dumpsites are started. Moreover, nobody wants to pay to remove the illegal waste [SK Priatel'ia Zeme - SPZ Interview 2012].</p> <p>A NGO initiative is TrashOut.Me: citizens can report illegal dumps through a mobile app and locations are made public.</p> <p>Illegal dumps in regions Bratislava, Liptovský Mikuláš, and others are systematically cleaned and removed by an informal organisation of "Greenwatch" in cooperation with local authorities and collection companies [NATUR-PACK 2012].</p>
Legislation	
<i>National</i>	<p>Waste Framework Directive²: Slovakia has completed the transposition of the majority of EU legislation regarding waste management. However, the Directive 2008/98/EC on waste was not transposed into national law. Also the requirement to develop waste prevention programs and targets for recycling and recovery of waste materials and construction & demolition waste were not yet transposed [Ernst & Young 2011]. But these problems will be tackled in the coming new Waste Act, that will come into force on 1 January 2013 [SK MoE 2012] [SK CEPTA 2012]. The most important regulations regarding waste management are:</p> <ul style="list-style-type: none"> – Act No. 223/2001 Coll. on waste and on amendment of certain acts, as amended – the main waste legislation – Decree of the Ministry of Environment of the Slovak Republic No. 283/2001 Coll. of Laws on implementing certain provisions of the Act on Wastes, and amendments; the basic statutory instrument for the Act on waste – Law for the protection of nature and soil (No.543/2003) – Act on packaging (No. 119/2010 later amended) – Act on fee for disposal of waste (No. 17/2004) – Act 582/2004 Coll. on local taxes and fees on municipal waste and small construction wastes as amended <p>By the end of 2013 a new Waste Act is expected, that possibly will compile all existing waste related regulations and decrees</p> <p>Landfill Directive and WAC Decision²</p> <ul style="list-style-type: none"> – Decree of the Slovak Ministry of Environment No. 283/2001 Coll. on execution of certain provisions of the Waste Act, as amended – Decree of the Slovak Ministry of Environment No. 301/2008 Coll. which amendment and supplement Decree No. 283/2001 Coll. on implementing certain provisions of the Act on Wastes. – Act No. 223/2001 Coll. on waste and on amendment of certain acts, as amended – Act No. 17/2004 Coll. on fees for landfilling, as amended <p>Packaging Directive² [DK APOH 2012] [SK MoE 2012]:</p> <ul style="list-style-type: none"> – Act No. 223/2001 Coll. on waste and Amendments of Some Acts as amended – Act No. 119/2010 Coll. on Packaging and on amendments to Act No. 223/2001 Coll. on Waste and on amendments of certain Acts, as amended

² EUR-Lex: <http://eur-lex.europa.eu> accessed on 27 February 2012

	<ul style="list-style-type: none"> – Decree of MoE SR No. 81/2011 Coll. on beverage backup packaging – Decree of MoE SR No. 91/2011 Coll. on implementing certain provisions of the Act on Packaging – Decree No. 283/2001 Coll. on implementation of certain provisions of the Waste Act, as amended
<i>Regional</i>	<i>All regional regulation comes from Waste Act – has to be in line with WA [SK APOH 2012].</i>
WMP and WPP	
<i>National</i>	<p>Waste management plan of the Slovak Republic for 2011-2015 (<i>Program odpadového hospodárstva Slovenskej republiky naroky 2011-2015</i>)</p> <p>http://www.minzp.sk/files/oblasti/odpady-a-obaly/poh/poh2011-2015/poh-sr-2011-2015.pdf</p> <p>http://www.minzp.sk/files/oblasti/odpady-a-obaly/poh/poh2011-2015/priloha_01.pdf (Annex 1)</p> <p>http://www.minzp.sk/files/oblasti/odpady-a-obaly/poh/poh2011-2015/priloha_02.pdf (Annex 2)</p> <p>http://www.minzp.sk/files/oblasti/odpady-a-obaly/poh/poh2011-2015/priloha_03.pdf (Annex 3)</p> <p>http://www.minzp.sk/files/oblasti/odpady-a-obaly/poh/poh2011-2015/priloha_04.pdf (Annex 4)</p> <p>http://www.minzp.sk/files/oblasti/odpady-a-obaly/poh/poh2011-2015/priloha_04.pdf (Annex 4)</p> <p>http://www.minzp.sk/files/oblasti/odpady-a-obaly/poh/poh2011-2015/priloha_05_06.pdf (Annex 5, 6)</p> <p>http://www.sazp.sk/public/index/go.php?id=2095&lang=sk</p>
<i>Regional</i>	According to [SK APOH 2012] the regional plans are not yet adopted in all Slovakian regions. The regional plans are prepared and reviewed as Strategic documents for the moment [SK MoE 2012].
<i>WMP of municipalities and waste producers</i>	Municipalities and waste producers that produce yearly more than 10 tons of hazardous waste and 100 tons of non-hazardous waste will prepare new WMPs in 4 months after adoption of Regional WMPs. It is expected in July- August 2013.
Instruments applied in the field of municipal waste and packaging waste	
<i>Legal instruments</i>	<p>Landfill ban/restrictions/diversion targets [EC 2012e]. Criteria for landfill restrictions are defined in Article 18 Paragraph 3 of the Act No. 223/2001 Coll, in Article 32 Paragraphs 4 – 7 of the Decree No. 283/2001 Coll., in the Annex No. 11b of the Decree No. 283/2001 Coll. and in further legislation. The limit values are estimated only for non-hazardous waste landfills and for inert waste landfills. List of waste types that can be accepted at the landfill is defined in the permit for landfill and they are considered on a case-by-case basis. The non-accepted wastes are listed.</p> <p>In WPM SR 2011 – 2015 the ban of landfilling of wastes with content of organic carbon is higher than 5 % by weight from 2015.</p> <p>Environmental sound treatment standards [EC 2012e]: Slovak Technical Standards: 83 8102 Waste landfilling. General provisions. 83 8102 Waste landfilling. Design of waste landfills. 83 8103 Waste landfilling. Operation and monitoring of landfills. 83 8104 Waste landfilling. Closure and recultivation of waste landfills. 838105 Waste landfilling. Engineering-geological investigation of landfills. 83 8106 Waste landfilling. Insulation of landfills. Design, construction, control and technical requirements. 83 8107 Waste Landfilling. Management of leachates from landfills. 83 81 08 Waste landfilling. Landfill gas,</p> <p>Technical standards of series 83 82 Waste characterisation (36 standards) and 83 83 Methods of testing of dangerous properties of wastes (5 standards)</p>
<i>Economic and fiscal instruments</i>	<p>Landfill tax / gate fee/typical charge.</p> <p>The actual landfill taxes according to Act. 17/2004 are [SK CEPTA 2012]:</p> <ul style="list-style-type: none"> - hazardous waste: 33,1939 €/t

	<ul style="list-style-type: none"> - municipal waste (MSW): from 9,9581 €/t (sorted no constituents) to 4,9790 €/t (sorted 5 constituents) – the most municipalities use the 4,9790 €/t (separate collection is almost in all municipalities) - inert waste (soil, stones, gravel, concrete, ...) 0,3319 €/t - other waste 6,6387 €/t - biowaste 13,2775 €/t <p>The gate fee (MSW) in Slovakia fluctuates around 30 €/t (without VAT). There are also some landfills at level 20 €/t - gate fee is subject of the competition on the market [SK CEPTA 2012].</p> <p>So when we consider the lowest gate fee 20 €/t + VAT (4 €/t) + landfill tax (4,98 €/t), total charge is at minimum around 29 €/t [SK CEPTA 2012].</p> <p>PAYT [EC 2012]: PAYT is introduced in some regions of Slovakia, however has the lowest fee of MS with PAYT (0.17€/kg) [EC 2012]</p> <p>Deposit refund systems [EC 2012]: return system for reusable beverage packaging in shops [EC 2012c]. Activities for the improvement of separate collection systems and the recovery of selected waste types are supported through the Recycling Fund [EEA 2010]. Recycling fees (i.e. contributions to the Recycling Fund) are introduced for the following products: batteries and accumulators, electrical and electronic equipment, glass, including plate glass and container glass (above 10 t/year), mineral lubricant oils, multilayer composite materials, paper and cardboard (above 10 t/year), products made of polyethylenterephthalat, polyethylen, polypropylen, polystyren and polyvinylchlorine, vehicles and tyres for vehicles.</p> <p>Packaging waste [EC 2012] : Producer responsibility scheme for packaging, WEEE, ELV, and batteries, and an obligated contribution to the Recycling Fund for paper/cardboard and tyres; sanction for entities that do not meet the limits for packaging waste recycling and recovery [EC 2012]. Producers or distributors of packaged products are obliged to establish a prevention programme in case the amount of packaging they put on the market exceeds 10 t/year. The programme shall contain quantitative prevention measures, measures for achieving the objectives and control mechanisms for the verification of the fulfilment of those objectives [BiPRO 2007-2011].</p> <p>Fines [EIONET 2009]: Fines are introduced.</p> <p>Subsidies / Funding:</p> <ul style="list-style-type: none"> - European Cohesion Funds are used to invest in infrastructure. - Recycling Fund (Slovak), EU structural funds, state owned Environmental Fund (mostly for municipalities).
Administrative instruments	<p>Cooperation initiatives:</p> <ul style="list-style-type: none"> - Working groups on waste topics (e.g. in 2011 all stakeholders have been involved during the preparation of the new Waste Act)[SK Priatelia Zeme - SPZ Interview 2012]. - Cooperation agreements between municipalities) [SK Priatelia Zeme - SPZ Interview 2012] – formation of municipality associations (there are around 40 associations with the aim of cooperation in the field of waste management. - Memorandum about cooperation in operating the system of collection of WEEE from households in SK among ZMOS (Association of cities and municipalities of Slovakia) and collective systems for EEE³ [SK NATUR-PACK 2012]. - Memorandum on cooperation in collection of packaging wastes from households in SK among ZMOS and collective scheme ENVI-PAK

³ Collective systems for Electrical and Electronic Equipment are schemes similar to Packaging schemes (authorised organisations). EPR for WEEE is covered by the EEE schemes (collective systems). List of the collective systems for EEE is on the page 14.

Informative instruments

Networks:

- ZMOS (Association of cities and municipalities of Slovakia) support separate collection of waste including PPW, and is member of the Recycling Fund⁴.
- Únia miest Slovenska – (Union of cities of Slovakia) is the second association of municipalities in Slovakia, covering important share of inhabitants. UMS also support separate collection of municipal wastes.
- “The Recycling Fund” publishes its activities via TV and journals; and organises workshops for economic operators. The Fund supports separate collection of packaging and non-packaging waste, Slovak recycling capacities and organises information campaigns on collection systems and waste recovery [EC 2012c].
- “ENVI-PAK”, a.s. is a joint stock company (non-for-profit) established to provide for the observation of packaging waste collection duty as a collective scheme for obliged persons from Packaging directive. ENVI-Pak a.s. was granted a PRO-EUROPE license for the use of the "Green Dot". ENVI-PAK is the most important partner to municipalities in contribution to financing separate collection of waste packaging.
- “NATUR-PACK”, a.s. is a collective scheme for packaging and for EEE. It represents more than 3.000 obliged persons – from this point of view it is the biggest packaging scheme with market share of 58% within the all 11 packaging schemes.).
- List of all “packaging scheme”s in Slovakia (11), alphabetically: AWES, a.s., ECO SYSTEM s.r.o., E-cycling s.r.o., ENVI-PAK, a.s., ENVI-REA, a.s., ETALUX, LIMIT RECYCLING SLOVAKIA, a.s., NATUR-PACK, a.s., NOWAS s.r.o., SEWA, a.s. and SLOVMAS, a.s.(<http://obaly.sazp.sk>)
- List of all “collective systems” for EEE in Slovakia (17), alphabetically: ASEKOL SK s.r.o., AWES, a.s., ECO SYSTEM s.r.o., E-cycling, s.r.o., EKOLAMP Slovakia, ELEKOS, ELKOMIN, ENVIDOM, EnviLine, s.r.o., ETALUX, Green company s.r.o., LIMIT RECYCLING SLOVAKIA, a.s., NATUR-PACK, a.s., NOWAS s.r.o., SEWA, a.s., SLOVMAS, a.s. and ZEO Slovakia s.r.o.)(<http://elektro.sazp.sk>).
- “TrashOut.Me” is an environmental project for discovering illegal dumps in your neighborhood and all over the world. It consists of 2 elements; a mobile app which you can get for your iPhone or Android device and a web site with a map of those illegal dump places. The project started in Slovakia, where more than 160 people reported illegal dumps all over the country and these reports were sent to the Ministry of Environment.
- Organisation of waste awareness raising campaigns [SK Priatelia Zeme - SPZ Interview 2012]

Information campaigns: Information campaigns addressing certain target groups (e.g. households, the public, businesses, schools, tourists, industry etc.): Initiatives educate about waste concerns especially addressing the stage of early childhood like schools and kindergartens. An example is the realisation of the “Ecologic Olympics” [BiPRO 2007-2011]], but many other initiatives exist. The Ministry of Environment organises international festival of films, TV programmes, and video programmes on the topic of the environment (ENVIROFILM) and is issuing ENVIROMAGAZÍN, national periodical magazine to support the environment protection⁵. Communication regarding collection and recycling and recovery of packaging waste should be provided by authorised organisations. In addition, the Recycling Fund organizes information campaigns on collection systems and subsequent recovery of waste [EC 2012c].

Slovak Environmental Agency is operating the webpage enviroportal.sk that contains all information on waste production and management as well as other useful information. Some useful information is also available on the webpage of Slovak Environmental Agency: www.sazp.sk

⁴<http://www.transwaste.eu/file/001347.pdf> accessed on 27 February 2012

⁵<http://www.sazp.sk/public/index/go.php?id=1347&lang=en> accessed on 27 February 2012

	<p>Information about current situation in waste management in Slovakia is available on the website www.odpady-portal.sk They mainly focus on waste management in Slovakia but also inform about Slovak and EU legislation, the problems that SR faces towards EU, environmental issues in other countries, ... They are also issuing a periodical magazine "Odpadové hospodárstvo" [SK NATUR-PACK 2012]. This webpage and magazine are operated and published by a private company.</p> <p>The expert journal Odpady is issued by private publisher on a monthly basis. The experts are also publishing their contributions to the Czech – Slovak journal Odpadové fórum, issued by Czech publishing house CEMC Praha. This publishing house is also issuing internet specialised journal Waste Forum which is very popular for Slovak contributors from research and academic environment.</p> <p>Information campaigns are also organised by collective schemes for packaging and EEE. For example, NATUR-PACK:</p> <ul style="list-style-type: none"> – cooperates with NGO DAPHNE – The Institute of Applied Ecology in continual education of children in primary schools and kindergartens. – cooperates with local collection company KOSIT, a.s. in regular organisation of competition in paper's collection in Košice (the 2nd biggest town in Slovakia). – is a partner of school's Olympic games (OLOMPIADA) which aim is to support the separation of waste (in cooperation with local collection company OLO, a.s.) in Bratislava [SK NATUR-PACK 2012]. <p>One of the most popular awareness raising campaigns is organised by SITA and ENVI-PAK during the summer during the biggest Slovak festival of music Pohoda in Trenčín. This event made it to the Guinness book of records. Another successful campaign is organised by OLO Bratislava called OLOMPIADA for school children and students. KOSIT Košice organises a campaign for children KOSIŤÁČIK. Other campaigns: EKOPAKY, Slovak Records, INSA batteries project.</p> <p>Slovak Environmental Agency organises education activities Zelený svet, ProEnviro, EnvirOtázky.</p> <p>Handbook for management of bio-wastes: a manual for Slovak municipalities and local & regional authorities (although knowledge on existence of handbook is low [SK Priatel'ia Zeme - SPZ Interview 2012]).</p> <p>One day per year the most important congress called Slovak Waste Day is realised. A network platform is organised by organisations, private and public companies and institutions under the auspices of Ministry of Environment (APOH, ZOVP). The research conference TOP (Techniques of Environment Protection) with over 200 participants is organised by Slovak technical University in June every year. Also other conferences specialised on waste management are organised regularly.</p>						
<i>Others (to be specified as required)</i>	No other instruments applied in SK according to [SK MoE 2012] and [SK APOH 2012].						
Municipal waste generation							
<i>Total amount of MW generated (in kt)[EUROSTAT 2012b]</i>	<table border="1"> <thead> <tr> <th data-bbox="1054 1576 1323 1626">MS</th> <th data-bbox="1323 1576 1482 1626">EU 27</th> </tr> </thead> <tbody> <tr> <td data-bbox="1054 1626 1323 1666">1,809</td> <td data-bbox="1323 1626 1482 1666">252,095</td> </tr> <tr> <td data-bbox="1054 1666 1323 1756">333</td> <td data-bbox="1323 1666 1482 1756">502</td> </tr> </tbody> </table>	MS	EU 27	1,809	252,095	333	502
MS	EU 27						
1,809	252,095						
333	502						
<i>Total amount of MW generated per capita (in kg)[EUROSTAT 2012b]</i>							
Collection infrastructure (municipal waste including bio-waste and packaging waste)							
<i>Collection coverage for MW (in %)[EUROSTAT 2010]</i>	<table border="1"> <tbody> <tr> <td data-bbox="1054 1805 1323 1861">100</td> <td data-bbox="1323 1805 1482 1861">96.6</td> </tr> </tbody> </table>	100	96.6				
100	96.6						
<p>Collection of municipal waste: Since 2002, the number of separately collected fractions of municipal waste has increased, and the proportion of separated municipal waste, as of 2009, has increased by approximately 2.7 % [EEA 2010]. Current rate of selectively collected municipal waste is about 8% [EEA 2012b]. Since 2010, all municipalities need to organise separate collection. But the effectiveness can differ significantly between municipalities.</p>							

It should be noted however that significant errors exist in data reported to Eurostat. According to the data from the Regional Information System on Waste operated by Slovak Environmental Agency the rate is over 25%.

Separate collection of bio-waste: Since 2006, there is a ban for landfilling and burning, as well as incineration of biodegradable waste from public and private green spaces and gardens. By 2013, Slovakia wants to establish an effective separate collection of kitchen, canteen waste and biodegradable waste from public and private green spaces and gardens (consistent with the Strategy to reduce biodegradable municipal landfilling) [MoE 2011-2015].

Separate collection of packaging waste: The existent infrastructure for separate collection covers 76 % of the population according to Eurostat [BiPRO 2007-2011], 98% of the population according to the Slovak Environment Agency. Since 2002, the number of separately collected fractions of municipal waste has increased, and the proportion of separated municipal waste, as of 2009, has increased by approximately 2.7 % [EEA 2010].

In 2009, the total amount of separated municipal waste was – according to Eurostat – 129 kt (paper, glass, plastic and metal) or 22.61 kg per capita. The existing infrastructure for separate collection was not used to its full capacity though and amounted to 76% (100% would result in 35kg per capita). However, in order to meet the WFD targets, 56 kg per capita to be recycled/prepared for re-use should be achieved [BiPro 2007-2011]. Next, separate collection has been introduced for hazardous wastes, such as batteries & accumulators, solvents & paints, WEEE, etc.) [MoE 2011-2015].

All municipalities are obliged to organise separate collection, but some municipalities have door-to-door collection, others containers per street. Other municipalities have only one separate container for the entire village, resulting in only a small share of separate collection⁶. Nevertheless, they comply with the current waste legislation [SK Priatelia Zeme - SPZ Interview 2012]. In small villages (having less than 200 inhabitants) the systems are not effective and are expensive due to the small amount of inhabitants.

According to [Ernst & Young 2011] 8 % of the total municipal waste was collected selectively in 2009, including glass, paper, plastic, metal and wood packaging. But as noted earlier, this rate is contested by Slovak authorities with actual rates being much higher.

There are other 11 packaging schemes (authorised organisations) in Slovakia for supporting packaging waste collection, of which the Green dot scheme is one of them. These organisations have to cooperate with municipalities because they need to collect at least 30% of packaging waste from municipalities, according to current Act on Packaging. For example, NATUR-PACK supports directly the local collection companies which provide a separate collection for municipalities. 1,500 municipalities were supported by this mechanism in 2010 [SK NATUR-PACK 2012]. But also ENVI-PAK has a good program for supporting separate collection directly in municipalities [SK CEPTA 2012].

In Slovakia the amount of packaging put on the market shows a growing trend. As a consequence the production of packaging waste treatment per inhabitant in Slovakia has increased [EEA 2010]. Currently, established separate collection infrastructure is insufficient. Additional investments in modern waste collection and alternative treatment infrastructure are necessary [BiPRO 2007-2011], although it can not be denied that Slovakia has been investing significantly the past years. A non-governmental Recycling Fund is in operation financially supporting the collection, recovery and treatment of waste including packaging waste (metal, glass, plastic and paper) [EC 2012c]. Authorised organisations for packaging and collective systems for EEE financially support the collection, recovery and treatment of packaging waste and WEEE [NATUR-PACK 2012]. The municipality is responsible for the waste collection system [BiPRO 2007-2011]. Separate waste collection has to be considerably improved to meet the WFD requirements [BiPRO 2007-2011].


Treatment infrastructure for municipal waste

<i>Self-sufficiency for disposal of total waste (in %)</i>	100% [EC 2012b]	
Treatment rates	MS	EU 27
<i>Recycling rates of municipal waste (in %)[EUROSTAT 2012b]</i>	3.7	24.9
<i>Composting rates of municipal waste (in %)[EUROSTAT 2012b]</i>	5.2	14.7
<i>Recovery rates of municipal waste including incineration⁰ with energy recovery (in %)[EUROSTAT 2012b]</i>	9.8	17.2

⁶According to Natur-Pack (2012) only small villages deal with this problem

Incineration rates of municipal waste (incineration without energy recovery) (in %)[EUROSTAT 2012b]	0.7	
Disposal rates of municipal waste (in %)[EUROSTAT 2012b]	80.6	38.2
Note: these data present the to Eurostat reported data, although they differ from the own Slovak information system. Municipalities and companies make errors in calculating the data. But as no other official data are available, we use the Eurostat data for our analysis and for the roadmap.		
Information on treatment facilities, compliance/BAT and capacity		
Recycling facilities	<p>The environmental permit register counts:</p> <ul style="list-style-type: none"> – 234 R3 facilities, incl. 109 plastic waste recycling plants and 81 composting plants [MoE 2011-2015] – 79 metal recycling/reclamation plants [MoE 2011-2015] – 92 inorganic substances recycling plants (glass, C&D) [MoE 2011-2015] – 3 paper recycling plants [SK Priatel'ia Zeme - SPZ Interview 2012] – 1 glass recycling plant [SK Priatel'ia Zeme - SPZ Interview 2012] <p>The existing recycling infrastructure is sufficient and could even handle an increased rate of separate collection. According to [SK APOH 2012], Slovakia has enough capacities for all types of material (glass, paper – except cardboard, metal, WEE, plastic different types, tetrapacks, tyres, oil...).</p> <p>Recycling of bio-waste: The treatment of bio-waste is one of the major future issues for Slovakia. The country will most likely not comply with the EU requirements concerning the reduction of biodegradable municipal waste disposed in landfills in 2013. In 2007, the landfilled amount of biodegradable municipal waste was 480,829 tonnes, i.e. 69% of the quantity generated. In 2010, the estimated amount of biodegradable municipal waste increased to 507,253 tonnes i.e. 73% of the generated in 1995. Slovakia therefore met the EU target of 75% in 2010 [EEA 2012b]. But it will be unlikely that the target of 50% in 2013 will be met. Slovak authorities expect that a rate of under 60% should be achievable in 2013.</p> <p>Recycling rates of packaging waste: total plastic waste treatment capacity (plastic packaging waste included) was in 2011 approximately 112,000 t/year⁷ [SK CEPTA 2012]. On a national scale the following information for non-hazardous waste is available:</p> <ul style="list-style-type: none"> – The current national waste management system for waste disposal is strongly dependent on the landfilling practice. The Slovak Republic still has one of the highest shares of landfilling and very limited alternative treatment infrastructure. Only 4% of the waste is recycled while 10% goes to incineration and only 5% of municipal waste is composted [EUROSTAT 2012b] (recycling rate is higher though following Slovak Environment Agency; recycling of packaging waste is for example not taken into account in the Eurostat recycling data). – As from 1 January 2009, all landfills which had not met the technical and legal requirements were closed [SK CEPTA 2012]. Simultaneously, strict guidelines for the administration and control of all operating landfills were set out [EEA 2010]. – Recycling Fund facilitates and supports establishment of the separate waste collection. <p>At present, there is sufficient capacity for the recovery of particularly electrical and electronic equipment, old vehicles, waste oils, used tires, packaging waste (including the capacity to process</p>	

⁷ http://www.recfond.sk/index.php?www=catalog_list&id_catalog=8&navigation_main_id=3&navigation_id=3

	<p>certain plastic waste) scrap, aluminium scrap, lead and laptop batteries and accumulators, waste containing mercury, beverage containers and waste glass. After meeting the recovery targets, construction of new treatment capacity for these specific wastes will no longer be subsidised from public funds [MoE 2011-2015]. Exceptions are the recovery of special plastics, glass, composite and fly ash that are generated primarily from the treatment of old electrical and electronic equipment and vehicles. Where it is necessary, development, research and operation of new technologies for recovery of these materials will be supported [MoE 2011-2015].</p> <p>According to [EEA 2012b], Slovakia has not included much of the recycled packaging waste from households and similar packaging from other sources in its reporting of recycled municipal waste to Eurostat. The amount of recycled municipal waste in Slovakia was significantly lower than the amount of recycled packaging waste. The actual recycling rates in Slovakia are therefore likely to be higher than presented in Eurostat, as also claimed by Slovak authorities.</p>
<p><i>Incinerators with energy recovery</i></p>	<p>2 incinerators for municipal waste (public, treatment of resp. 128 Mt and 71kt in 2009) [MoE 2011-2015]. According to [SK APOH 2012] the capacity will be increased, given the fact that the share of landfilling must decrease. According to [SK MoE 2012] building new incineration plants or increasing the capacity of the existing two plants, provokes substantial public resistance. The Ministry is consciously searching for a way to deal with this aspect of 'not in my back-yard' (NIMBY).</p>
<p><i>Incinerators without energy recovery</i></p>	<p>15 incinerators are operational for industrial waste (incl. 5 for hazardous waste) and 4 co-incinerators (mostly private operators). Hospital waste is burned in 8 incinerators operated by hospitals and other health facilities [MoE 2011-2015] [SK APOH 2012].</p>
<p><i>Landfills for non-hazardous waste</i></p>	<p>106 compliant landfills. Total rest capacity is 17.525.460 tonnes. Slovakia also has 17 compliant landfills with inert waste with a total capacity of 3,7 Mio tonnes) [EC 2012e]</p> <p>Most operators are private. 50% private and 50% public according to APOH (2012). Mainly big cities operate their own public landfills [SK Priatel'ia Zeme - SPZ Interview 2012] [SK MoE 2012].</p>
<p><i>Map with all major installations</i></p>	<p><u>Landfilling</u></p>  <p>Source: [MoE 2011-2015], geographical location of landfills with non-hazardous waste</p>



Source: [MoE 2011-2015], geographical location of landfills with inert waste

Incineration



Source: [MoE 2011-2015], geographical location of incineration plants

Infringement procedures and court cases related to WFD and Landfill Directive

<p><i>Number of infringement procedures and cases brought to the CJEU</i></p>	<p>Nr</p>	<p>Slovakia has infringement procedures ongoing with regard to [EC 2011]:</p> <ul style="list-style-type: none"> - the transposition of the ELV Directive: current Slovak legislation does not sufficiently encourage vehicle manufacturers to avoid using hazardous materials, and the term 'hazardous substances' is not clearly defined - the transposition of the Waste Framework Directive [SK Priatelka Zeme - SPZ Interview 2012][SK CEPTA 2012]
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		Cases were opened for [EC 2011]:								
		<ul style="list-style-type: none"> – illegal waste disposal: Operation of the Žilina-PovažskýChlmec waste site without a site conditioning plan – conformity of national legislation with Directive 94/62/EC on packaging and packaging waste: Slovak legislation does not sufficiently encourage the recycling and the use of recycled materials, and nor does it prioritise energy recovery when it is preferable to material recycling for environmental and cost-benefit reasons. In addition, Slovak law contains some provisions that restrict competition in relation to packaging and packaging waste – full transposition and conformity with Directive 2006/21/EC on the management of waste from extractive industries – insufficient transposition of Directive No. 2006/66/EC on batteries and accumulators and waste batteries and accumulators 								
Fulfilment of targets related to biodegradable waste going to landfills [EC 2012a]										
Fulfilment of target of the Landfill Directive on biodegradable waste going to landfills									73.3%	
									YES	
Statistics on packaging waste [EUROSTAT 2012d]										
	<i>Plastic packaging waste</i>		<i>Paper packaging waste</i>		<i>Metal packaging waste</i>		<i>Glass packaging waste</i>		<i>Total packaging waste</i>	
	<i>MS</i>	<i>EU</i>	<i>MS</i>	<i>EU</i>	<i>MS</i>	<i>EU</i>	<i>MS</i>	<i>EU</i>	<i>MS</i>	<i>EU</i>
<i>Total amount generated (in kt)</i>	91	14,590	151	29,783	26	4,544	88	16,006	395	76,593
<i>Total amount generated per capita (in kg)</i>	16.9	29.2	27.8	59.5	4.8	9.1	16.2	32	73	153
<i>Share of total packaging waste (in %)</i>	23.1	19.0	38.1	38.9	6.6	5.9	22.2	20.9	100	100
<i>Recycling rates (in %)</i>	49.3	32.2	84.2	83.4	61.3	69.5	51.6	67.6	59.9	62.5
<i>Recovery rates including incineration with energy recovery (in %)</i>	51.4	59.7	89.3	90.7	61.7	69.9	51.7	67.6	63.2	74.6
<i>Disposal rates (in %)</i>	48.6	40.3	10.7	9.3	38.3	30.1	48.3	32.4	36.8	25.4
<i>Fulfilment of recycling target of the Packaging Directive on recycling (for 2009)[[EC 2012c]</i>	yes	n/a	yes	n/a	yes	n/a	yes	n/a	yes	n/a

Next steps planned by Competent Authorities	Measures planned	Implementation likely?
<i>Collection</i>	Improve conditions for separate collection by information campaigns and infrastructural investments including adopted collection schemes [BiPRO 2007-2011].	Yes, according to [SK MoE 2012], [SK APOH 2012]
<i>Treatment</i>	Closure of non-compliant landfills and elimination of illegal dumpsites [BiPRO 2007-2011]. Improvement of technical conditions for waste processing and recycling [BiPRO 2007-2011].	Yes, according to [SK MoE 2012], [SK APOH 2012])
<i>Minimise landfilling</i>	Minimize landfilling of municipal waste by improving alternative waste management infrastructure and improved use of financial tools [BiPRO 2007-2011]. Increase the landfilling charge to minimise landfilling, promote separate collection and prevent littering [BiPRO 2007-2011].	Yes, according to [SK MoE 2012] [SK APOH 2012] Justifications necessary, according to [SK MoE 2012]
<i>Polluter Pays Principle</i>	Fully implement the polluter pays principle in the whole country; increasing the fee [BiPRO 2007-2011].	Yes, according to [SK MoE 2012], [SK APOH 2012]). It will be implemented in the new Waste Act. According to [SK Priatelía Zeme - SPZ 2012] there is little political support for raising the fees
<i>Information and awareness campaigns</i>	Information and awareness campaigns for the public to stop littering and improve environmental protection related to waste issues [BiPRO 2007-2011].	Yes, according to [SK MoE 2012], [SK APOH 2012])
<i>Waste management data</i>	Further improve the quality (reliability) of waste management data [BiPRO 2007-2011].	Yes, according to [SK MoE 2012], [SK APOH 2012])

Information Sources:

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⁸Searchable at

http://www.eea.europa.eu/soer/countries#c11=CommonalityReport&c11=DiversityReport&c11=FlexibilityReport&c12=all&c5=waste&b_s tart=0

⁹Searchable at

http://www.eea.europa.eu/soer/countries#c11=CommonalityReport&c11=DiversityReport&c11=FlexibilityReport&c12=all&c5=waste&b_s tart=0

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