

• WASTE

Key questions and key findings

Is the production of waste placed on the market being reduced?

- In 2012 were generated 8 668 104.18 tonnes of waste introduced on the market. When compared with 2011, waste introduced on the market in Slovakia decrease app. 20% in 2012.
- There were generated 1 747 569.05 tons of total municipal waste in Slovakia in 2012. This volume represents 323 kg of municipal waste per capita. Compared to 2011, this is an decrease 1.2%. When compared with the EU countries, generation of the municipal waste per capita is low, still below the average EU 27 value.

Is the proportion of landfilled waste decreasing?

- There has been a long and negative high share of waste landfilling on total waste disposal almost 81% for waste other than municipal, and 74% for total handled municipal waste

Is Slovakia complying with the waste limits set forth by international criteria?

- In 2012, 4.2 kg per capita of waste electrical and electronic equipment was collected in 2010. Slovakia reached the limit of 4 kg/capita set by the EC.
- Slovakia reached the proportion for re-utilisation, recycling, and reclamation of old vehicle parts as defined by the EC Directive and thus fulfilled the set limit.
- Slovakia managed to comply with the obligation to collect and reclaim waste from electrical and electronic equipment. (WEEE)

Is packaging waste reclamation on a rise?

- Of total volumes of generated packaging waste in 2012, 59.8% of waste was recycled, and 62.4 % was recovered.

◆ Waste generation

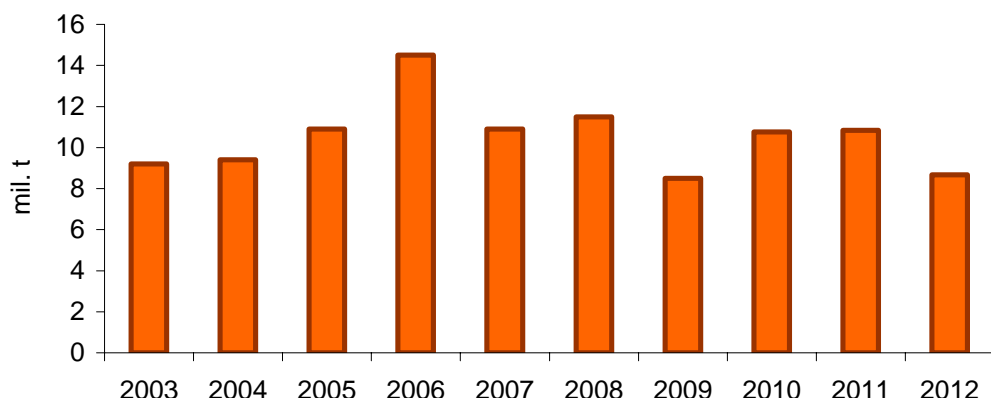
When compared with 2011, decrease in waste introduced on the market shows app. 20% in 2012.

Waste generation in 2012 (t)

Waste category	Amount (t)
Hazardous waste	371 553.28
Other waste	6 548 981.85
Municipal waste	1 747 569.05
Total	8 668 104.18

Source: SEA, SO SR

Waste generation (t)



Source: SEA, SO SR

*Growth in the generation of other waste types in 2006 by app. 40% compared to 2005 and 2007, was caused especially by the growth in generated construction waste, specifically in the category of excavation soil generated at the construction of highway exits, the Sitina tunnel in Bratislava, and single declaration of gross volumes produced at U.S. Steel Košice.

In the area of waste generation by economic activities classification SK NACE, manufacturing industry has been the dominating component over the recent years, with 38% share in 2012. Sector of Electricity, gas, steam and air conditioning supply follow with 15% and sector of Construction with 12%. It is necessary to point out that the total amount of waste produced by particular economic sectors does not include municipal waste.

Waste generation by particular economic sectors in year 2012 (t)

SECTION	Total (t)	Hazardous waste (t)	Other waste (t)
A - Agriculture, Forestry, Fishery	549 390.77	5 554.82	543 835.95
B - Mining and quarrying	310 579.33	645.98	309 933.34
C - Manufacturing	2 644 941.77	203 213.95	2 441 727.82
D - Electricity, gas, steam and air conditioning supply	1 045 757.25	4 603.30	1 041 153.96
E - Water supply; sewerage; waste management and remediation activities	670 564.62	79 384.21	591 180.42
F - Construction	806 186.76	34 082.02	772 104.74
G - Wholesale and retail trade; repair of motor vehicles and motorcycles	337 444.57	13 154.63	324 289.94
H - Transporting and storage	112 606.17	11 994.20	100 611.97
I - Accommodation and food service activities	3 234.32	102.62	3 131.70
J - Information and communication	4 599.74	421.47	4 178.27
K - Financial and insurance activities	532.29	53.03	479.26
L - Real estate activities	121 661.90	2 972.46	118 689.44
M - Professional, scientific and technical activities	98 091.79	1 746.32	96 345.47
N - Administrative and support service activities	12 093.88	1 986.40	10 107.48
O - Public administration and defence; compulsory social security	21 497.40	899.04	20 598.36
P - Education	810.54	104.16	706.38
Q - Human health and social work activities	154 566.21	3 741.29	150 824.92
R - Arts, entertainment and recreation	1 205.23	97.41	1 107.82
S - Other services activities	1 513.09	176.50	1 336.59
Unknown	23 257.48	6 619.45	16 638.03
Total	6 920 535.12	371 553.28	6 548 981.86

Source: SEA

◆ Waste handling

Waste recovery

There were 3 431 134.67 tons of waste recovered in the SR in 2012. This represents 50% of total volume of waste located on the market (not included MW). R3 activity – Recycling or reclamation of organic substances which are not used as solvents has the greatest share on waste recovery with a 21% share.

Waste recovery following codes R1 – R13 in year 2012 (t)

Code	Activity	Total (t)	Hazardous waste (t)	Other waste (t)
R01	Used mainly as fuel or to extract energy through different approach	111 486.61	4 256.77	107 229.84
R02	Solvent reclamation/regeneration	2 229.69	2 229.69	0.00
R03	Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes)	725 561.73	1 044.11	726 605.84
R04	Recycling or reclamation of metals and metal compounds	684 321.71	6 396.96	677 924.75
R05	Recycling or reclamation of other inorganic material	478 030.00	8 393.49	469 636.51
R06	Regeneration of acids and bases	1 140.98	1 126.46	14.52
R07	Recovery of components used for pollution abatement	151.87	82.09	69.78
R08	Recovery of components from catalysers	2 573.66	2 573.58	0.08
R09	Oil re-refining or other re-uses of soil	12 944.97	12 622.10	322.87
R10	Treatment of soil to benefit the agricultural production or to improve environment	582 428.45	1 748.78	580 679.67
R11	Use of waste obtained from the activities R1 to R10	74 059.32	241.38	73 817.94
R12	Treatment of waste generated by any of the R1 to R11 activities	174 410.55	13 043.35	161 367.20
R13	Storing of waste before using any of the R1 to R12 activities (besides temporary storage prior to collection at the place of waste generation).	580 795.13	19 765.59	561 029.54
Total		3 431 134.67	73 524.35	3 358 698.54

Source: SEA

Waste disposal

Of total volumes of generated waste placed on the market was disposed 3 342 470.32 t, what means 48% on total waste placed on the market (without MW). Dominance of landfill waste is a historical rule with and 81% share on total waste disposal. As of December 31, 2012, there were 118 landfills operated in Slovakia.

Number of landfills (towards 31.12.2012)

Region	Hazardous waste landfills	Landfills for not hazardous waste	Inert waste landfills	Total
Bratislava	2	7	2	11
Trnava	2	7	1	10
Trenčín	2	11	1	14
Nitra	3	14	2	19

Žilina	2	14	0	16
Banská Bystrica	2	13	1	16
Prešov	1	15	1	17
Košice	3	9	3	15
Total	17	90	11	118

Source: SEA

Waste disposal following codes D1 – D15 in year 2012 (t)

Code	Activity	Total (t)	Hazardous waste (t)	Other waste (t)
D01	Underground or surface waste disposal (e.g. landfill)	2 717 345.60	84 537.68	2 632 807.92
D02	Treatment by soil processes (e.g. biodegradation of liquid or sludge waste in soil, etc.)	132 613.08	49 586.91	83 026.17
D08	Biological treatment non-specified in this annex that generates compounds and mixtures eliminated by any of the D1 to D12 activities	255 231.49	42 967.84	212 263.65
D09	Physical-chemical treatment non-specified in this annex that generates compounds and mixtures eliminated by any of the D1 to D12 activities (e.g. vaporizing, drying, calcinations, etc.)	99 538.22	77 105.48	22 432.74
D10	Incineration on land	67 469.27	20 354.78	47 114.49
D13	Mixing or blending prior to any of the D1 to D12 activities	4 869.99	363.36	4 506.63
D14	Placing into other packaging prior to any of the D1 to D12 activities	308.31	228.79	79.52
D15	Storage before implementing any of the D1 to D14 activities. (besides temporary storage prior to collection at the place of waste generation)	65 094.36	21 062.01	44 032.35
Total		3 342 470.32	296 206.85	3 046 263.47

Source: SEA

Other waste handling
Handling with waste by means DO, O and Z codes (t)

Disposal code	Activity	Total (t)	Hazardous (t)	Others (t)
DO	Handing over of waste for domestic use	32 777.07	0	32 777.07
Z	Storage of waste	114 153.10	1 822.10	112 331.00
Total		146 930.17	1 822.10	145 108.07

Source: SEA

◆ Waste from electrical and electronic equipment (WEEE)

The EP and Council Directive 2002/96/EC on waste electrical and electronic equipment (WEEE) sets a unified limit for the collection of electrical household waste to 4 kg/capita. Slovakia met this limit in 2012. Amount of collected WEEE was 22 671 tons.

Summary reports by producers of electrical equipment for the year 2012 (kg)

Category under Annex 3 of the waste law	Recovered		Recycled	
	kg	%	kg	%
1. Big domestic appliances	10 258 184.13	90.69	10 141 002.66	89.65
2. Small domestic appliances	1 710 559.19	85.75	1 646 333.97	82.53
3. IT and telecommunication devices	2 649 077.03	89.18	2 618 220.00	88.14
4. Consumer electronic devices	2 811 231.82	88.81	2 721 069.01	85.96
5. Sources of light	890 379.97	91.46	870 260.62	89.39
5a. Gass lamps	275 405.85	93.25	275 405.85	93.25
6. Electrical and electronic instruments	1 036 819.75	90.39	1 005 467.19	87.66
7. Toys, devices designated for sport and recreational use	176 606.36	83.06	169 827.77	79.87
8. Medical devices	124 193.17	85.83	123 173.66	85.12
9. Machines for monitoring and testing	115 663.30	88.31	114 168.33	87.17
10. Vending machines	213 072.41	91.41	210 980.50	90.51
Total	20 261 192.98	89.73	19 895 909.56	88.12

Source: SEA

Notwithstanding the reduction in the sale of electrical and electronic equipment in 2012 by almost 1.5% compared to 2011, Slovakia managed to comply with the obligation to collect and reclaim waste from electrical and electronic equipment. (WEEE) The obligation to collect and reclaim 21 724 tons of electrical and electronic waste was exceeded in Slovakia by 1.04%. In total, producers of electrical and electronic equipment who sell electrical equipment in 2012 collected 22 671 tons of WEEE and carried out processing of 22 579 tons of electrical and electronic waste which is approximately 46% of the number of electrical and electronic equipment introduced to the market in 2011. Slovakia today reaches the level of collection and processing of electrical and electronic waste set by the EU for the horizon following 2014. Slovak Ministry of Environment enforces the policy whereby individual producers are obliged to collect and process all electrical and electronic waste found in Slovakia.

In 2012, Slovakia complied with the limits for recovery and recycling of individual electrical and electronic waste categories set by the Regulation of the Slovak Government no. 206/2010 Coll.

◆ Polychlorinated biphenyls

Polychlorinated biphenyls (PCB) are synthetically prepared oily liquids. These compounds showing excellent technological properties were used in technology as fillings for transformers and as hydraulic liquids in condensers, hot-air media, additives to paints and plastic material, printing colors, glues, cements, as lubricants, burning inhibitors, etc.

Inventory of contaminated equipment (CE) with PCB contents is performed by the SAE, COHEM pursuant to Act 223/2001 Coll. on waste. The process of inventory is the result of reports by CE holders. Since the start of the inventory activities in 2001 until the end of 2012, 300 holders were

registered into the register. Total number of reported equipment with PCB contents is 49 197 pieces. By the end of 2012, the information PCB system still showed 5 522 units of CE with their holders no having complied with the provisions of the quoted law regarding the obligation to eliminate this equipment before December 31, 2010.

Results of the inventory of contaminated equipment (CE) as of December 31, 2012

Number of CE in the IS - KZ (pcs)		
Total numbers	Functional	Eliminated
49 197	5 522	43 675

Contaminated installations (%)	
Functional	Eliminated
11%	89%

Source: SEA

Results of the inventory as of December 31, 2012 clearly show that the register still shows 11% of total number of reported CE. A number of them still contain PCB in the volume below 5 dm³, however, pursuant to Council Directive 96/59/EC on the disposal of polychlorinated biphenyls and polychlorinated terphenyls (PCB/PCT), in the case of power condensers the limit of 5 dm³ shall be understood as the sum of separate volumes of the combined instrument. Holders of this equipment act contrary to the national and European legislation.

List of holders with CE still in operation: "List of holders of contaminated equipment containing PCB" can be found at <http://www.sazp.sk/public/index/go.php?id=2098&lang=sk>

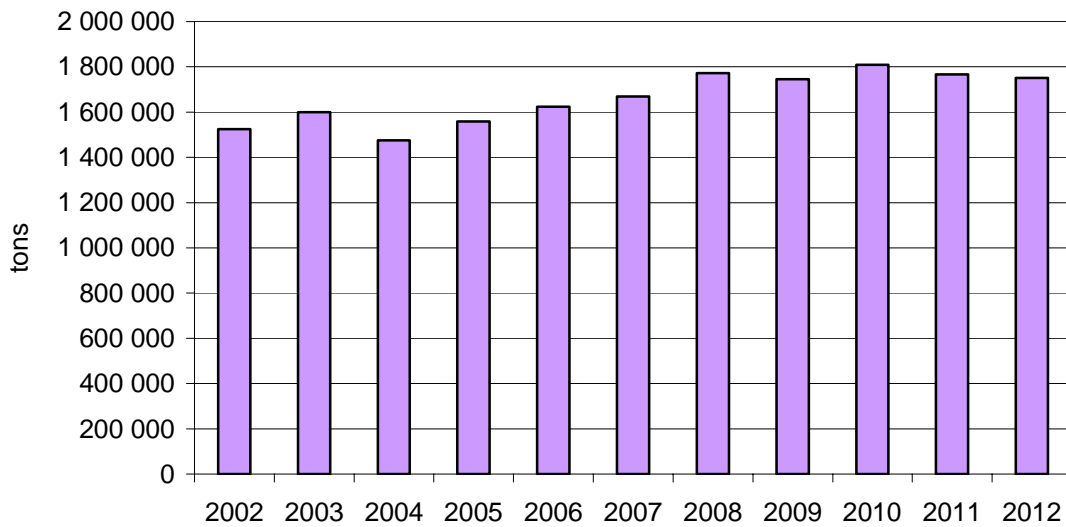
◆ **Old vehicle**

When compared with 2011 (39 171 pcs of old vehicle) there was in 2012 (33 469 pcs) reduction about 14.5% in the number of handled old vehicles.

◆ **Municipal waste**

According to data from the SO SR, there were 1 747 569.05 tons of total municipal waste generated in Slovakia in 2012. This volume represents 323 kg of municipal waste per capita. Compared to 2011, this is an increase by 4 kg per capita. Long-term waste disposal on landfills 74.18% is the most frequent method of municipal waste handling, following by incineration with energy recovery (6%).

Municipal waste generation (1000 tons)



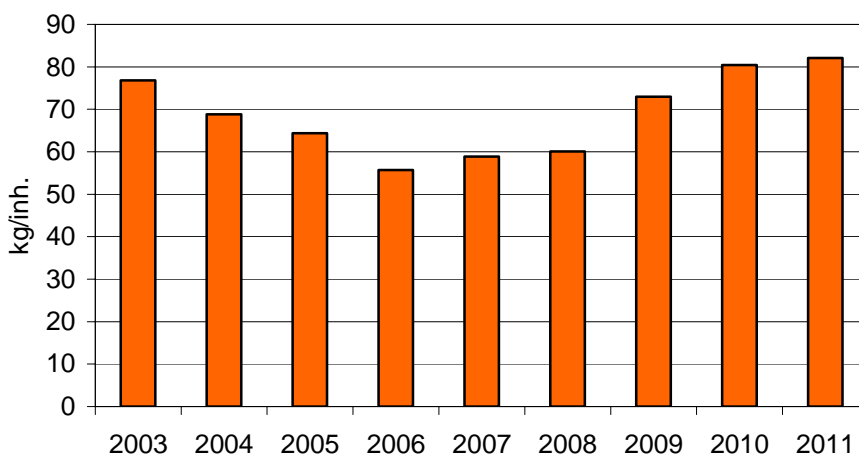
Source: SO SR

In terms of municipal waste composition, mixed municipal waste (67.35%) constitutes the major component of municipal waste together with bulky waste (9.83%), biologically degradable waste was 5.48 %, small construction waste (5.39%) and waste paper and cardboard was 3.37% and glass 2.78%.

◆ Packaging and waste from packaging

Total volumes of packaging waste show rising characteristics. The number of recovered packaging waste material grew from 45.21% in 2005 to 46.22%, in 2008 to 62.4% in 2012.

Trend in packaging waste generation (kg/inh.)



Source: Eurostat

◆ Financial mechanism of waste management

Recycling Fund

Total revenues into the fund from the contributions for the monitored commodities in 2012 represented more than 12.14 mil. EUR. Contributions for the commodity of "cars" amounting to more than 9.4 mil. EUR showed the highest share within the Recycling Fund. Successful applicants in 2012 together received more than 10.15 mil. EUR from the fund. This sum may include also the funds approved in the previous years but paid as late as in 2012.

◆ Transboundary movement

In 2012 was permitted to be imported into Slovakia 270 300 tonnes of waste classified under Annex IV (Yellow Register of Waste), Annex V, part 1, register A of the European Parliament and of the Council (EC) Directive no. 1013/2006 on waste shipment and 301 809.5 tonnes of waste was permitted for export. On the basis of licences issued by the MoE SR, for transit shipment in 2012, 93 138 tonnes of waste was licensed for transit through the Slovak territory.

Total amount of transported and imported waste in 2012 (t)

Country	Import (t)	Export (t)
Belgium	-	1 000
Bulgaria	-	8 000
Czech republic	2 500	28 180.5
Holland	-	1 000
Hungary	8 000	-
Germany	8 000	1 769
Poland	-	204 270
Austria	178 000	7 500
Slovenia	14 000	-
Serbia	-	50 000
Italy	59 800	-
Great Britain	-	90
Total	270 300	301 809.5

Source: SEA