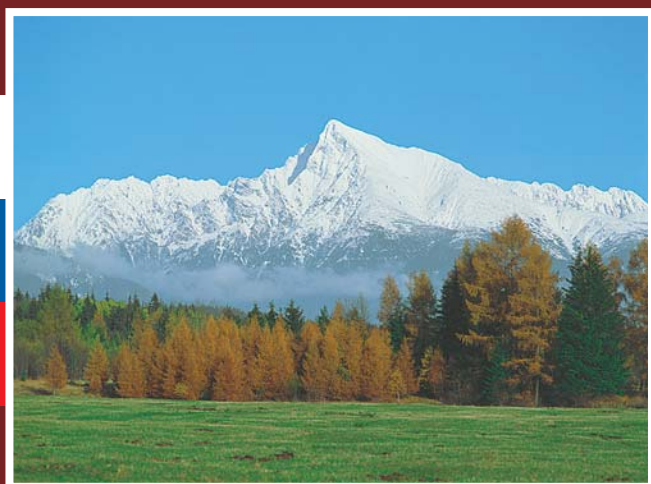


***Ministry of the Environment  
of the Slovak Republic***



***STATE OF THE ENVIRONMENT  
REPORT  
SLOVAK REPUBLIC 2007***



***Slovak Environmental  
Agency***









While **handling waste** or otherwise treating waste everyone shall be obliged to protect human health and the environment.

§ 18 par. 1 of the Act No. 223/2001 Coll. on Waste, including several changed and subsequently amended other laws

## • WASTE AND WASTE MANAGEMENT

### Initial situation

The year 2007 was the second year of meeting the objectives of the Programme of Waste Management of the Slovak Republic for the years 2006-2010.

### Balance of waste generation

#### Waste generation (t)

Waste category	Amount (t)
Hazardous waste	663 299.73
Other waste	14 456 137.35
Municipal waste	1 668 648.31
<b>Total</b>	<b>16 788 085.39</b>

Source: SEA, SO SR

#### Generation of waste located on the market (t)

Waste category	Amount (t)
Hazardous waste	525 165.60
Other waste	8 740 682.17
Municipal waste	1 668 648.31
<b>Total</b>	<b>10 934 469.08</b>

Source: SEA, SO SR

Compared to 2006, the annual increment in waste put on the market is about 25 %. **Other waste** is the greatest waste category responsible for this situation, with as much as 29 % annual increment.

The increase existed in hazardous waste generation by 2 %, compared to the previous year.

Municipal waste includes both waste categories (O and H). However, it is necessary to separate the category of municipal waste considering the unique character of its regime, typical of municipal waste.

In the area of waste generation by **economic activities** classification, **manufacturing industry** has been the **dominating** component over the recent years, **with 55 %** share. Sector of building industry follows with 22 %, agriculture with 7 %, and trade with 4 % share. It is necessary notice that the amount of waste by particular economic sectors is not calculated municipal waste.

**Waste generation by particular economic sectors in 2007 (t)**

Economic sector	Total	Hazardous waste	Other waste
Agriculture	649 497.45	12 635.65	636 861.80
Fishery	671.72	0.22	671.50
Industry total	5 053 345.77	332 868.92	4 720 476.85
Building industry	2 039 422.02	27 550.74	2 011 871.28
Trade	367 973.00	29 891.34	338 081.65
Hotels and restaurants	2 997.88	114.98	2 882.90
Transport and communications	137 291.70	67 544.56	69 747.14
Banking and insurance sector	324.10	83.79	240.31
Activities in domain of real estate	244 324.30	5 920.98	238 403.32
Public administration and defence	27 367.31	1 086.45	26 280.86
Education	1 592.38	103.43	1 488.95
Health service	245 418.98	2 743.51	242 675.47
Waste water treatment and waste disposal	257 669.54	37 053.29	220 616.25
Unknown	237 951.61	7 567.72	230 383.88
<b>Total</b>	<b>9 265 847.76</b>	<b>525 165.60</b>	<b>8 740 682.17</b>

Source: SEA

**Waste treatment****Waste treatment activities**

Code	Treatment activities
<b>R1</b>	Used mainly as fuel or to extract energy through different approach
<b>R2</b>	Solvent reclamation/regeneration
<b>R3</b>	Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes)
<b>R4</b>	Recycling or reclamation of metals and metal compounds.
<b>R5</b>	Recycling or reclamation of other inorganic material.
<b>R6</b>	Regeneration of acids and bases.
<b>R7</b>	Recovery of components used for pollution abatement
<b>R8</b>	Recovery of components from catalysers.
<b>R9</b>	Oil re-refining or other re-uses of soil.
<b>R10</b>	Treatment of soil to benefit the agricultural production or to improve environment.
<b>R11</b>	Use of waste obtained from the activities R1 to R10.
<b>R12</b>	Treatment of waste generated by any of the R1 to R11 activities.
<b>R13</b>	Storing of waste before using any of the R1 to R12 activities (besides temporary storage prior to collection at the place of waste generation).

**Waste disposal activities**

Code	Disposal activity
<b>D1</b>	Underground or surface waste disposal. (e.g. landfill)
<b>D2</b>	Treatment by soil processes (e.g. biodegradation of liquid or sludge waste in soil, etc.)
<b>D3</b>	Depth injection (e.g. injection of extractable waste into wells, salt mines or natural disposal sites, etc.)
<b>D4</b>	Disposal into surface tanks (e.g. disposal of liquid or sludge waste into pits, ponds, or lagoons, etc.)
<b>D5</b>	Specially engineered landfills (e.g. placement into separate cells with treated wall surfaces that are covered and insulated one from another and from environment, etc.)
<b>D6</b>	Discharging and dumping into water recipients, besides seas and oceans.

<b>D7</b>	Discharging and dumping into seas and oceans, including disposal to ocean bottom.
<b>D8</b>	Biological treatment non-specified in this annex that generates compounds and mixtures eliminated by any of the D1 to D12 activities.
<b>D9</b>	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, e.g.)
<b>D10</b>	Incineration on land.
<b>D11</b>	Incineration at sea.
<b>D12</b>	Permanent storage (e.g. placing of containers in mines, etc.)
<b>D13</b>	Mixing or blending prior to any of the D1 to D12 activities.
<b>D14</b>	Placing into other packaging prior to any of the D1 to D12 activities.
<b>D15</b>	Storage before implementing any of the D1 to D14 activities (besides temporary storage prior to collection at the place of waste generation).

## Waste disposing

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

Disposal code	Activity	Total	Hazardous	Others
DO	Handing over of waste for domestic use	81 572.52	1 051.81	80 520.71
O	Handing over to another subject	425 564.59	19 824.73	405 739.86
Z	Storage of waste	314 199.58	20 365.65	293 833.93
Total		<b>821 336.69</b>	<b>41 242.19</b>	<b>780 094.50</b>

Source: SEA

## Waste recovery

There were **3 483 168 tons of waste recovered** in the SR in 2006. This represents **32 % of total volume of waste** located on the market. R10 activities – treatment of soil for the purposes of agricultural returns or for improving the environment show a has the greatest share on waste reclamation (22 %). R5 activity – Recycling or re-extraction of other inorganic compounds show a 21 % share, R3 activities – Recycling or re-extraction of organic compounds that are not used as solvents (including composting and other biological transformation processes) show a 15 % share.

### Waste recovery following codes R1 – R13 in year 2007 (t)

Code of recovery	Total	Hazardous waste	Other waste
<b>R01</b>	161 752.17	7 144.84	154 607.34
<b>R02</b>	3 313.61	3 230.05	83.55
<b>R03</b>	527 963.82	19 367.36	508 596.46
<b>R04</b>	468 079.98	9 457.25	458 622.73
<b>R05</b>	738 631.66	3 920.26	734 711.39
<b>R06</b>	677.69	362.37	315.32
<b>R07</b>	491.24	37.05	454.19
<b>R08</b>	2 367.00	2 345.00	22.00
<b>R09</b>	12 275.93	12 244.48	31.45
<b>R10</b>	757 041.65	5 751.94	751 289.71
<b>R11</b>	133 711.78	450.20	133 261.58
<b>R12</b>	79 789.42	6 357.12	73 432.30
<b>R13</b>	597 072.26	27 383.14	569 689.12
<b>Total</b>	<b>3 483 168.21</b>	<b>98 051.07</b>	<b>3 385 117.14</b>

Source: SEA

## Waste disposal

Of total volumes of generated waste, **45 % of waste was disposed**, which in absolute numbers means **4 961 342.87 tons of waste**. Dominance of landfill waste is a historical rule, with a 86 % share on total waste disposal. As of December 31, 2007, there were 151 landfills operated in Slovakia.

### Number of landfills (towards 31.12.2007)

Region	Hazardous waste landfills	Landfills for not hazardous waste	Inert waste landfills	Total
Bratislava	2	11	2	15
Trnava	2	11	1	14
Trenčín	1	15	3	19
Nitra	3	18	2	23
Žilina	0	16	2	18
Banská Bystrica	1	19	2	22
Prešov	1	20	1	22
Košice	3	13	2	18
<b>Total</b>	<b>13</b>	<b>123</b>	<b>15</b>	<b>151</b>

Source: SEA

### Waste disposal following codes D1 – D15 in year 2007 (t)

Code of disposal	Total	Hazardous waste	Others waste
D01	4 269 207.25	132 287.24	4 136 920.02
D02	136 485.98	93 195.47	43 290.50
D03	10.22	10.22	0.0
D05	130.36	60.71	69.65
D08	69 839.40	34 942.33	34 897.07
D09	107 154.34	84 323.14	22 831.20
D10	84 588.95	27 501.64	57 087.31
D11	38.22	27.90	10.32
D12	137.83	25.53	112.30
D13	14 690.86	90.00	14 600.86
D14	1 350.13	405.29	944.84
D15	277 709.33	13 002.86	264 706.46
<b>Total</b>	<b>4 961 342.87</b>	<b>385 872.33</b>	<b>395 260.02</b>

Source: SEA

The important share of waste disposal, with 3 %, has D2 method, following D8 method, biological treatment which is generated wastes disposed by methods marked as D1 to D12 and method D10 – incineration on land contributes by 2 %.

## Waste from electrical and electronic equipment (WEEE)

### Summary reports by producers of electrical equipment for the year 2007

Category under Annex 3 of the waste law	Introduced to market (kg)	Collected (kg)	Processed (kg)	Recovered (kg)	Recycled (kg)
1. Big domestic appliances	28 624 066	8 499 804	8 311 204	7 212 313	7 160 955
2. Small domestic appliances	3 260 568	744 171	744 171	594 830	572 308
3. IT and telecommunication devices	5 408 045	1 933 154	1 933 214	1 713 828	1 668 720
4. Consumer electronic devices	6 085 362	1 623 252	1 623 146	1 405 323	1 348 850
5. Sources of light	3 044 460	49 889	172 929	163 457	155 989
5a. Gas lamps	312 951	163 332	163 332	146 550	146 550
6. Electrical and electronic instruments	2 025 628	71 169	71 169	63 293	57 223
7. Toys, devices designated for sport and recreational use	90 603	3 686	3 686	2 874	2 518
8. Medical devices	69 644	67 413	67 413	57 608	57 294
9. Machines for monitoring and testing	32 006	28 202	25 375	21 590	21 449
10. Vending machines	97 381	17 461 126	97 495	87 296	86 606
	<b>49 050 713</b>	<b>30 645 198</b>	<b>13 213 134</b>	<b>11 468 963</b>	<b>11 278 462</b>

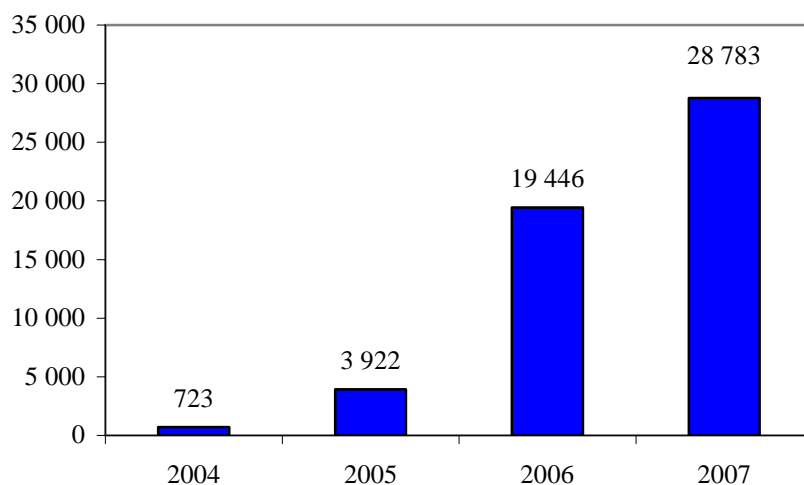
Source: SEA

There were placed on the market 49 thousand tons of electrical devices in Slovakia in 2007 (9 kg per inhabitant). Amount of collected WEEE was approx. 30.6 thousand tons (5.6 kg per inhabitant).

## Old vehicle

There were 28 783 old vehicles processed in 2007.

### Processed old vehicle (amount of cars)



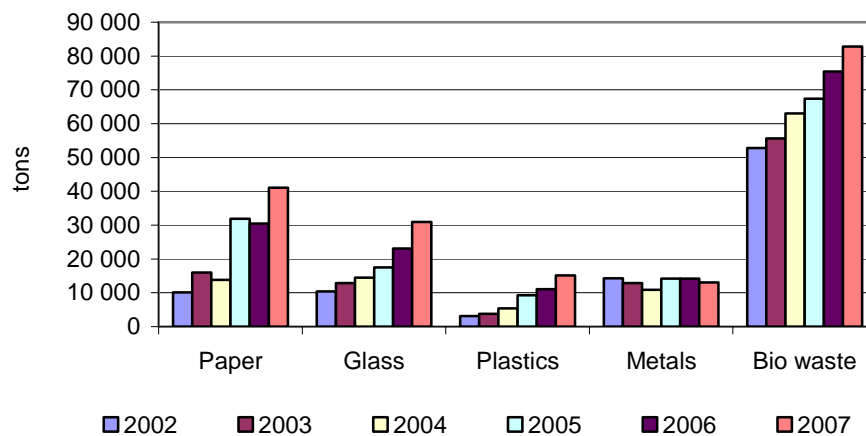
## Municipal waste

According to data from the SO SR, there were **1 668 648 tons of total municipal waste** generated in Slovakia in 2007. Greatest municipal waste (MW) production was recorded in the Bratislava region, with 21 816 tons of KO more than in 2006. Least MW was produced in the region of Banská Bystrica. This volume represents **309 kg of municipal waste per capita**. Compared to 2006, this is an increase by 8 kg per capita. Long-term waste **disposal on landfills** (76 %) is the **most frequent method** of municipal waste handling, following by incineration with energy recovery (7 %) and composting by 5 % and incineration 4 %.

In terms of **municipal waste composition**, mixed municipal waste (71 %) constitutes the major component of municipal waste together with bulky waste (9 %), small construction waste (6 %). Biologically degradable waste was 5 % and waste from street cleaning was 3 %

According to the SO SR, **volume of separated municipal waste per capita is 16 kg**, which means that the level of municipal waste separation is the same as in 2006. Volume of **recovered municipal waste per capita increased by 15 kg**.

### Separated waste collection (t)



Source: SO SR

## Financial mechanisms of waste management

### ◆ Recycling fund

The recycling fund completed its sixth-year existence in 2007.

Revenues from producers and importers of taxed commodities in 2007 represented more than 593 million SKK, which is 28 million more than in 2006. In 2007, the Recycling fund acknowledged more than 1 680 applications for funding from municipalities and businesses. In total, 647.5 million



SKK were approved for the applicants, which is by 282.5 million SKK more than in 2006. Recycling fund also acknowledged 1 330 applications of municipalities for the obligatory contribution to separated waste, in the sum of 1 300 to 1 800 SKK per ton of waste to be reclaimed. To this end, more than 63 million SKK were designated in 2007, which is an increase by more than 46 million SKK.

Thanks to the fund's financial contribution in 2007, Slovak Republic could, through contractual obligations of its recipients - businesses and municipalities - collect and separate 212 000 tons of waste. More than 134 000 tons of waste material was reclaimed through the fund's contribution. Subjects that received contribution from the fund collected and processed more than 28 000 old vehicles. In relation to projects implemented through the fund in 2007, increment in the newly-created jobs reached 148. Since 2002, total number of these new jobs has reached 930.

#### ◆ Environmental Fund

In 2007, the Environmental Fund in the area of waste management, 74 applicants funded, with the amount of 198 mil. SKK.

### Packaging and waste from packaging

Volumes of packaging waste generated in the SR and recovered or incinerated in waste incinerators with energy recovery technologies (t)

Material	Packaging waste	Recovered waste or waste incinerated with energy recovery				
		Material recycling	Recycling total	Other recovery methods	Waste incineration with energy recovery	Waste and energy recovery and waste incineration in total
Glass	98 033	14 329	14 329	984	-	15 313
Plastics	59 981	23 830	23 830	-	3 236	27 066
Paper/cardboard	110 244	67 072	67 072	-	2 702	69 774
Metals	4 460	1 311	272	272	1583	-
	9 939	2 123	362	362	2 485	-
	14 399	3 434	634	634	4 068	-
Wood	17 858	471	471	-	1 411	1 882
<b>Total</b>	<b>300 515</b>	<b>109 136</b>	<b>109 136</b>	<b>1 618</b>	<b>7 349</b>	<b>118 103</b>

Source: MoE SR

### Trans-boundary movement – import, export and transit of waste

Over the period of 1.1.2007 to 31.12.2007, the MoE SR issued **151 decisions on trans-boundary transport of waste.**

**Summary of the number of effective licenses for trans-boundary transport of waste, issued in 2007 (t)**

Issued in year	Import	Export	Transit	Total
2007	41	7	3	<b>51</b>
2007- 2008	74	18	8	<b>100</b>
<b>Total</b>	<b>115</b>	<b>25</b>	<b>11</b>	<b>151</b>

Source: SEA

**Total permitted volumes of waste by individual countries (t)**

Country	Import to SR (t)	Export from SR (t)	Transit (t)
Belgium	-	5 500	-
Czech Republic	318 690	700	-
Netherlands	350	-	1 092
Croatia	500	-	-
Japan	100	-	-
Hungary	48 200	-	8 100
Poland	340 800	207 900	-
Austria	143 680	-	20 800
Romania	-	-	400
Italy	-	-	5 000
Germany	60 500	194	40 792
Switzerland	500	-	-
Ukraine	34 050	26 350	-
Great Britain	-	90	-
<b>Total</b>	<b>947 370</b>	<b>240 734</b>	<b>76 184</b>

Source: SEA

