



MINISTRY OF THE ENVIRONMENT OF THE SLOVAK REPUBLIC



**STATE OF THE ENVIRONMENT REPORT
SLOVAK REPUBLIC 2005**





The territory cannot be burdened by human activities over the bearable limit of load. The admissible level of environment pollution is given by threshold limits, specified by special regulations; these limits shall be specified in accord with the stage of knowledge, so that neither health of people, nor other living organisms and other elements of environment are threatened.

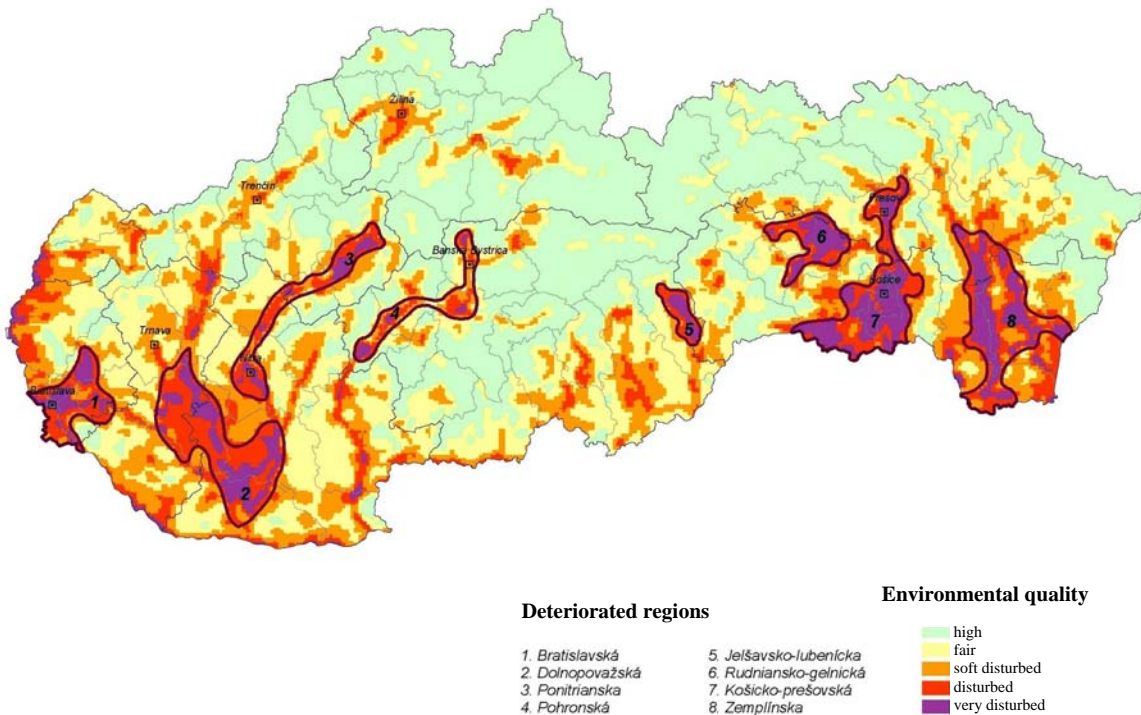
§ 11 of the Act No. 17/1992 Coll. on Environment

ENVIRONMENTAL REGIONALISATION OF SR AND LOADED AREAS

• ENVIRONMENTAL REGIONALISATION OF THE SLOVAK REPUBLIC

The area of the SR is, in the frame of **environmental regional classification** evaluated in 5 grades of quality of the environment, according to which there are identified environmentally most **loaded areas**.

Quality of the environment and the loaded areas



Source: SEA

Basic parameters of the loaded areas

Loaded area	*Area of km ²	Number of inhabitants	Position in frame of regions – rate in %
Bratislavská	488	432 000	Bratislava 93 %, Trnava 7 %
Lower-Považie	1 261	247 000	Nitra 66 %, Trnava 34 %
Ponitrianska	450	272 000	Nitra 51 %, Trenčín 49 %
Pohronská	203	186 000	Banská Bystrica 100 %
Jelšavsko-lubenická	137	21 000	Banská Bystrica 100 %
Rudniansko-gelnická	357	52 000	Košice 95 %, Prešov 5 %
Košicko-prešovská	1 044	425 000	Košice 81 %, Prešov 19 %
Zemplínska	1 040	173 000	Košice 83 %, Prešov 17 %
Total	4 980	1 808 000	

Source: SEA

* In area of km² is included 5th and 4th grade of quality of the environment.



*The smog regulation system is a set of measures taken for a limited time to regulate sources, which in a crucial way participate in air pollution. The smog regulation system shall be set up in **areas of controlled air quality** with the possible smog getaway, where deterioration of air quality is caused by pollutants, for which information threshold limits and warning threshold limits have been specified.*

§ 13 par. 2 and 3 of the Act No. 478/2002 Coll. on Air Protection ...

• LOADED AREAS

The Bratislava loaded area

♦ Air pollution

Air pollution is mainly caused by activities of industrial enterprises, especially mechanical engineering, chemical, civil engineering, automobile industry and traffic, and air pollution is rising each year. Of all monitored pollutants, particulate matter and nitrogen oxides play major role in the high level of air pollution.

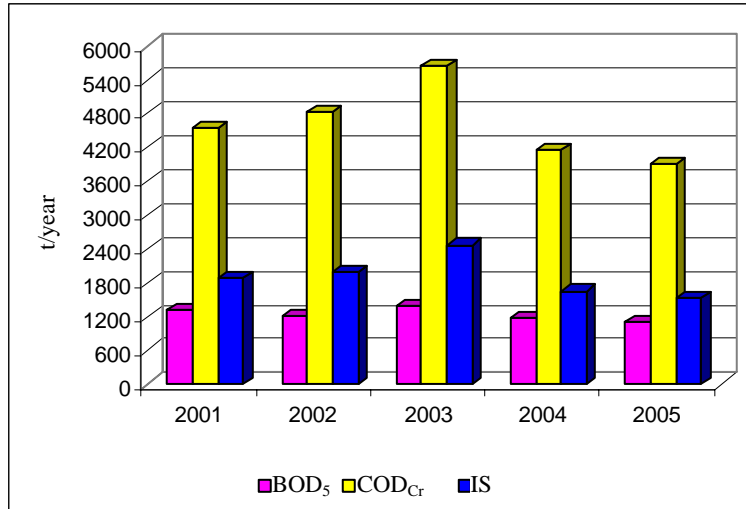
The most significant stationary sources of air pollution in Bratislava loaded area and their emissions of basic polluting substances (BPS) in 2004 (t/year)

Operator	TZL	SO ₂	NO _x	CO
1. SLOVNAFT, Inc., Bratislava	309.478	9 671.910	3 768.397	721.752
2. Paroplynový cyklus, Inc., Bratislava	20.486	2.458	460.169	45.935
3. VOLKSWAGEN SLOVAKIA, Inc., Bratislava	14.368	0.321	57.174	20.048
4. Odvoz a likvidácia odpadu, Inc., Bratislava	1.409	2.201	177.272	13.839
5. ISTROCHEM, Inc., Bratislava	0.189	127.561	1.289	26.873
6. Bratislavská teplárenská, Inc., tepláreň II, Bratislava III	5.108	0.613	112.367	37.669
7. HOLCIM (Slovensko), Inc., Rohožník	88.571	190.745	1 217.574	1 044.461

Source: SHMI

♦ Water pollution

The trend of discharged pollution from the significant sources of water pollution in Bratislava loaded area (t/year)



Source: SHMI

Surface water quality in Bratislava loaded area

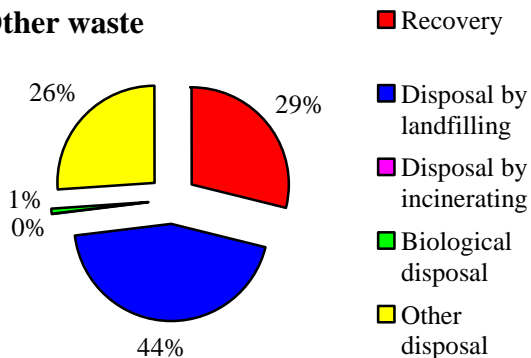
Water source	Sampling point	Groups of indicators and quality classes					
		A	B	C	D	E	F
Dunaj	Karlova Ves	II	III	III	III	IV	V
	Bratislava L.B.	II	III	III	III	IV	V
	Bratislava stred	II	III	II	III	IV	V
	Bratislava P.B.	II	II	II	III	IV	V
	Rajka	I	II	II	III	IV	I
Priesakový kanál	Čunovo	II	II	II	III	II	I
Mošonské rameno	Štátna hranica	I	II	II	III	IV	I
Malý Dunaj	Bratislava	I	II	II	III	III	IV
	Malinovo	I	II	IV	III	III	IV

Source: SHMI

♦ Waste management

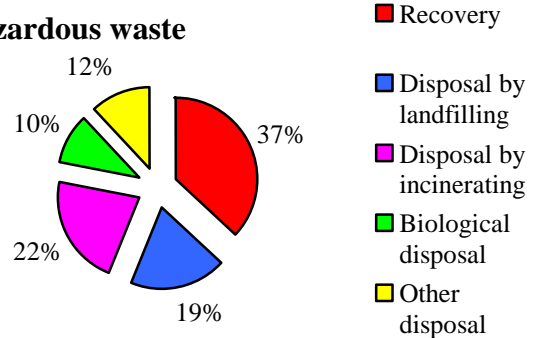
The way of waste disposal in Bratislava loaded area

Other waste



Source: SEA

Hazardous waste



Source: SEA

The Lower - Považie loaded area

♦ Air pollution

Major air polluters in this territory include chemical, food, and cellulose – paper producing industry. Local heating houses and sites also worsen air quality.

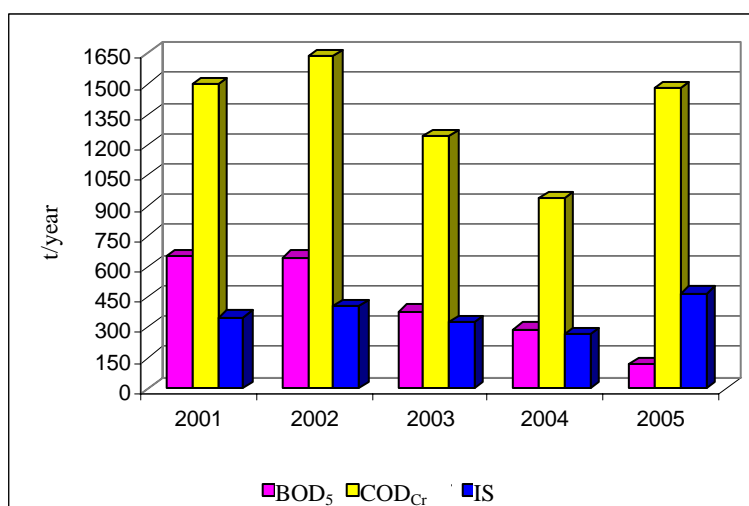
The most significant stationary sources of air pollution in Lower-Považie loaded area and their emissions of basic polluting substances (BPS) in 2004 (t/year)

Operator	SPM	SO ₂	NO _x	CO
1. Duslo, Inc., Šaľa	280.133	932.085	789.514	114.200
2. Slovenské cukrovary, Inc., operation Sereď	8.832	285.053	91.464	9.369
3. KAPPA, Inc., Štúrovo	58.618	898.576	824.428	168.536

Source: SHMI

♦ Water pollution

The trend of discharged pollution from the significant sources of water pollution in Lower-Považie loaded area (t/year)



Source: SHMI

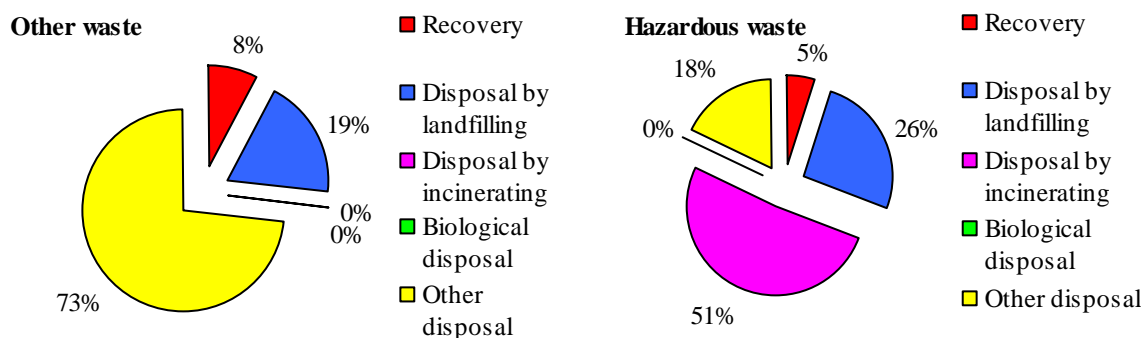
Surface water quality in Lower-Považie loaded area

Water source	Sampling point	Groups of indicators and quality classes					
		A	B	C	D	E	F
Váh	Nad Sereďou	II	II	V	II	III	I
	Selice	II	III	III	III	III	V
	Kolárovo	I	II	III	II	III	III
Trnávka	Modranka	V	III	V	III	IV	V
Dolný Dudváh	Sládkovičovo	III	IV	V	IV	V	V
Žitava	Dolný Oháj	IV	IV	V	III	IV	V
Malá Nitra	Pod Šuranmi	III	IV	V	IV	IV	V
Nitra	Komoča	IV	IV	V	IV	V	IV

Source: SHMI

♦ Waste management

The way of waste disposal in Lower-Považie loaded area



Source: SEA

Source: SEA

The Ponitrie loaded area

♦ Air pollution

Air quality is impacted mainly by power industry, natural gas transport, chemical industry, mining and processing of minerals, and leather-processing industry. Air pollution in this territory is caused by low quality of fuel-energy sources that utilize coal with higher content of sulfur and arsenic. Local heating houses contribute to the impaired air quality.

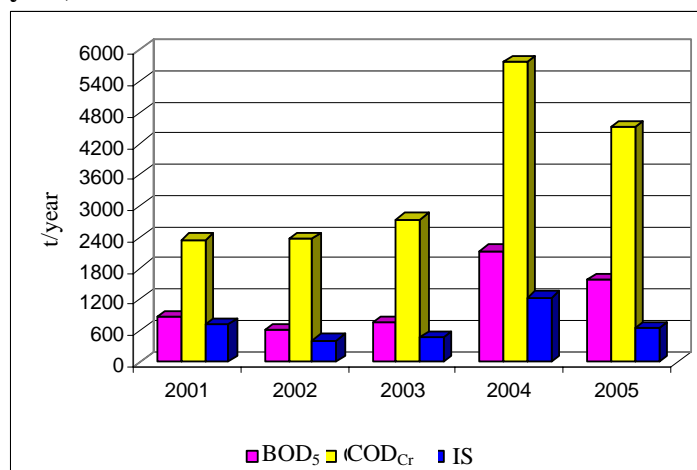
The most significant stationary sources of air pollution in Ponitrie loaded area and their emissions of basic polluting substances (BPS) in 2004 (t/year)

Operator	SPM	SO ₂	NO _x	CO
1. SPP, Inc., Bratislava, enterprise Ivanka pri Nitre	0.055	0.283	1 222.189	124.321
2. SE, Inc., Bratislava, OZ ENO, Zemianske Kostol'any	673.404	41 768.330	5 339.049	493.862
3. Novácke chemické závody, Inc., Nováky	989.069	9.669	160.746	75.441
4. CALMIT, Ltd., Žirany	82.210	3.233	6.571	785.394
5. KVARTET, Inc., Partizánske	135.933	453.110	97.095	323.650

Source: SHMI

♦ Water pollution

The trend of discharged pollution from the significant sources of water pollution in Ponitrie loaded area (t/year)

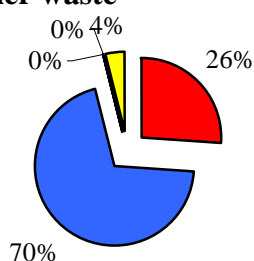


Source: SHMI

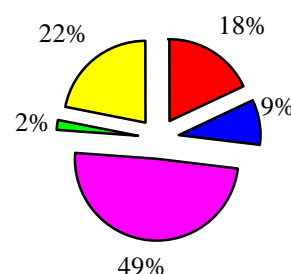
Surface water quality in Ponitrie loaded area

Water source	Sampling point	Groups of indicators and quality classes					
		A	B	C	D	E	F
Nitra	Opatovce nad Nitrou	III	II	IV	III	V	
	Chalmová	IV	V	V	IV	V	V
	Nitrianska Streda	V	IV	V	IV	V	V
	Lužianky	III	IV	IV	IV	V	V
	Čechynce	IV	IV	V	IV	V	V
Handlovka	Koš	V	III	V	IV	V	V
Nitrica	Partizánske	II	II	IV	III	III	IV
Bebrava	Krušovce	III	III	V	IV	V	IV

Source: SHMI

♦ Waste management
The way of waste disposal in Ponitrie loaded area
Other waste

Recovery

- Disposal by landfilling
- Disposal by incinerating
- Biological disposal
- Other disposal

Hazardous waste

Recovery

- Disposal by landfilling
- Disposal by incinerating
- Biological disposal
- Other disposal

Source: SEA

Source: SEA

The Pohronie loaded area
♦ Air pollution

Air quality in the assessed territory is impacted by existing large-size, middle-size, and small-size air pollution sources, as well as by the automobile industry. Aluminum production and wood-processing industry play major role in air quality. Local heating houses contribute to the overall impaired air quality.

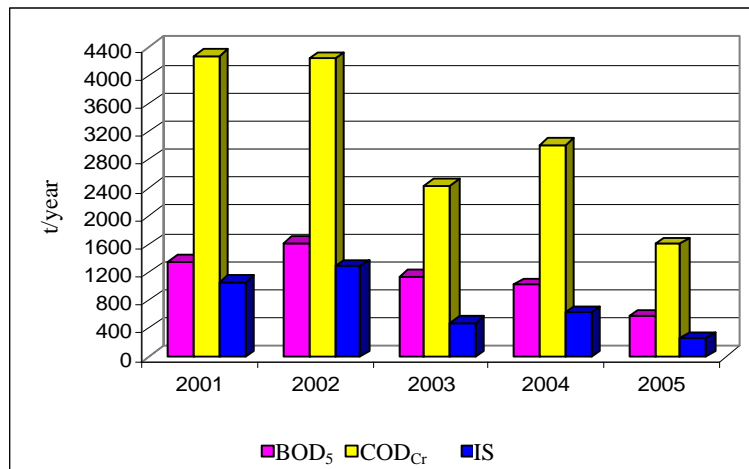
The most significant stationary sources of air pollution in Pohronie loaded area and their emissions of basic polluting substances (BPS) in 2004 (t/year)

Operator	SPM	SO ₂	NO _x	CO
1. SLOVALCO, Inc., Žiar nad Hronom	103.963	1 376.263	541.013	13 009.671
2. Zvolenská teplárenská, Inc., Zvolen	28.675	2 118.633	508.571	36.642
3. ZSNP, Inc., Žiar nad Hronom	28.803	440.049	225.643	443.523
4. BUČINA, Inc, Zvolen	59.255	1.330	80.673	47.878
5. ANB, Inc., operation Žarnovica	26.252		37.215	22.037

Source: SHMI

♦ **Water pollution**

The trend of discharged pollution from the significant sources of water pollution in Pohronie loaded area (t/year)



Source: SHMI

Surface water quality in Pohronie loaded area

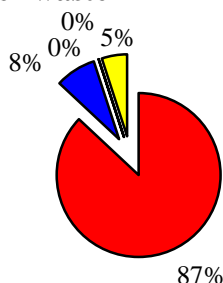
Water source	Sampling point	Groups of indicators and quality classes					
		A	B	C	D	E	F
Hron	Banská Bystrica	II	II	II	III	V	III
	Sliač	IV	II	III	III	V	III
	Budča	III	I	III	III	V	IV
	Žiar nad Hronom	II	II	III	III	V	IV
	Žarnovica	II	II	III	III	V	IV
Bystrica	Banská Bystrica	IV	II	III	IV	IV	IV
Zolná	Ústie	III	II	III	IV	V	V
Neresnica	Ústie	II	II	IV	II	IV	III
Slatina	Ústie	III	II	IV	III	IV	V

Source: SHMI

♦ **Waste management**

The way of waste disposal in Pohronie loaded area

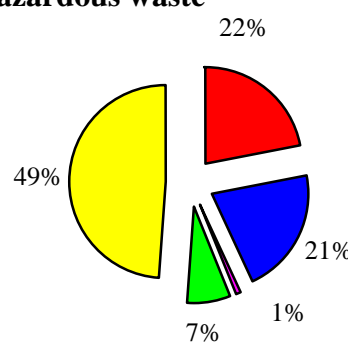
Other waste



- Recovery
- Disposal by landfilling
- Disposal by incinerating
- Biological disposal
- Other disposal

Source: SEA

Hazardous waste



- Recovery
- Disposal by landfilling
- Disposal by incinerating
- Biological disposal
- Other disposal

Source: SEA

Jelšava-Lubeník loaded area

♦ Air pollution

Air pollution is caused mainly by mining activities and magnesite processing activities in this area. Summary air pollution is caused also by local heating houses.

The most significant stationary sources of air pollution in Jelšava-Lubeník loaded area and their emissions of basic polluting substances (BPS) in 2004 (t/year)

Operator	SPM	SO ₂	NO _x	CO
SLOVMAG, Inc., Lubeník	55.405	191.107	284.136	2 576.974
Slovenské magnezitové závody, Inc., Jelšava	85.143	248.308	874.961	1 845.266

Source: SHMI

♦ Water pollution

Surface water quality in Jelšava-Lubeník loaded area

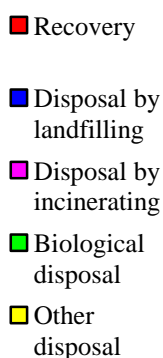
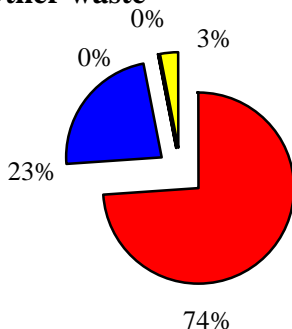
Water source	Sampling point	Groups of indicators and quality classes					
		A	B	C	D	E	F
Muráň	Bretka	II	II	III	II	IV	IV

Source: SHMI

♦ Waste management

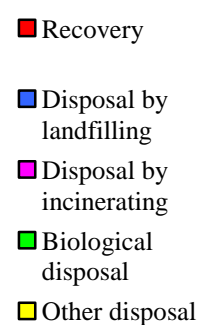
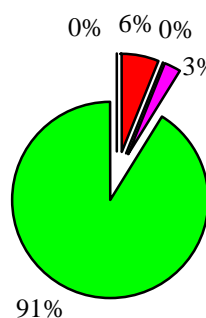
The way of waste disposal in Jelšava-Lubeník loaded area

Other waste



Source: SEA

Hazardous waste



Source: SEA

The Rudniansko-gelnická loaded area

♦ Air pollution

Copper production and lime processing industry play major role in local air pollution, which at increased production has an impact on the air pollution load of the territory. These air pollution sources couple also with corporate and local heating systems – local heating houses.

The most significant stationary sources of air pollution in Rudniansko-gelnická loaded area and their emissions of basic polluting substances (BPS) in 2004 (t/year)

Operator	SPM	SO ₂	NO _x	CO
1. KOVOHUTY, Inc., Krompachy	8.143	122.316	6.514	1 064.146
2. Calmit, Ltd. Bratislava, operation Margecany	19.545	1.695	1.678	1 050.272
3. Zlievareň SEZ Krompachy, Inc. Krompachy	3.711	2.502	2.732	325.387

Source: SHMI

♦ **Water pollution**

Surface water quality in Rudniansko-gelnická loaded area

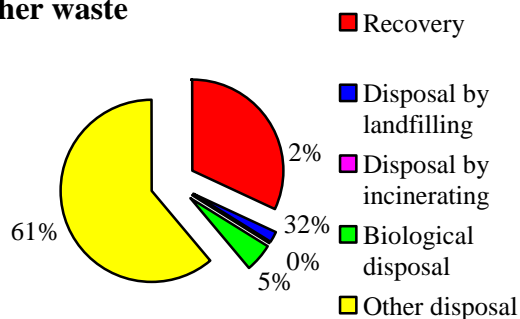
Water source	Sampling point	Groups of indicators and quality classes					
		A	B	C	D	E	F
Hornád	Pod Spišskou N. Vsou	IV	II	IV	II	IV	III
	Kolinovce	III	III	IV	II	IV	III
	Pod Kluknavou	V	IV	IV	II	IV	IV
Rudniansky p.-2	Ústie	I	III	III	II	IV	V
Slovinský p.	Ústie	I	III	III	II	V	III
Smolník - 1	Ústie	I	V	II	II	II	V
Hnilec	Pod Mníškou	II	I	II	II	IV	III
	Prítok do VN Ružín	I	I	III	II	IV	III

Source: SHMI

♦ **Waste management**

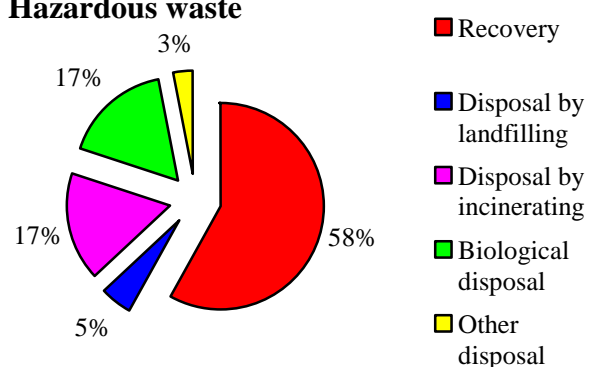
The way of waste disposal in Rudniansko-gelnická loaded area

Other waste



Source: SEA

Hazardous waste



Source: SEA

The Košice-Prešov loaded area

♦ **Air pollution**

Heavy industry, including mainly the smelting and power industries, is the major air polluter in this territory. Extraction and processing of minerals produce high volumes of emissions. It is the wood-processing industry that impacts the air pollution situation in Prešov.

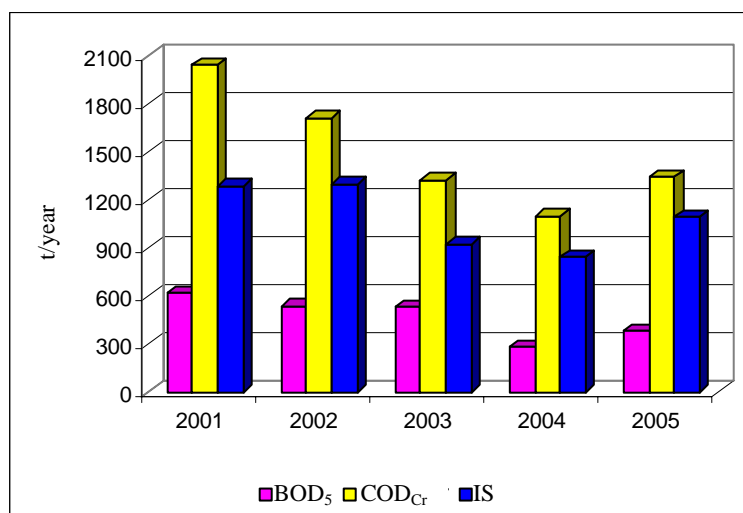
The most significant stationary sources of air pollution in Košice-Prešov loaded area and their emissions of basic polluting substances (BPS) in 2004 (t/year)

Operator	SPM	SO ₂	NO _x	CO
1. U. S .Steel, Ltd., Košice	6 347.626	11 282.364	9 091.781	106 700.446
2. TEKO, Inc., Košice	82.965	1 531.450	1 570.180	71.210
3. Carneuse Slovakia, Ltd., Košice	203.976	19.321	122.159	110.702
4. SZM Jelšava, Inc., division Bočiar	20.003	108.912	118.221	112.134
5. V.S.H., Inc., Turňa nad Bodvou	32.476	9.379	576.170	87.201
6. SIDERIT, Ltd., Nižná Slaná	64.111	2 451.838	78.222	140.636
7. Kronospan Slovakia, Ltd., Prešov	136.995	0.031	173.681	692.519
8. Posádková správa budov Prešov	0.516	5.044	3.431	19.006

Source: SHMI

♦ **Water pollution**

The trend of discharged pollution from the significant sources of water pollution in Košice-Prešov loaded area (t/year)



Source: SHMI

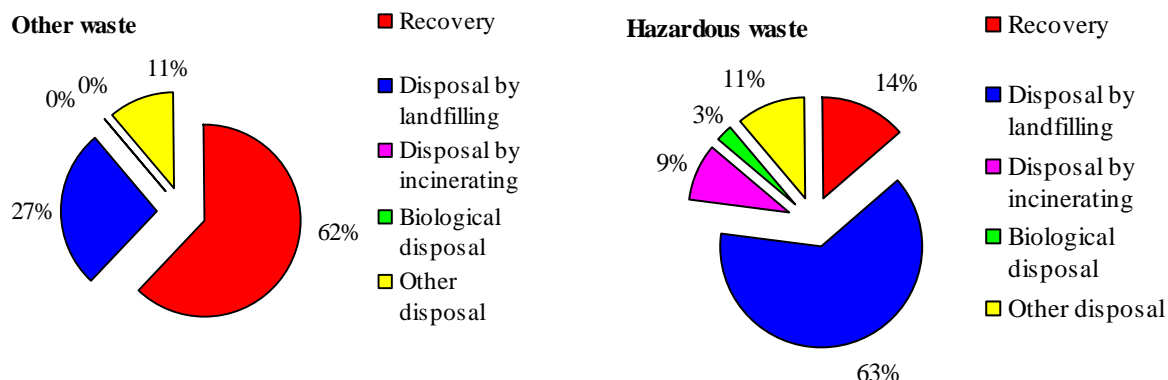
Surface water quality in Košice-Prešov loaded area

Water source	Sampling point	Groups of indicators and quality classes					
		A	B	C	D	E	F
Hornád	Krásna nad Hornádom	III	II	III	II	IV	
	Žďaňa	IV	IV	IV	I	IV	V
	Hidasnémeti	V	V	IV	II	V	IV
Torysa	Kendice	IV	III	IV	II	IV	IV
	Košické Olšany	IV	III	IV	II	IV	
Svinka	Obišovce	III	III	III	II	IV	V
Sekčov	Ústie	III	III	III	II	IV	IV
Sokoliansky p.	Tornyosnémeti	II	IV	V	II	V	IV
Ida	Ústie	V	II	III	II	IV	III
Turňa	Ústie	III	II	III	III	IV	III
Bodva	Host'ovce	V	IV	IV	II	V	IV

Source: SHMI

♦ **Waste management**

The way of waste disposal in Košice-Prešov loaded area



Source: SEA

Source: SEA

The Zemplín loaded area

♦ **Air pollution**

Emissions from the heat and wood-processing industries are the main contributors to the level of air pollution in this loaded area. Air pollution in the southern part of the territory is caused by energy sources that burn solid fuels.

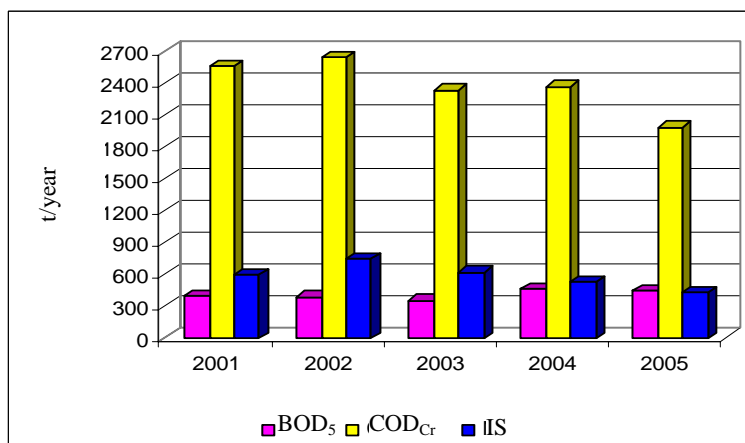
The most significant stationary sources of air pollution in Zemplín loaded area and their emissions of basic polluting substances (BPS) in 2004 (t/year)

Operator	SPM	SO ₂	NO _x	CO
1. SE, Inc., Bratislava, Elektrárň Vojany I a II	5 961.700	4 116.602	4 683.326	632.099
2. ENERGETIKA, Ltd., Strážske	5.709	236.493	48.764	9.725
3. BUKOCEL, Inc., Hencovce	671.191	2 244.106	619.433	1 683.216
4. ZEOCEM Bystré	7.071	30.585	5.298	7.692
5. CHEMES, Inc. Humenné	107.081	1 346.260	546.818	148.769

Source: SHMI

♦ **Water pollution**

The trend of discharged pollution from the significant sources of water pollution in Zemplín loaded area (t/year)

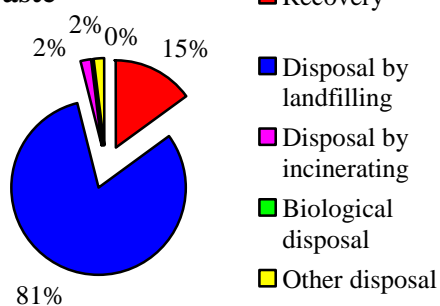


Source: SHMI

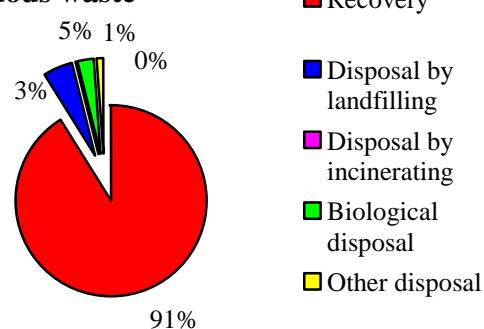
Surface water quality in Zemplín loaded area

Water source	Sampling point	Groups of indicators and quality classes					
		A	B	C	D	E	F
Laborec	Petrovce	III	II	III	II	IV	II
	Lastomír	III	II	II	II	III	I
	Ižkovce	IV	III	II	II	IV	III
Šíravský kanál	Ústie	III	II	II	II	IV	II
Zálužický kanál	Pod Šíravou	III	II	II	III	III	
Uh	Pinkovce	III	III	III	II	V	III
	Ústie	IV	II	II	II	III	III
Čierna voda-4	Stretava	IV	II	III	III	III	III
Ondava	Nižný Hrušov	III	II	III	II	IV	III
	Brehov	III	II	IV	II	IV	IV
Oľka	Ústie	V	III	II	II	III	
Topľa	Pod Vranovom	II	II	III	II	IV	III
Trnávka – 1	Zemplínske Hradište	V	III	V	IV	V	IV
Somotorský kanál	Somotor	V	III	V	III	III	
Bodrog	Streda nad Bodrogom	III	IV	III	II	IV	V

Source: SHMI

♦ Waste management
The way of waste disposal in Zemplín loaded area
Other waste


Source: SEA

Hazardous waste


Source: SEA