

• NATURAL AND TECHNOLOGICAL HAZARDS

Accidental deterioration of water quality

In 2008, the SEI statistics showed reduction in the number of events and recorded 102 emergency deteriorations or threats to water quality (EDW). Of all recorded events, 49 were cases relating to surface water, and 53 were cases of threats or contamination of ground water.

Special deterioration or quality menace of water of the SR in the years 2000-2008

Year	EDW recorded by SEI	Special deterioration of water					
		Surface			Ground		
		Total number	Watercourses and basins	Water courses	Total number	Pollution	Endangerment
2000	82	55	2	9	27	3	24
2001	71	46	1	4	25	1	24
2002	127	87	1	6	40	5	35
2003	176	134	2	3	42	0	42
2004	137	89	1	10	48	11	37
2005	119	66	2	5	53	2	51
2006	151	94	0	3	57	6	51
2007	157	97	1	4	60	4	56
2008	102	49	0	6	53	4	49

Source: SEI

In 2008 again, in terms of hazardous compounds, deterioration of water quality was caused mainly by crude oil compounds in 65 cases (63.7 %), waste water in 15 cases (14.7 %), and in 6 cases (5.8 %) no contaminant was detected. Livestock excrements in 7 cases (6.8 %), insoluble substances, caustic alkali, pesticides, and other toxic substances have smaller impact on SDW.

Progress in number of WQEDA according to the sort of WDS in the years 1994 – 2008

Sorts of water deteriorative Substances (WDS)	1994	1996	1999	2001	2002	2003	2004	2005	2006	2007	2008
Oil substances	63	69	54	40	64	59	70	63	69	76	65
Alkalis	3	5	5	2	5	3	1	0	3	4	2
Pesticides	1	1	1	0	1	0	3	0	2	0	0
Excrements of farm animals	9	14	7	4	9	21	15	14	14	12	7
Silage fluids	0	1	2	0	2	1	1	0	0	0	0
Industrial fertilisers	0	0	0	0	0	1	0	0	0	0	0
Other toxic substances	5	1	6	5	3	3	0	4	4	5	2
Insoluble substances	4	4	1	2	6	11	3	4	3	3	2
Waste water	6	6	6	10	17	35	20	10	28	24	15
Other substances	13	9	4	1	3	7	10	8	6	7	3
Water detrimental substances impossible to determine	17	7	12	7	17	35	14	10	22	26	6

Source: SEI

In 2008, there was only one such emergency deterioration of water outside the Slovak territory. Unknown originators (17.6 %) and so-called foreign organisations (7.8 %) represent stable contributors to emergency deterioration of water quality.

Just like in the previous years, in 2008, human factor and poor technical condition of equipment or facilities for hazardous substances were the most frequent causes for SDW. High number of SDW was caused by transport (38) and transfer of hazardous substances (6).

Fire risk

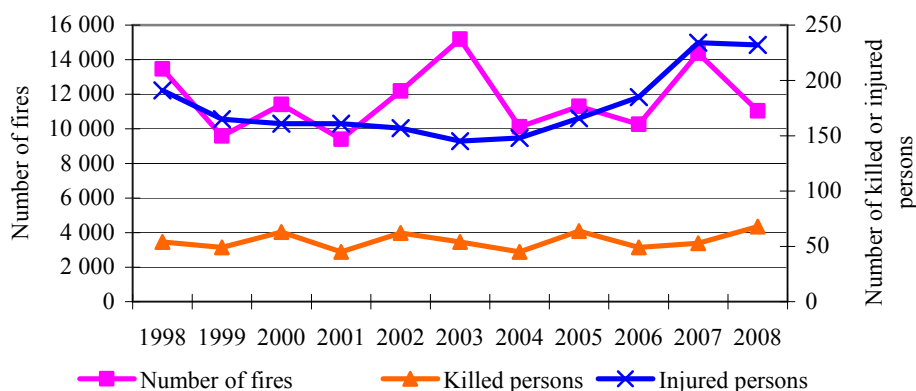
In 2008 were documented in the SR **11 045 fires**, causing 68 casualties and 232 injured. Direct material damage reached 1 310 287.1 thous. SKK (43 493.6 thous. €), while the volume of preserved values was calculated at 5 840 030 thous. SKK (193 853.5 thous. €).

Although the number of fires dropped by 3 321, compared to 2007, material damage as well as the magnitude of preserved values copied the level of 2007.

Compared to previous years, greatest number of fires originated surprisingly in the **household sector** – 1 983, with 42 casualties and 138 injured persons. Direct material damage reached the value of 154,581 mil. SKK (5,131 mil. €). In terms of fire statistics, **agriculture** shows the second greatest number of fires – 1 633, occasioning direct material damage at 81,252 million SKK (2,697 mil. €), with 4 casualties and 5 injured persons. Least number of fires was recorded in the **commercial** sector, with 162 direct material damage totalling 145,446 mil. SKK (4,827 mil. €).

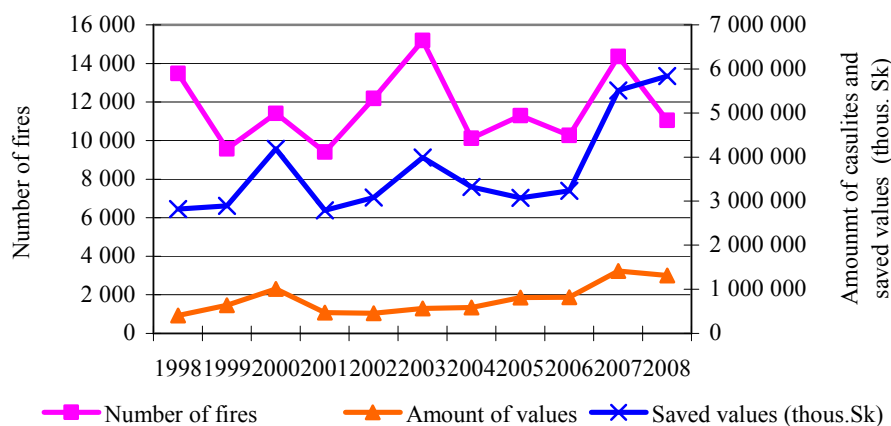
From the perspective of administrative distribution of territory, **most fires** occurred in 2008 in the Košice region (1 768), while **least** fires were recorded in the Trenčín region (989). **Greatest damage** due to the occurrence of fires was recorded in the Žilina region (446 373.0 thous. SKK / 14 816.9 thous. €) and the **least** in the Trenčín region (58 630.9 thous. SKK / 1 946.2 thous. €).

Relationship between number of fires and number of killed or injured persons in 1998-2008



Source: FPRS MoI SR

Relationship between number of fires and number of casualties or amount of saved values in 1998-2008



Source: FPRS MoI SR

Floods

In 2008, there were 188 municipalities affected by floods, where 1 675 houses were flooded (cellars, basements). 10 742 inhabitants felt the aftermath of the floods, including 691 persons who had to be evacuated. Total cost and damages by floods in the SR in 2008 amounted to 1 377.381 mil. SKK (45.720 mil. €), including the rescue costs of 75.764 mil. SKK (2.514 mil. €), and safety works of 108.055 mil. SKK (3.586 mil. €).

Material damage amounted to 1 193.491 mil. SKK (39.616 mil. €), damage to private citizens' property was 57.134 mil. SKK (1.896 mil. €), and damage to municipal property was 270.460 mil. SKK (8.977 mil. €), damage to higher territorial governing units was 271.866 mil. SKK. Flood prevention construction measures at water courses were damaged, resulting in damages at 310.218 mil. SKK (10.296 mil. €).

In January 2008, works begun to be implemented on transposition of the **EP and Council Directive 2007/60/EC on the assessment and management of flood risks** into Act No. 666/2004 Coll. on flood protection.

Floods aftermath over the period of 2001-2008

	No. of flood stricken residential areas	Flooded territories (ha)	Damages by floods (mil. SKK)	Costs (mil. SKK)		Total costs and damages (mil. SKK/mil. €)
				Rescue activities	Maintenance and safety activities	
2001	379	22 993	1 960.60	57.10	32.10	2 049.80 / 68.04
2002	156	8 678	1 525.70	58.10	50.10	1 639.90* / 54.43
2003	41	744	43.90	5.69	4.20	53.79 / 1.79
2004	333	13 717	1 051.80	37.23	102.93	1 191.96 / 39.57
2005	237	9 237	800.46	67.82	80.64	948.92 / 31.50
2006	512	30 730	2 425.90	180.35	193.4	2 799.64 / 92.93
2007	60	339	109.58	9.14	6.39	125.11 / 4.15
2008	188	3 570	1 193.5	108.00	75.80	1 377.38 / 45.72

* including also the sum of 6.0 mil. SKK – cost of anti-mosquito chemical spray treatment

Source: MoA SR, MoE SR