

STATISTICAL RELEASE

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Environmental statistics

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Consumption of hazardous chemicals in the Republic of Serbia, 2009 and 2010

– Preliminary data –

The survey contains the selected statistical data on production, export/ import and consumption of hazardous chemicals in the Republic of Serbia in 2009 and 2010, as well as data on hazardous chemicals consumption by sections included in this survey.

Total quantity of produced hazardous chemicals in 2010 increased by 69.3% relative to 2009.

Observing production of hazardous chemicals in 2009, by toxicity classes, out of total quantity of produced hazardous chemicals, 1% was in the class of carcinogenic, mutagenic and toxic for reproduction (A), 28.8% belonged to the class of very toxic (C), 46.3% was in the group of toxic (D) and 24.3% were harmful chemicals (E).

Regarding production of hazardous chemicals in 2010, by toxicity classes, out of total quantity of produced hazardous chemicals, 0.3% was in the class of carcinogenic, mutagenic and toxic for reproduction (A), 37.3% belonged to the class of very toxic (C), 54.1% was in the group of toxic (D) and 8.2% were harmful chemicals (E).

1. Production of hazardous chemicals by toxicity classes

Toxicity classes	Production of hazardous chemicals, t	
	2009	2010
Total	441 605	747 841
A – Carcinogenic, mutagenic and toxic	2 460	2 548
B – Chronically toxic	2	-
C – Very toxic	127 234	279 280
D – Toxic	204 472	404 935
E – Harmful	107 437	61 078

In 2010, recorded was the decrease of imported hazardous chemicals, as follows: class of carcinogenic, mutagenic and toxic for reproduction (A) by 58.2%, chronically toxic (B) by 44%, very toxic (C) by 6%, toxic (D) by 16.3%, while in the class of harmful (E), quantity was increased by 19.7, compared to 2009.

In 2009, by toxicity classes of hazardous chemicals, exports amounted to 4.7% chemicals from the class of carcinogenic, mutagenic and toxic for reproduction (A), 1.5% was in the class of chronically toxic (B), 9.8% was in the class of very toxic (C), 11.4% were toxic (D) and 72.6% were harmful (E).

In 2010, by toxicity classes of hazardous chemicals, exports amounted to 1.1% chemicals from the class of carcinogenic, mutagenic and toxic for reproduction (A), 1% was in the class of chronically toxic (B), 35.7% was in the class of very toxic (C), 49.8% were toxic (D) and 12.7% were harmful (E).

2. Import and export of hazardous chemicals by toxicity classes

Toxicity classes	Import, t		Export, t	
	2009	2010	2009	2010
Total	105 083	105 870	85 034	213 177
A – Carcinogenic, mutagenic and toxic	165	69	3 970	2 423
B – Chronically toxic	5 370	3 008	1 306	1 593
C – Very toxic	17 947	16 867	8 322	76 017
D – Toxic	32 599	27 271	9 673	106 146
E – Harmful	49 002	58 655	61 763	26 998

Total calculated quantity of consumed hazardous chemicals in 2010 increased by 38.8% relative to 2009.

In 2010, recorded was the decreased calculated quantity of consumed hazardous chemicals as follows: class of chronically toxic (B) by 65.1%, harmful (E) by 2.1%, while the increase was noted in the class of very toxic (C) by 60.8% and in class of toxic (D) by 43.4% if compared to 2009.

3. Consumption¹⁾ of hazardous chemicals by toxicity classes

Toxicity classes	Consumption ¹⁾ of hazardous chemicals, , t	
	2009	2010
Total	461 654	640 534
A – Carcinogenic, mutagenic and toxic	-1 345 ²⁾	194
B – Chronically toxic	4 066	1 415
C – Very toxic	136 859	220 130
D – Toxic	227 398	326 060
E – Harmful	94 676	92 735

¹⁾ The calculated value (production + imports-exports)

²⁾ Negative value – since the exported quantity of hazardous chemicals also included a part of stocks from the previous year.

Table 4 presents values of hazardous chemicals consumption, provided by regular statistical survey on consumption of hazardous chemicals.

4. Consumption of hazardous chemicals, by toxicity classes, for sections covered by survey on consumption of hazardous chemicals¹⁾

Toxicity classes	Consumption of hazardous chemicals, t	
	2009	2010
Total	425 419	577 646
A – Carcinogenic, mutagenic and toxic ²⁾	14 495	18 719
B – Chronically toxic ²⁾	12 891	14 634
C – Very toxic	106 117	177 009
D – Toxic	227 177	293 677
E – Harmful	64 740	73 606

¹⁾ Includes sections: Mining and quarrying, Manufacturing, Electricity, gas, steam and air conditioning supply, Water supply; sewerage, waste management and remediation activities (divisions of Water collection, treatment and supply and Sewerage).

²⁾ Quantity of consumed hazardous chemicals of classes A and B in 2009 and 2010, regarding the sections included in the survey (table 4) is higher than calculated consumption of hazardous chemicals for the Republic of Serbia (table 3) since the list of selected toxic chemicals from the PRODCOM list of industrial products has not been fully harmonized with Serbian Nomenclature of Industrial Products.

Methodological explanations

Shown data for 2009 and 2010 are gathered based on complex survey on hazardous chemicals.

The list of hazardous chemicals which is used in survey on hazardous chemicals is created on the basis of chemicals' characteristics that affect human life and health.

According to the toxic properties, hazardous chemicals are grouped in five classes: class A – carcinogenic, mutagenic and reprotoxic, class B – chronically toxic (e.g. sensitizing, etc.), class C- very toxic, class D- toxic and class E- harmful.

Carcinogenic chemicals are the chemicals which, if inhaled, swallowed or absorbed through the skin, can cause cancer or increase the risk of it.

Mutagenic chemicals are the chemicals which, if inhaled, swallowed or absorbed through the skin, can cause genetic changes or increase the risk of them.

Chemicals toxic for reproduction are the chemicals which, if inhaled, swallowed or absorbed through the skin, can cause hazardous effects on posterity and/ or decrease male or female reproductive functions, i.e. decrease the capabilities or increase the risk of their appearance.

Chemicals that cause sensibilization are the chemicals which, if inhaled, swallowed or absorbed through the skin, can cause over sensibility and longer exposure to such chemicals can cause characteristic hazardous effects.

Very toxic chemicals are chemicals which, if inhaled, swallowed or absorbed through the skin, in small quantities, can cause death, acute or chronic health effects.

Toxic chemicals are the chemicals which, if inhaled, swallowed or absorbed through the skin, in small quantities, cause death, acute or chronic health effects.

Harmful chemicals are the chemicals which, if inhaled, swallowed or absorbed through the skin, cause death, acute or chronic health effects.

List of chemicals which is used in complex survey on hazardous chemicals is in compliance with the Regulation on registration, evaluation and authorization of chemicals 1907/06 (REACH – Registration, Evaluation, Authorization and Restriction of Chemical substances) and it is defined by PRODCOM (PROducts of COMmunity) list.

More detailed methodologies are available on the website of SORS: <http://webrzs.stat.gov.rs/WebSite/userFiles/file/Zivotna%20sredina/SMET8/SMET011110C.pdf>

Starting from 1999 the Statistical Office of the Republic of Serbia has not at disposal and may not provide available certain data relative to AP Kosovo and Metohia and therefore these data are not included in the coverage for the Republic of Serbia (total).