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Water use and protection against pollution in the Republic of Serbia, 2011 – Preliminary results –

The data represent the preliminary results of the Survey on water use and protection against pollution in the Republic of Serbia in 2011. The tables present data on abstracted, used and wastewater quantities from industry.

Of the total 3 480 111 thous. m³ of abstracted waters, 99.5% are from self-supply (surface water - 98.7%, ground water - 0.8%) and 0.5% is from public water supply.

The following divisions are particularly marked: Electricity, gas, steam and air conditioning supply, Manufacture of basic metals, Manufacture of food products and Manufacture of chemicals and chemical products that abstract and use 98.9% of the total water quantity.

1. Water abstraction from industries, by type of supply system, 2011

Republic of Serbia

	From public water supply thous. m ³	Self-supply, thous. m ³		Total, thous. m ³
		Ground water	Surface water	
Abstracted water¹⁾	18 513	27 410	3 434 188	3 480 111
Mining and quarrying	973	2 026	8 076	11 075
Manufacturing	15 427	22 351	51 688	89 466
Electricity, gas , steam and air conditioning supply	2 113	3 033	3 374 424	3 379 570
Water intensive industries	8 023	14 798	3 419 498	3 442 319
Electricity, gas , steam and air conditioning supply	2 113	3 033	3 374 424	3 379 570
Manufacture of basic metals	1 202	753	35 965	37 920
Manufacture of food products	2 419	9 198	2 573	14 190
Manufacture of chemicals and chemical products	2 289	1 814	6 536	10 639

¹⁾ Water used for hydropower plants, which are not included in this table, in 2011 amounted to 152 423 mill. m³.

Out of the total used water in industries, 97.1% refers to water used in sections Electricity, gas, steam and air conditioning supply, 2.6% to water used in Manufacturing, while 0.3% relates to water used in Mining and quarrying.

2. Water use in industry, by type of use, 2011

Republic of Serbia						thous. m ³
	Cooling water for electricity generation	Other cooling water	Water in technological process	Sanitary water	Other industrial use of water	Total water use in industry
Water use¹⁾	3 327 440	40 751	47 271	9 709	54 941	3 480 111
Mining and quarrying	-	219	8 866	1 382	608	11 075
Manufacturing industry	325	39 953	32 025	6 551	10 613	89 466
Electricity, gas, steam and air conditioning supply	3 327 115	579	6 380	1 776	43 720	3 379 570
Water intensive industries	3 327 440	37 177	24 379	4 309	49 014	3 442 319
Electricity, gas, steam and air conditioning supply	3 327 115	579	6 380	1 776	43 720	3 379 570
Manufacture of basic metals	-	32 649	4 364	805	102	37 920
Manufacture of food products	199	2 225	7 053	921	3 792	14 190
Manufacture of chemicals and chemical products	126	1 724	6 582	807	1 400	10 639

¹⁾ Water used for hydropower plants, which are not included in this table, in 2011 amounted to 152 423 mill. m³.

Of the total 3 439 088 thous. m³ of industrial waste waters, 99.2% come from next divisions: Electricity, gas, steam and air conditioning supply, Manufacture of basic metals, Manufacture of food products and Manufacture of chemicals and chemical products, which are the largest consumers of water, and the remaining 0.7% come from Mining and quarrying and other divisions of Manufacturing.

The share of treated waters in total wastewater discharged from industry in 2011 amounted to 3.9%.

3. Wastewater from industry, 2011

Republic of Serbia			
	Treated wastewater, thous. m ³	Total discharged wastewater, thous. m ³	Percent of treated water in total discharged water by industrial activity divisions that water comes from
Wastewater¹⁾	135 232	3 439 088	3,9
Mining and quarrying	2 076	4 095	50,7
Manufacturing industry	53 396	76 257	70,0
Electricity, gas, steam and air conditioning supply	79 760	3 358 736	2,4
Water intensive industries	122 614	3 412 596	3,6
Electricity, gas, steam and air conditioning supply	79 760	3 358 736	2,4
Manufacture of basic metals	30 363	34 964	86,84
Manufacture of food products	8 707	12 339	70,6
Manufacture of chemicals and chemical products	3 784	6 557	57,7

¹⁾ In water used for hydropower plants are not included wastewater.

In 2011, water abstraction was by 32.9% decreased relative to 2010, whereof, 12.5% less ground and spring water was abstracted and 32.8% less surface water.

4. Water abstraction from industries, by type of supply system, 2009–2011

Republic of Serbia		mill. m ³		
	2009	2010	2011	
Abstracted water¹⁾	187 647	232 258	155 903	
From public water supply	22	18	18	
From self-supply	187 625	232 240	155 885	
From ground and spring waters	30	31	27	
From surface water	187 595	232 209	155 857	

¹⁾Water used for hydropower plants is included.

In 2011, wastewater quantity was by 10.3% increased relative to the referent period 2010. Quantity of treated wastewater in 2011 decreased by 17.0% compared to 2010.

5. Water use and wastewater in industry, 2009–2011

Republic of Serbia		mill. m ³		
	2009	2010	2011	
Water use¹⁾	187 647	232 258	155 903	
For production	187 635	232 248	155 893	
Flowing water in hydropower plants	184 260	229 115	152 423	
For cooling purposes ²⁾	3 271	3 032	3 368	
Water in technological process	48	48	47	
As a raw material	12	10	10	
For other purposes	56	53	55	
For sanitary use	12	10	10	
Wastewater³⁾	3 356	3 119	3 439	
Treated wastewater	174	163	135	

¹⁾Water used for hydropower plants is included.

²⁾Included are all waters for cooling purposes in electricity production and other technological processes.

³⁾Water used for hydropower plants is excluded.

Methodological notes

The survey on industry use and protection of waters against pollution involves all enterprises with 10 and more employees, with the main activity related to the sections of mining and quarrying, manufacturing and electricity, gas, steam and air conditioning supply, i.e. the divisions 05-35 of the Classification of Activities (2010).

Data are collected by the reporting method and regarding the geographical aspect, the survey encompasses enterprises that perform their activities on the whole territory of the Republic of Serbia. Starting from 1999, the Statistical Office of the Republic of Serbia does not have available certain data for AP Kosovo and Metohia, and thus are not included in the data for the Republic of Serbia (total).

Ground water relates to water stocks found beneath the earth's surface.

Surface water refers to all running or stagnant waters on the earth's surface, meaning lakes, streams, rivers (waterways), recipients, etc, as well as artificial waterways including irrigation, industrial and navigation canals, drainage systems and so on.

Self-supply involves every water abstraction by users for their final consumption.

Used water covers all waters supplied to the reporting units and used by them for performing their activities.

Wastewater is water which is, after use, treated as wastewater and transported to treatment plant or let out into recipient (underground or surface water). Wastewater quantities do not include atmospheric water and water used for hydropower plants.

Treated wastewater refers to all wastewaters treated by primary, secondary or tertiary method during the reporting year.

More detailed methodologies are available on the website of the Office:

<http://webrzs.stat.gov.rs/WebSite/Public/PageView.aspx?pKey=201>.