

# COMMUNICATION

# ZS20

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Environmental Statistics

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## Irrigation systems

This communication presents selected statistical data on irrigation systems, which show the main indicators of irrigation facilities and equipment and areas covered by the related system depending of the irrigation practice. The tables contain preliminary results on the quantities of water used for irrigation and on irrigated land as of 31/12/2009.

Total water quantities used for irrigation decreased by 25.5% in 2009, when compared with reference values in 2008, of which most quantities were withdrawn from watercourses (84.5% of the total irrigation water quantity), which is 29.6% less in relation to 2008.

### Used irrigation water<sup>1)</sup>, 2009 As of 31/12/2009

	Total	From ground waters	From watercourse	From accumulations and lakes	Other	thous. m <sup>3</sup>
Republic of Serbia	36 079	858	30 489	4 732	-	-
Central Serbia	2 799	27	728	2 044	-	-
AP Vojvodina	33 280	831	29 761	2 688	-	-
AP Kosovo and Metohia	...	...	...	...	...	...

<sup>1)</sup> Preliminary results.

In 2009, there were 8.8% more land which was irrigated than in 2008. In 2009, as in 2008, artificial rain was the most used irrigation system, representing 93% of the total area irrigated by means of this practice. It amounts to 8% more than reference values in 2008.

### Irrigated areas<sup>1)</sup>, 2009 As of 31/12/2009

	Surface irrigation	Sprinkling	Drop by drop	Total utilized agricultural area	Total irrigated areas	ha
<b>Total</b>	<b>1 432</b>	<b>25 399</b>	<b>415</b>	<b>5 069 646<sup>2)</sup></b>	<b>27 246</b>	
Arable fields and gardens	1 432	25 092	37	3 300 999	26 561	
Orchards	0	261	357	240 285	618	
Vineyards	0	6	21	57 540	27	
Meadows	0	40	-	624 924	40	

<sup>1)</sup> Preliminary results.

<sup>2)</sup> Total utilized agricultural area also included pastures and other lands.

To irrigate areas, 17% less pumping aggregates were used in 2009 than in the same period 2008, while the number of aggregates for sprinkling decreased by 6% compared to 2008.

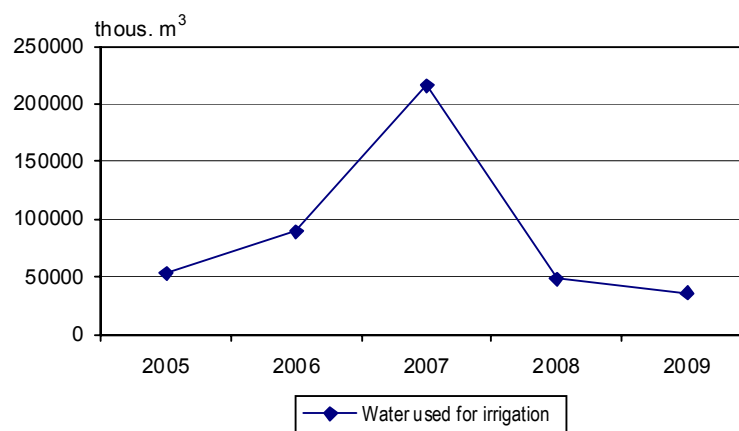
The total capacity of irrigation facilities and equipment decreased in 2009 by 3% compared to 2008.

The data relating to the Republic of Serbia and its subteritories. Starting from 1999, the Statistical Office of the Republic of Serbia does not have available certain data for AP Kosovo and Metohia, which are therefore not included in the data for the Republic of Serbia (total).

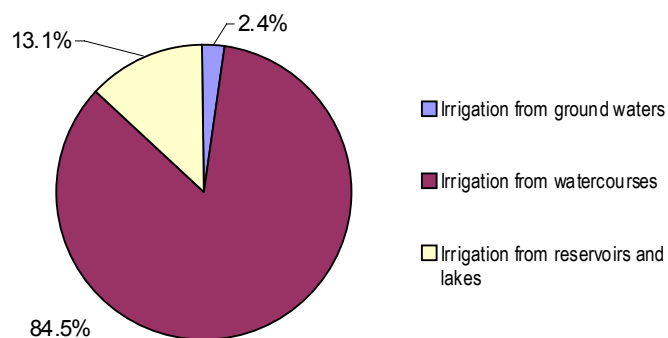
### Facilities and equipment for irrigation, 2005-2009

	2005	2006	2007	2008	2009
<b>Republic of Serbia</b>					
<b>Facilities and equipment for irrigation</b>					
Pumping plants (number)	459	427	280	564	467
Sprinkler systems (number)	1 254	1 250	498	449	422
Total capacity, m <sup>3</sup> /sec	118	106	71	29	28
Total canals , km	2 153	2 141	460	1 258	1421
Total pipelines, km	1 268	1 342	919	1 110	1416
<b>Central Serbia</b>					
<b>Facilities and equipment for irrigation</b>					
Pumping plants (number)	102	95	48	351	34
Sprinkler systems (number)	670	669	35	62	9
Total capacity, m <sup>3</sup> /sec	36	42	10	3	1
Total canals , km	1 780	1 780	232	1 029	343
Total pipelines, km	428	501	357	592	341
<b>AP Vojvodina</b>					
<b>Facilities and equipment for irrigation</b>					
Pumping plants (number)	357	332	232	213	433
Sprinkler systems (number)	584	581	463	387	413
Total capacity, m <sup>3</sup> /sec	82	65	61	26	27
Total canals , km	373	361	228	229	1078
Total pipelines, km	840	841	562	518	1075
<b>AP Kosovo and Metohia</b>					
<b>Facilities and equipment for irrigation</b>					
	...	...	...	...	...

### Total water used for irrigation, 2005-2009



### Irrigation by sources, 2009



## Methodological explanations

Data on irrigation systems are regularly collected by means of regular reports submitted by water supply and agricultural enterprises, which manage irrigation systems and equipment.

Geographically, the survey covers enterprises that carry out their activity on the whole territory of the Republic of Serbia.

The reporting method is used for data collection, i.e. the reporting unit fills in the questionnaire based on available documentation. Should any corresponding documentation on certain information lack, a competent person makes an estimation based on her/his knowledge of the functions of irrigation systems, available facilities, network condition and irrigation equipments along with technical characteristics. The reporting unit forwards the filled in questionnaire to the relevant statistical office located on its territory.

**River basin** is a river with all its tributaries, if they are not counted as a separate basin. Otherwise only the direct tributary of the corresponding river is shown. Watercourses with minor basin are counted in so-called „direct basin“ of a bigger watercourse. River and lake basins, according to which are defined by the Secretariat of the Republic and Province for Water Management.

Under **area fit for irrigation** presented is the area on which there are irrigation systems (canals with related facilities and pumping installations), and which can be irrigated with the existing equipment, whether it is irrigated or not.

Under **used water for irrigation** presented are the quantities of water which were consumed for the purpose of irrigating arable land by means of the three irrigation methods (surface, sprinkling and drop-by-drop).

Under **length of canals**, that is, irrigation pipelines, presented is the length of all principal and distribution canals, i.e pipelines.

Under **pumping stations** presented is the total capacity power in kW for all pumps in the stations, including the capacity power of mobile aggregates.

The total **capacity of pumps** is the installed capacity of all pumps in the stations, expressed in m<sup>3</sup>/s.

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