STATISTIČNI URAD REPUBLIKE SLOVENIJE
STATISTICAL OFFICE OF THE REPUBLIC OF SLOVENIA

STATISTIČNE INFORMACIJE
RAPID REPORTS

17. FEBRUAR 2005
17 FEBRUARY 2005

št./No 49

27 OKOLJE
ENVIRONMENT

št./No 1

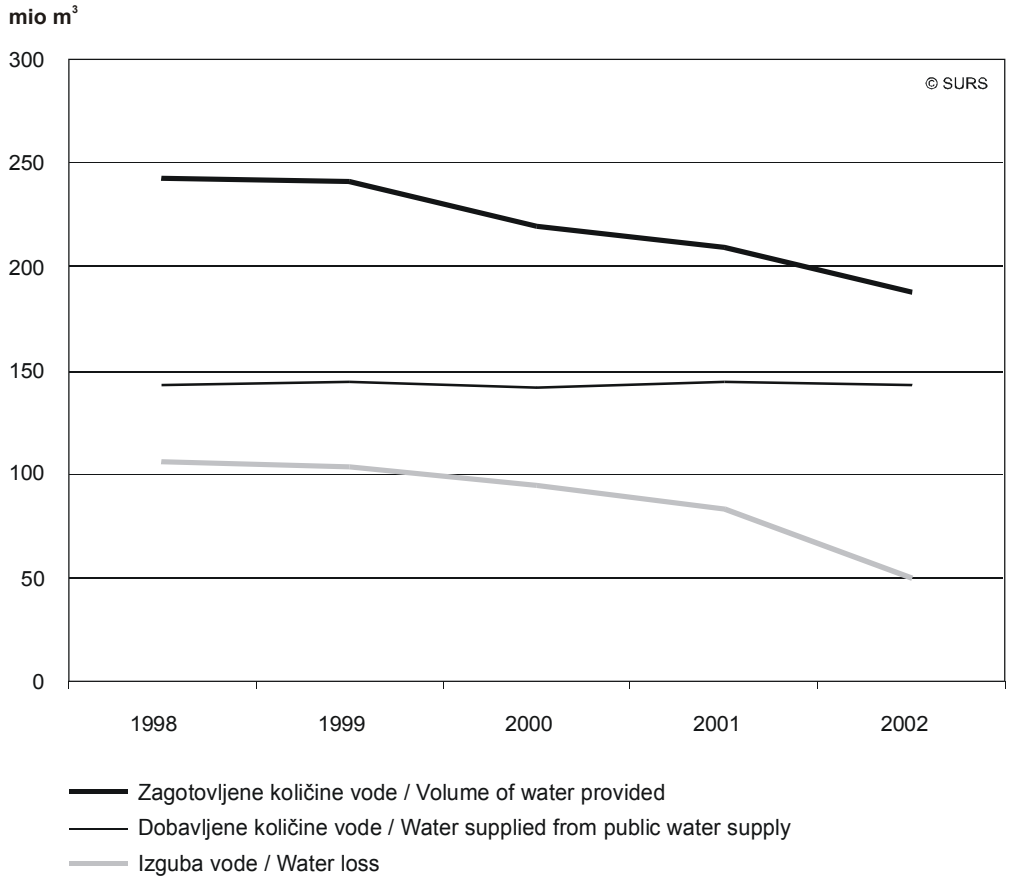
ZAGOTOVLJENE IN DOBAVLJENE KOLIČINE VODE TER IZGUBE VODE V JAVNEM VODOVODU, SLOVENIJA, 2002

VOLUME OF WATER PROVIDED AND SUPPLIED AND VOLUME OF WATER LOSS FROM PUBLIC WATER SUPPLY, SLOVENIA, 2002

- V letu 2002 je bilo za javni vodovod načrpanih 187 milijonov m^3 sveže vode. Večina te vode je bila načrpana iz podzemne vode, zato je skrb za ohranjanje zadostnih količin podzemnih vod in za ohranjanje njihove kakovosti v Sloveniji še toliko pomembnejša.
- Izguba vode zaradi dotrajanih omrežij se postopno zmanjšuje. Po letih prehajanja javnih vodovodov v upravljanje poslovnih enot s koncesijo se vodovodna omrežja postopoma obnavljajo.
- Prvič objavljamo tudi podatek o dobavljeni, vendar neobračunani vodi. Ta se je v preteklosti večkrat prištela kar k izgubam.

- In 2002, 187 million m^3 of water were pumped for the needs of public water supply. The major part of water was pumped from groundwater resources, so it is vital to provide adequate quantities and good quality of water in these resources.
- Loss of water due to old water networks keeps decreasing. Upon transition in the management from public water supply organisations to business units with concession, water networks are being renewed.
- For the first time we publish data on supplied but uncharged water. In the past these data were added to water loss.

Slika 1: Zagotovljene in dobavljene količine vode ter izgube vode v javnem vodovodu, Slovenija, 1998-2002
Chart 1: Volume of water provided and supplied and volume of water loss from public water supply, Slovenia, 1998-2002



1. Zagotovljene količine vode, načrpane v javnem vodovodu, po vodnih virih, Slovenija, 2002
Volume of provided water, pumped in the public water network by water resources, Slovenia, 2002 1000 m^3

	Skupaj Total	Podzemna voda Ground water	Izviri podzemne vode Springs of ground water	Izviri podzemne vode s površinskim dotokom Springs of ground water with surface water affluence	Tekoče vode Running waters	Naravna jezera Natural lakes	Umetni zbiralniki vode Artificial lakes	Umetne bogatitve Artificial recharge
1990	262144	257271[1)]	…	…	4873[2)]	-	-	…
1995	259687	251917[1)]	…	…	7770[2)]	-	-	…
1998	242915	237970[1)]	…	…	4945[2)]	-	-	…
1999	240764	237399[1)]	…	…	3365[2)]	-	-	…
2000	219640	214704[1)]	…	…	4936[2)]	-	-	…
2001	209953	205585[1)]	…	…	4368[2)]	-	-	…
2002	187109	101555	72327	8222	3532	-	-	1473

1) Prejšnje poimenovanje "podtalnica, studenci" je zajemalo podzemno vodo, izvire podzemne vode in izvire podzemne vode s površinskih dotokom.
The previous expression for "ground water, wells" included ground water, springs of ground water and springs of ground water with surface water affluence.

2) Prejšnje poimenovanje "površinske vode" je zajemalo tekoče vode in umetne bogatitve.
The previous expression "surface waters" included running waters and artificial recharge.

2. Zagotovljene količine vode, načrpane v javnem vodovodu, po vodnih virih, po statističnih regijah, Slovenija, 2002
Volume of provided water, pumped in the public water network by water resources, by statistical regions, Slovenia, 2002 1000 m^3

	Skupaj Total	Podzemna voda Ground water	Izviri podzemne vode Springs of ground water	Izviri podzemne vode s površinskim dotokom Springs of ground water with surface water affluence	Tekoče vode Running waters	Naravna jezera Natural lakes	Umetni zbiralniki vode Artificial lakes	Umetne bogatitve Artificial recharge
SLOVENIJA/SLOVENIA	**187109**	**101555**	**72327**	**8222**	**3532**	**-**	**-**	**1473**
Pomurska	8502	8328	88	86	-	-	-	-
Podravska	26661	23605	1889	-	110	-	-	1057
Koroška	8366	853	4956	-	2557	-	-	-
Savinjska	18798	2862	15435	501	-	-	-	-
Zasavska	4245	731	1316	2198	-	-	-	-
Spodnjeposavska	5798	4962	836	-	-	-	-	-
Jugovzhodna Slovenija	8780	4676	3973	66	65	-	-	-
Osrednjeslovenska	54818	47588	2809	3621	800	-	-	-
Gorenjska	23355	3415	19062	462	-	-	-	416
Notranjsko-kraška	5498	2234	2271	993	-	-	-	-
Goriška	14249	669	13285	295	-	-	-	-
Obalno-kraška	8039	1632	6407	-	-	-	-	-

3. Zagotovljene količine vode, načrpane v javnem vodovodu, po vodnih virih, po porečjih, Slovenija, 2002
Volume of provided water, pumped in the public water network by water resources, by sub-basins, Slovenia, 2002 1000 m^3

	Skupaj Total	Podzemna voda Ground water	Izviri podzemne vode Springs of ground water	Izviri podzemne vode s površinskim dotokom Springs of ground water with surface water affluence	Tekoče vode Running waters	Naravna jezera Natural lakes	Umetni zbiralniki vode Artificial lakes	Umetne bogatitve Artificial recharge
SLOVENIJA / SLOVENIA	**187109**	**101555**	**72327**	**8222**	**3532**	**-**	**-**	**1473**
Povodje Donave / Donava basin	162636	98692	51063	7876	3532	-	-	1473
Porečje Save / Sava sub-basin	119244	65880	41942	7649	3357	-	-	416
Zgornja Sava	15554	2541	12382	215	-	-	-	416
Sora	5510	1614	3711	185	-	-	-	-
Ljubljanska Sava	49624	42800	3486	3274	64	-	-	-
Ljubljanica	7829	4500	1537	1056	736	-	-	-
Litijska Sava	4685	741	1742	2202	-	-	-	-
Savinja	19183	2758	13742	126	2557	-	-	-
Krška Sava	6437	4949	1488	-	-	-	-	-
Krka	9029	5671	3067	291	-	-	-	-
Spodnja Sava	1393	306	787	300	-	-	-	-
Porečje Kolpe / Kolpa sub-basin	1836	43	1627	101	65	-	-	-
Kolpa	1836	43	1627	101	65	-	-	-
Porečje Drave / Drava sub-basin	31774	24218	7406	40	110	-	-	-
Meža	1690	272	1418	-	-	-	-	-
Zgornja Drava	2076	564	1512	-	-	-	-	-
Ptujska Drava	24874	23382	1382	-	110	-	-	-
Dravinja	3134	0	3094	40	-	-	-	-
Porečje Mure / Mura sub-basin	9782	8551	88	86	-	-	-	1057
Spodnja Mura	4947	3793	83	14	-	-	-	1057
Velika Krka z Ledavo	4835	4758	5	72	-	-	-	-
Povodje Jadranskega morja / Adriatic Sea river basin	24473	2863	21264	346	-	-	-	-
Porečje obale / The coast sub-basin	10245	2194	8000	51	-	-	-	-
Slovenska obala	7118	562	6505	51	-	-	-	-
Timav	3127	1632	1495	-	-	-	-	-
Porečje Soče / Soča sub-basin	14228	669	13264	295	-	-	-	-
Zgornja Soča	1145	111	1034	-	-	-	-	-
Idrijca	1008	17	759	232	-	-	-	-
Srednja Soča	8414	516	7835	63	-	-	-	-
Vipava	3661	25	3636	-	-	-	-	-

4. Količine vode, dobavljene iz javnega vodovoda, Slovenija, 2002
Volume of water supplied from public water supply, Slovenia, 2002 1000 m^3

	Skupaj Total	Voda, dobavljena gospodinjstvom Water supplied to households	Voda, dobavljena dejavnostim Water supplied to activities	Dobavljena, vendar neobračunana voda[1] Supplied but uncharged water[1]	Izguba vode Water loss within waterworks network
1990	245840	86217	79834	-	79789
1995	250056	86475	56294	-	107287
1998	241595	86122	48984	-	106489
1999	240154	87178	48934	-	104042
2000	228549	87968	46175	-	94406
2001	213990	87684	43730	-	82576
2002	183421	88470	37559	7376	50016

1) Neobračunana voda se do leta 2002 ni posebej izkazovala.
Supplied but uncharged water was not separately shown until 2002.

5. Količine vode, dobavljene iz javnega vodovoda, po statističnih regijah, Slovenija, 2002
Volume of water supplied from public water supply by statistical regions, Slovenia, 2002

1000 m³

	Skupaj Total	Voda, dobavljena gospodinjstvom Water supplied to households	Voda, dobavljena dejavnostim Water supplied to activities	Dobavljena, vendar neobračunana voda Supplied but uncharged water	Izguba vode Water loss within waterworks network
SLOVENIJA / SLOVENIA	**183421**	**88470**	**37559**	**7376**	**50016**
Pomurska	7242	3393	2401	233	1215
Podravska	14765	5292	1487	24	7962
Koroška	4890	2270	825	34	1761
Savinjska	20490	11055	6882	687	1866
Zasavska	4241	1688	844	129	1580
Spodnjeposavska	5799	2605	795	27	2372
Jugovzhodna Slovenija	9690	5344	2275	51	2020
Osrednjeslovenska	55016	27688	7787	2670	16871
Gorenjska	20247	8869	4688	1938	4752
Notranjsko-kraška	5176	1777	1113	262	2024
Goriška	15104	5756	3638	1216	4494
Obalno-kraška	20761	12733	4824	105	3099

6. Količine vode, dobavljene iz javnega vodovoda, po porečjih, Slovenija, 2002
Volume of water supplied from public water supply by sub-basins, Slovenia, 2002

	Skupaj Total	Voda, dobavljena gospodinjstvom Water supplied to households	Voda, dobavljena dejavnostim Water supplied to activities	Dobavljena, vendar neobračunana voda Supplied but uncharged water	Izguba vode Water loss within waterworks network
SKUPAJ/TOTAL	**183421**	**88470**	**37559**	**7376**	**50016**
Povodje Donave / Donava river basin	158142	78436	31654	6055	41997
Porečje Save/ Sava sub-basin	115847	56130	22896	5594	31227
Zgornja Sava	15872	7450	3726	986	3710
Sora	5192	2019	1178	952	1043
Ljubljanska Sava	47007	22472	6461	2584	15490
Ljubljanica	7829	3472	1412	288	2657
Litijska Sava	5611	2482	1053	182	1894
Savinja	17241	8834	5637	477	2293
Krška Sava	6448	2873	1124	39	2412
Krka	9401	5653	2075	27	1646
Spodnja Sava	1246	875	230	59	82
Porečje Kolpe / Kolpa sub-basin	1926	1125	389	31	381
Kolpa	1926	1125	389	31	381
Porečje Drave / Drava sub-basin	31852	17171	5638	197	8846
Meža	1690	968	283	1	438
Zgornja Drava	2076	1295	541	-	240
Ptujska Drava	24741	13232	3922	19	7568
Dravinja	3345	1676	892	177	600
Porečje Mure/ Mura sub-basin	8517	4010	2731	233	1543
Spodnja Mura	4959	1634	960	210	875
Velika Krka z Ledavo	4838	2376	1771	23	668
Povodje Jadranskega morja / Adriatic Sea river basin	25279	10034	5905	1321	8019
Porečje obale / The coast sub-basin	11177	4979	2568	105	3525
Slovenska obala	8372	3799	2020	105	2448
Timav	2805	1180	548	-	1077
Porečje Soče / Soča sub-basin	14102	5055	3337	1216	4494
Zgornja Soča	1145	919	226	-	-
Idrijca	1007	538	272	12	185
Srednja Soča	8414	2393	1517	1167	3337
Vipava	3536	1205	1322	37	972

STATISTIČNA ZNAMENJA

- ni pojava
... ni podatka
0 podatek je manjši od 0,5 dane merske enote
0,0 podatek je manjši od 0,05 dane merske enote
1) označba za opombo pod tabelo

STATISTICAL SIGNS

- no occurrence of event
... data not available
0 value not zero but less than 0,5 of the unit employed
0,0 value not zero but less than 0,05 of the unit employed
1) footnote

METODOLOŠKA POJASNILA

Statistična raziskovanja voda sodijo med osnovna statistična raziskovanja na področju okolja in naravnih virov. V okviru teh raziskovanj preučujemo tudi javni vodovod, in sicer z raziskovanjem VOD-V.

Namen statističnega raziskovanja

S tem raziskovanjem zbiramo naslednje podatke:

– o količinah vode, ki jo zajame vodovodni sistem iz posameznega tipa vodnega vira, po porečjih;
– o količinah vode, dobavljene iz vodovodnega sistema, po porabnikih in po naseljih;
– o količinah vode, ki se izgubi med razdeljevanjem, o številu priključkov in o dolžini primarnega in sekundarnega vodovodnega omrežja.

Enote opazovanja

Enote opazovanja so javni vodovodi, ki zagotavljajo povprečno vsaj 10 m^3 vode na dan ali oskrbujejo vsaj 50 oseb.

Definicije in druga pojasnila

Vodni viri:

– podzemna voda izdatnejših vodonosnikov: črpališča na vodonosnikih z medzrnsko poroznostjo, studenci/vodnjaki, črpališča podzemne vode vodonosnikov z razpoklinsko poroznostjo, kraško/razpoklinsko poroznostjo ali mešano poroznostjo;
– izviri podzemne vode, ki ne zajemajo hkrati tudi površinskega dotoka: kraški izviri, izviri na stikih bolj prepustnih s slabo prepustnimi plastmi, studenci z gravitacijskim dotokom vode;
– izviri podzemne vode s površinskim dotokom: izviri podzemne vode, kjer zraven priteka še površinska voda;
– tekoče vode: reke, potoki;
– naravna jezera: ledeniška, presihajoča in rečna jezera (rečne mrtvice);
– umetni zbiralniki vode: akumulacije, ribniki, zalite gramoznice, kali;
– umetne bogatitve: zajem podzemne vode, ki jo umetno bogatimo s površinsko vodo (drenaže rečne vode, bazeni za bogatenje).

Javni vodovod je sistem objektov pod enotnim nadzorom in enotno upravo, ki naselja preskrbuje z vodo iz centralnega vodnega vira.

Povodje je območje, s katerega vse celinske vode odtekajo preko potokov, rek ali jezer v isto reko, ki se izliva v morje.

Porečje je območje, s katerega vse celinske vode odtekajo preko potokov, rek ali jezer v isto reko ali jezero.

METHODOLOGICAL EXPLANATIONS

Statistical water surveys are basic statistical surveys in the field of environment and natural resources. Among this surveys we have also the survey on public water supply (VOD-V form)

Purpose of the statistical survey

With this survey we collect data on:

– volume of water taken by the water supply system from an individual water resource by sub-basins
– volume of water supplied from the water systems, by users and by settlements
– water loss during the water distribution, the number of connections and the length of primary and secondary water supply system

Observation units

Observation units are public water supply systems that provide at least 10 m^3 of water per day and purvey at least 50 persons.

Definitions and other explanations

Water resources

– groundwater of larger aquifers: pumping stations at aquifers with granular porosity, springs/wells, groundwater pumping stations of aquifers with fissure porosity, carst/fissure porosity or mixed porosity
– springs of groundwater that do not include a surface water inflow: carst sources, sources at contacts of more permeable and less permeable or non-permeable layers, and springs with a gravitational water inflow
– springs of groundwater with surface water inflow: springs of groundwater into which surface water flows
– running waters: rivers, streams
– natural lakes: glacier lakes, periodic lakes and river lakes
– artificial lakes: reservoirs, ponds, submerged gravel pits, puddles
– artificial recharge: drawing of groundwater that is artificially recharged with surface water (drainage river water, pools for recharge)

Public water supply is a system of structures under the unified supervision and unified management that provide the settlements from the central water source.

A river basin is the area of land from which all surface run-off flows through a series of streams, rivers and, possibly, lakes into the sea at a single river mouth, estuary or delta.

A sub-basin is the area of land from which all surface run-off flows through a series of streams, rivers and, possibly, lakes into a particular point in a watercourse (normally a lake or a river confluence).

KOMENTAR

Iz slike 1 je razvidno, da se skupna količina zagotovljene vode manjša; za to si prizadeva tudi EU. Vzrokov za to je lahko več, vendar je najpomembnejše to, da se s tem ohranja pomemben del narave. Količina dobavljene vode je stabilna. Povprečna poraba vode v gospodinjstvih na osebo se počasi zmanjšuje, v proizvodnih poslovnih enotah pa se uvajajo sistemi recirkulacije in ponovne uporabe vode; vse to prispeva k temu, da skupna poraba vode ne narašča. Podatki kažejo, da se zmanjšuje tudi količina izgubljene vode. Upoštevati moramo sicer, da je to deloma tudi posledica prenovljene metodologije; po prenovljeni definiciji namreč štejemo med izgube vode samo vodo, izgubljeno zaradi dotrajanih omrežij, ne pa tudi prelivov; zdaj spremljamo ločeno tudi količine dobavljene, vendar neobračunane vode (za čiščenje cest in za spiranje omrežja, za gašenje požarov itd...). Ponekod pa upravljavci dejansko obnavljajo tudi omrežja in to tudi vpliva na podatek na ravni države.

Do leta 2002 smo vodne vire delili samo na površinske vode in podzemno vodo, v letu 2002 pa smo začeli uporabljati podrobnejšo delitev vodnih virov. Tabela 1 tako za pretekla leta za posamezne kolone ne prikazuje podatkov.

Tabele 4,5 in 6 nam prikazujejo porabo vode po porabnikih in izgube vode. Podatki o izgubah vode za leto 2002 kažejo, da se deleži izgubljene vode po statističnih regijah gibljejo od 8 % do 46 %, povprečno, na ravni države pa se izgubi 26 % vode. Delež neobračunane vode v nobeni regiji ne obsega več kot 8 %, povprečje na ravni države pa znaša 4 %. Ob tem moramo upoštevati, da ponekod sploh ne vodijo evidence o količinah te vode ali pa so te le ocenjene.

COMMENT

Chart 1 shows that the total quantity of water provided is decreasing, which is also the case in the EU. There are several reasons for this; the most important is the preservation of an important part of the nature. The supplied water quantity is stable. Average consumption of water by households per person is slowly declining, in manufacturing units systems of recycling and water reuse are being introduced, which causes stabilisation of water consumption. Water loss is also declining. Partially this effect is caused by the new methodology that calculates among water loss only the loss caused by old water networks and not the water spilling. Separately we follow quantities of supplied but uncharged water (for road cleaning, for waterpipe cleaning, for fire extinguishing, etc.). Some water supply managers renew the water networks, which has influence on data at national level.

Until 2002 we divided water resources into surface waters and ground waters. In 2002 we began to use a more detailed breakdown of water resources. This is the reason that Table 1 contains empty spaces in some columns.

Tables 4, 5, 6 show water supplied and water loss by users. For 2002, water losses vary by statistical region from 8% to 46%, while the national average is 26%. The share of uncharged water is less than 8% in all regions and 4% at national level. We must mention that in some parts the records on the quantities of water are not kept or they are only estimated.

Objavljanje

Letno: Statistični letopis

Statistične informacije. Okolje

Publication

Annually: Statistical Yearbook

Rapid Reports, Environment

Sestavil / Prepared by: Zdenko Klemen

Izdaja, založba in tisk Statistični urad Republike Slovenije, Ljubljana, Vožarski pot 12 - **Uporaba in objava podatkov dovoljena le z navedbo vira** - Odgovarja generalna direktorica mag. Irena Križman - Urednica zbirke Statistične informacije Marina Urbas - Slovensko besedilo jezikovno uredila Ivanka Zobec - Angleško besedilo jezikovno uredil Boris Panič - Naklada 550 izvodov - ISSN zbirke Statistične informacije 1408-192X - ISSN podzbirke Okolje 1580-1802 - Informacije daje Informacijsko središče, tel.: (01) 241 51 04 - El. pošta: info.stat@gov.si - http://www.stat.si.

Edited, published and printed by the Statistical Office of the Republic of Slovenia, Ljubljana, Vožarski pot 12 - **These data can be used provided the source is acknowledged** - Director-General Irena Križman - Rapid Reports editor Marina Urbas - Slovene language editor Ivanka Zobec - English language editor Boris Panič - Total print run 550 copies - ISSN of Rapid Reports 1408-192X - ISSN of subcollection Environment 1580-1802 - Information is given by the Information Centre of the Statistical Office of the Republic of Slovenia, tel.: +386 1 241 51 04 - E-mail: info.stat@gov.si - http://www.stat.si.