
Economic analysis – basin wide overview



Annex 15 of the DRBM Plan



COMMENTS

1. There are differences between the countries in the methodologies used for calculating respective socio-economic indicators - different reference parameters have been used such as population or area within the Danube River Basin (DRB).

DE, SI, HR, BG, RO, CZ, AT, MD, BA: For calculation of the respective data the reference parameter is "area".

SK, RO, AT: National data used as around 98% of the country is in the DRB. RS: 92.8% is in the DRB.

RS: Data does not include data for Kosovo and Metohija, except for *Total area within the DRB* (Table 1, Column B) where Kosovo and Metohija are included.

2. The reference year for data collected is 2005. In cases where there is a different reference year, this is indicated. For DE: the reference year for all data is 2004 unless otherwise indicated.

3. Data resulting from calculations - in some cases the figures are rounded to facilitate presentation.

4. The reader of the report should have in mind exchange rate fluctuations.

Table 1: General socio-economic indicators

	Total area within DRB	Population	Employees total	GDP	GDP per capita
	(km ²)	(inhabitants)	(number)	(million EUR)	(EUR per capita)
Austria	80565	7,911,000	3830500	244453	29700
Bosnia and Herzegovina*	38719	1,487,785	241047	3323	2230
Bulgaria	42,837	3,443,822	1,419,906	8876	2577
Croatia	35090	3,045,707	1049020	21757	7144
Czech Republic	21692	2,755,000	1244000	29306	10696
Germany	56300	9,700,000	4900000	310000	31700
Hungary	93000	10,176,581	3930100	90003	8937
Moldova	12330	1,096,000	314000	24	754
Romania	231219	21,623,000	9851000	80049	3702
Serbia	81974	7,481,698	2025627	23610	3186
Slovak Republic	47185	5,184,184	2132650	37035	6875
Slovenia	16380	1,761,191	688945	24922	14150
Ukraine	31165	2,640,455	1399465	2881	1090
Total for the Danube River Basin (DRB)	788456	78306423	31000633	876239	11190

Comments:

Austria: Figures estimated for DRB share of AT, data in column E and F is with reference year 2005

* Bosnia and Herzegovina: Figures only for Republic Srpska; data also for Federation of BiH will be provided in n

Bulgaria

Croatia: Reference year for population 2001

Czech Republic

Germany

Hungary: Exchange rate: 264.27 average yearly exchange rate of Hungarian National Bank for 2006

Moldova: Estimated data for the Danube Basin; reference year 2006; at date of calculation average exchange rate was 1 EUR = 16.3 MDL; GDP per capita is an average per country

Romania

Serbia: Reference year 2005. For all tables, average exchange rate for 2005 was 1EUR=83 din. Data does not include data for Kosovo and Metohija, except for *Total area within the DRB* (Table 1, Column B) which does include Kosova and Metohija.

Slovak Republic

Slovenia

Ukraine

Table 2: Production in main economic sectors

	Agriculture (A+B)		Industry (C+D+E41)		Electricity generation (Total) (% hydropower, if available)	
	Gross value added	Share of GVA	Gross value added	Share of GVA	Gross value added	Share of GVA
	(million EUR)	(%)	(million EUR)	(%)	(million EUR)	(%)
Austria	3661	1.65	45933	20.74	1752	0.75
Bosnia and Herzegovina*	450.00	14.15	486.48	14.64	195	5.87
Bulgaria	795	12	2,221	59	n.a	n.a
Croatia	1637	9.1	4243	23.5	499	2.8
Czech Republic	1156	4.40	10083	38.36	645	2.45
Germany	3500	1.3	79600	28.9	3700	1.3
Hungary	3190	4.1	17824	22.9	1294	1.7
Moldova	102	18	85	15	3	0
Romania	6748	8.43	19725	24.64	1670	2.08
Serbia	2092	11.3	3350	20	718	4.1
Slovak Republic	1413	4.35	9398	28.9	522	1.6
Slovenia	554	2.54	5410	24.83	680	3.12
Ukraine						
Total for Danube River Basin	25298		198359		11677	

Note: NACE codes classification-rev.1 from 1993

3190	4.1	17824	22.9	1294	1.7
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Comments:

Austria

Bosnia and Herzegovina: * Figures are for Republica Srpska only

Bulgaria

Croatia: Data in column F and G are data for activities E40 according to the NACE codes classification

Czech Republic

Germany

Hungary: Data for 2006

Moldova

Romania

Serbia

Slovak Republic

Slovenia

Ukraine

Table 3: Water abstraction/supply

	Total water abstraction	Total invoiced water used	of which:		Cooling purposes in mil.m ³	Water abstraction per sectors			
			Total public water supply	Total self-supplied water (large users)		Households	Industry	Agriculture	Others (services)
			(million m ³)	(million m ³)		(million m ³)	(million m ³)	(m ³ /inhabitant)	(m ³ /1000 EUR GVA*)
Austria	2136	433	372	61		55	26	21	1
Bosnia and Herzegovina - RS	298	179	127	52		84			
Bulgaria	4311	3905	166	3740		40	203	8	3
Croatia	384	226	146	80	4	34	16	23	1
Czech Republic	294	83	79	4		74	13	17	no data
Germany	3700	580	580	not applicable		55	36	1	not applicable
Hungary	5818	5818	803	5015		39	241	229	5
Moldova	295	276	253	23		33	259	16	18
Romania	5400	4986				56	177	41	14
Serbia	4845	4528	510	4018		51	360	37	16
Slovak Republic	910	849	333	516	363	44	97	644	
Slovenia	1037	799	105	2	692	51	13	297	2
Ukraine	1421	209				79			
Total for the Danube River Basin	30849	22871	3474	13510					

all water abstracted including for cooling purposes

Notes:

The invoicing systems are quite different in Danube countries. A common data basis exists only for water abstraction.

In column G: * To include all water abstracted, also for cooling purposes

Column C and 4: * water used for hydropower is not included

*GVA: Gross Value Added

Comments:

Austria

Bosnia and Herzegovina: Figures for Republika Srpska only

Bulgaria

Croatia: Data on cooling water refers to water which was spent in the process (difference between abstracted and returned quantity)

Czech Republic

Germany

Hungary: data for situ water
Excluding in
use (14881
million m³)

Refers to
public supply Including
invoiced water electricity

Moldova

Romania

Serbia

Slovak Republic
Abstraction
for cooling
purposes is
in mil.m³

Slovenia

Ukraine

Table 4: Drinking water supply, wastewater services and connection rates for centralised public systems

not applicable

	Water supply production					Total collected wastewater (million m ³)	Population connected to public sewerage system (%)	Population connected to wastewater treatment plant (%)	Population connected to public water supply (%)
	Total public water supply	Households	Industry	Agriculture	Other sectors (services)				
	(million m ³)	(million m ³)	(million m ³)	(million m ³)	(million m ³)				
Austria	2136.1	433.1	1535	100	68	1066.44	91.7	91.7	86.0
Bosnia and Herzegovina	127	85.09	15.24		26.7	161.2	33	1.7	67.0
Bulgaria	165.5	136.1	29.4			452.4	67	64	99.0
Croatia	146.3	102.4	35.1	0	8.8	135.5	41.3	24.1	69.7
Czech Republic	78.5	50.7	19.5	1.4	6.9	295.5	72.6	65.8	88.3
Germany	580	450	130	not applicable/ no data	not applicable/ no data	1220	96	95	99.0
Hungary	532.2	371.5	50.9	3.4	106.4	588.62	64.9	54.2	98.4
Moldova	251	29	144	4	74	4.5	60	54	73.0
Romania	4986	1210	3500	276	300	4565	46	31	65.0
Serbia	510	379	77	0	54	389	55	11	77.0
Slovak Republic	332.67	229.6	96.3	6.83		839	57.09	55.16	85.3
Slovenia	105.74	90.48	2.8	0	12.463	106	49	45	90.0
Ukraine	209	26.29	38.42	97.35	76.94	159.7	41		51.0
Total for Danube River Basin (DRB)	10160.0	3593.3	5673.66	488.98	734.203	9982.86			

Notes:

There are cases where although the population are not connected to the public sewerage and WWTP (wastewater treatment plant), some of the population have individual waste water treatment. This is not reflected in the table.

Comments:

Austria: Estimation for DRB share of AT

Bosnia and Herzegovina: RS only

Bulgaria: Reference year 2003. Data will be updated in M

Croatia

Czech Republic

Germany collected
wastewater"
refers to
wastewater
collected in
public
sewers only

Base year for
collected
wastewater: 2004
Bavaria, 2007 Baden-
Württemberg

data for 2005

There is a difference between the households connected to public sewerage system and households connected to waste water treatment plant. The Budapest Central WWTP will start working at the end of 2009.

Hungary

Moldova

Romania

Serbia

Slovak Republic

Slovenia

Ukraine

Table 5: Wastewater treatment plants (WWTP)

	Wastewater treatment plants		WWTP with primary treatment		WWTP with secondary treatment		WWTP with tertiary treatment	
	Total number	Total capacity	Total number	Total capacity	Total number	Total capacity	Total number	Total capacity
	(number)	(1000 PE)	(number)	(1000 PE)	(number)	(1000 PE)	(number)	(1000 PE)
Austria	1519	13954	0	0	621	639	898	13315
Bosnia and Herzegovina	1	22	1	22				
Bulgaria	19	2964	5	18	14	2843	1	103
Croatia	34	1860	14	198	19	1562	1	100
Czech Republic	508	3962	5	2	276	819	227	3141
Germany	1813	19920	23	46	876	1001	914	18873
Hungary	631	11268.245	631	11268.245	616	11230.76	269	5377.799
Moldova	18	312383	18	312383	9	87740	none	none
Romania	312	11857	100	1076	209	10083	3	699066
Serbia	32	1247	3	211	29	1036	0	
Slovak Republic	226		7		160		31	
Slovenia	152	1715	10	418	125	771	17	526
Ukraine								
Total for the Danube River Basin	5265		817		2954		2361	

Notes:

The assessment considers reporting on urban wastewater treatment development in the DRB (agglomerations \geq 2000 PE). In some cases the reporting was done on the national level using statistical data, which covers even smaller agglomerations - DE, HR, SI.

Comments:

Austria: Estimation for DRB share of AT

Bosnia and Herzegovina only

Bulgaria

Croatia

Czech Republic

Germany

Hungary: Values are interpreted following the Austrian and Bulgarian examples

Moldova: Refers only to currently operating Urban WWTPs in the Moldovan part of the DRB with PE from 2000 to 10000 plus

Romania

Serbia

Slovak Republic

Slovenia

Ukraine

Table 6: Population connected to wastewater treatment plants (WWTP)

	Total population connected to treatment plant	Population connected to WWTP with primary treatment	Population connected to WWTP with secondary treatment	Population connected to WWTP with tertiary treatment	Population not connected
	(%)	(%)	(%)	(%)	(%)
Austria	91.7	0	4.3	87.5	8.3
Bosnia and Herzegovina	1.7	1.7			98.3
Bulgaria	64	1	61	2	36
Croatia	24.1	3	20.7	0.4	75.9
Czech Republic	65.80	0	9.8	56	34.2
Germany	94.1	0.2	6.3	87.6	5.9
Hungary	54.8	2.01	28.05	24.2	45.2
Moldova	54	54	38	0	56
Romania	31.26	4.29	25.65	1.32	68.74
Serbia	11	2	9		89
Slovak Republic	51.7	0.4	39.6	11.7	48.3
Slovenia	45	30	14	1	55
Ukraine					
Total for the Danube River Basin					

from the total population

average in the DRB; varies from 10% not connected in Ungheni to 85% not connected in Briceni

Note:

In some cases population shown as not connected to public sewerage systems may have individual wastewater treatment in place.

Comments:

Istria: column F - AT average; figure for population not connected to public sewerage systems, however individual wastewater treatment in place

Bosnia and Herzegovina: RS only

Bulgaria

Croatia

Czech Republic

Germany

Hungary

data for 2005

Moldova

Romania

Serbia

Slovak Republic

Slovenia

Ukraine

Table 7: Electricity generation in the DRB

	Total electricity capacity	HPP+ installed capacity	Total electricity generated	HPP generation	HPP	Cooling (Thermo+Nuclear)
	(MW)	(MW)	(1000 GWh)	(1000 GWh)	(1000 m ³)	(1000 m ³)
Austria	19182	11853	63.92	37.28	n.a.	1043
Bosnia and Herzegovina	1219.11	736.11	4.95	2.34		
Bulgaria	n.a.	159.69	n.a.	0.296	2886	n.a.
Croatia	1293	297	4794	1336	no data	3700
Czech Republic	2828		15.000		no data	no data
Germany	no data	2400	no data	no data	no data	2260000
Hungary	7222.4	22.37	35.859	0.186	4.148	1183790
Moldova	n.a.	16	n.a.	0.0002	450	n.a.
Romania	19.042		59.413			
Serbia	8355	2831	36.474	12.032	210878	2814
Slovak Republic	7921	2308.79	30.25	4.31	507	350
Slovenia	2645	707	12.57	2.97	175482	690
Ukraine						
Total for the Danube River Basin	50685	21331				

Note:

Some data will be available only in May - BG, MD

DE: Some data are not available considering different reporting basis

* HPP: Hydropower plant

Comments:

Austria

Bosnia and Herzegovina

Bulgaria

Croatia: Data on cooling waters refers to water which was spent in the process (difference between abstracted and returned quantity)

Czech Republic

Germany: Reference year for HPP installed capacity is 2008

Hungary

Moldova: according to agreement signed in 1973, Costesti-Stinca HPP constructed in 1978 operates on a parity basis with R

Romania

Serbia

Slovak Republic

Slovenia: Calculations were made from installed discharge, which is given in m³/s for each HPP in DRB.

Ukraine

Table 8: Inland navigation

	Quantity	Number of commercial
	(1000 tons)	harbours
		(number)
Austria	12107	7
Bosnia and Herzegovina	48.4	1
Bulgaria	3,693	14
Croatia	430	4
Czech Republic	0	0
Germany	4200	9
Hungary	80	28
Moldova	0	1
Romania	98900	13
Serbia	7746	11
Slovak Republic	1028	3
Slovenia	0	0
Ukraine	9585	
Total for Danube River Basin	137817.4	91

Comments:

Austria

Bosnia and Herzegovina: Figures only for Republika Srpska
Bulgaria
Croatia
Czech Republic
Germany: Reference year is 200
Hungary
Moldova: Giurgiulesti Harbour on the Danube River
Romania
Serbia
Slovak Republic
Slovenia
Ukraine

Table 9: Mineral aggregate extraction from the river bed

	Quantity	Number of mineral aggregates extraction sites
	(1000 m ³)	(number)
Austria	n.a	n.a
Bosnia and Herzegovina	653.97	150
Bulgaria	93	12
Croatia	2935	
Czech Republic	0	0
Germany	770	184
Hungary	12369	not available
Moldova	0	0
Romania	15903	1100
Serbia	5123	103
Slovak Republic	885.25	n/a
Slovenia	62	n/a
Ukraine		
Total for Danube Basin	38794.22	1549

Comments:

Austria

Bosnia and Herzegovina

Bulgaria: Reference year is 2003.

Croatia

Czech Republic

Germany: Reference year is 2007

Hungary

Moldova: national environmental legislation prohibits extraction of sand and gravel from river beds; these activities are being implemented illegally with no register.

Romania

Serbia

Slovak Republic

Slovenia

Ukraine

Table 10: National trends in water demand projected to 2015

	Population	Total water demand	Future demand of water abstraction per sector					Projected specific drinking water consumption per capita
			Households	Industry	Agriculture	Electricity production	Other sector (services)	
	(inhabitants)	(1000 m ³)	(1000 m ³)	(1000 m ³)	(1000 m ³)	(1000 m ³)	(1000 m ³)	(l/capita/day)
Austria	7938879	1708430.39	434653.63	1059414	113809	n.a.	100553	150
Bosnia and Herzegovina	1553187							180
Bulgaria	3151486	8318324	138035	5945762	2234527		12527199	120
Croatia	2938600							150
Czech Republic	2790000	295803	101100	70600	11800	105300	7003	99.3
Germany	9800000	not available	not available	not available	not available	not available	not available	not available
Hungary	9885272	5980.3	422.8	461.3	767	4141.2	189	120
Moldova	1009000	299250	36830	155610	38900	n/a	67910	100
Romania	21190	6576	1450	4490	636			55
Serbia	7700000	12953755	850000	8800000	400000	2813755	90000	150
Slovak Republic	5484000	519834.5	250101.77	567600	125392			138.8
Slovenia	1787608							
Ukraine								
Total for Danube Basin	54059222	24107953.19	1812593.20	16603937.3	2925830.37	2923196.2	12792853.94	

Notes:

The water demand projection is calculated based on different national methodologies, which consider minimum, average and maximum scenarios.

Figures do not include water demand for hydropower plants. Only water demand for thermo power plant for cooling is included.

Comments:

Austria

Bosnia and Herzegovina: Figures for RS only

Bulgaria

Croatia

Czech Republic

Germany

Hungary:

Moldova

Romania

Serbia

Slovak Republic

Slovenia

National trends for water demand are not available yet. For year 2015 an estimation for population growth has been calculated = 1.5% (Eurostat).

Ukraine