International Statistics for Water Services

Information every water manager should know

IWA STATISTICS & ECONOMICS

the international water association

2014

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This leaflet on International Statistics for Water Services is composed by the IWA Specialist Group on Statistics and Economics.

The International Water Association (IWA) is a worldwide network of professionals, which aims to exchange scientific and professional knowledge, provided by academics and water managers, covering all aspects of the water cycle. To achieve this goal, IWA organizes conferences supported by specialist groups and technical and scientific teams all over the world.

The Statistics and Economics Specialist Group provides a forum to discuss the financing of water utilities, the water tariff structures, performance indicators, efficiency and economics of water organizations and themes like total cost recovery. A part of this service consists of water surveys and providing statistics on water industry, such as tables and figures on abstraction, consumption, tariffs and data on sewerage and wastewater treatment.

The report “International Statistics for Water Services” is part of a series of documents presented at the IWA World Water Congresses and is also available on www.iwahq.org/Home. This report, more specifically the charges and consumption part, focuses on water consumption of households and small businesses.

The prices indicated do not necessarily reflect the full costs of water services, because some costs may be covered by sources other than the customer. In some cases there can be a political motivation to ensure that water is supplied at a socially acceptable price. There are many other factors affecting relative price levels, but these are not focused on in this survey.

Similar to the previous edition we have collected data from water bills, based on an annual consumption of 100 m³ and 200 m³ per year, to facilitate comparison on city level. All financial data are converted to US$, exchange rate December 31th, 2011. All quantitative information on population and so on is based on the situation in 2010.

This leaflet is merely meant as a teaser, with clear and eye-catching ratio’s and graphs.
Far more detailed information can be found at http://www.iwahq.org/8h/networks/specialist-groups/list-of-groups/statistics-and-economics.html. When comparing this information to previously published brochures, certain tendencies can be observed. But do keep in mind that the exchange rate of the US$ is time-related. Further useful statistics and information can also be found at **www.iwahq.org**

Thanks to all water professionals who helped to obtain the data for this survey. They are listed on the last page.

Working Group Statistics led by Jan Hammenecker
jan.hammenecker@vmw.be

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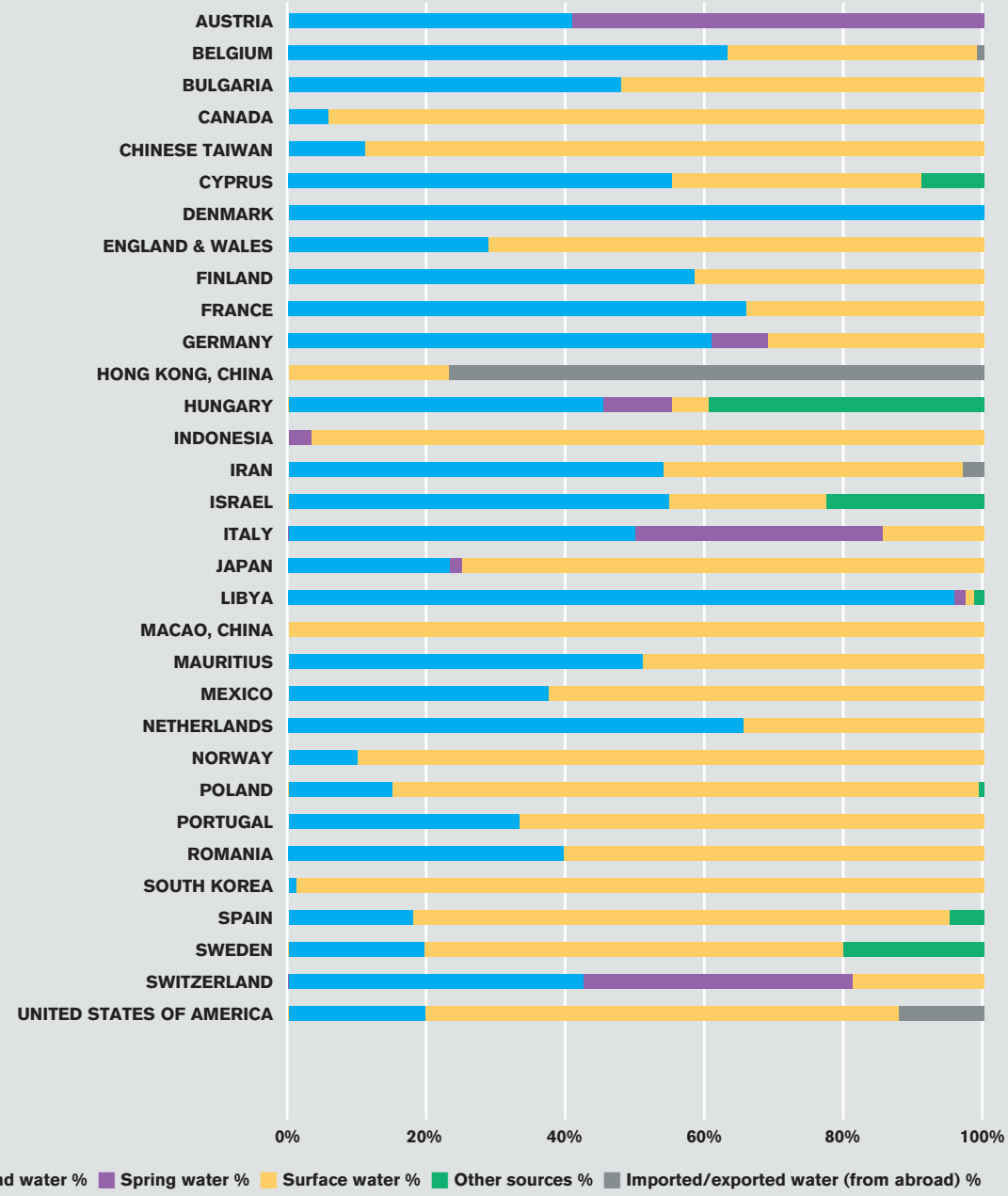
Abstraction for water supply according to source in 2010-2012

in mio m³/year

COUNTRY/REGION	TRUE GROUND WATER		SPRING WATER		SURFACE WATER		OTHER SOURCES		IMPORT/EXPORT WATER (from abroad)		TOTAL WATER ABSTRACTION	
	2010	2012	2010	2012	2010	2012	2010	2012	2010	2012	2010	2012
AUSTRIA	355	325	446	472	0	0	0	0	0	0	801	797
BELGIUM	473	453	0	0	253	258	0	0	0	3	726	714
BRAZIL	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	0	14,518	15,424
BULGARIA	n/a	446	n/a	0	n/a	488	n/a	0	n/a	0	800	934
CANADA	46	79	0	0	1,790	1,261	0	0	0	0	1,836	1,340
HONG KONG, China	0	0	0	0	228	217	0	0	681	709	909	926
CHINESE TAIWAN	465	448	6	6	3,955	3,508	0	0	0	0	4,425	3,962
CYPRUS	18	150	0	0	21	95	53	25	0	0	92	269
DENMARK	398	381	0	0	0	0	0	0	0	0	398	381
ENGLAND & WALES	1,787	1,684	0	0	4,072	4,144	0	16	0	0	5,858	5,844
FINLAND	261	261	0	0	184	184	0	0	0	0	445	445
FRANCE	6,000	3,630	0	0	2,750	1,870	0	0	0	0	8,750	5,500
GERMANY	3,079	3,081	422	419	1,537	1,569	0	0	0	0	5,038	5,069
HUNGARY	269	243	60	54	33	28	236	212	0	0	597	537
INDONESIA	n/a	0	n/a	10	n/a	281	n/a	0	n/a	0	n/a	292
IRAN	4,460	5,003	0	0	2,430	3,962	0	0	0	300	6,890	9,264
ISRAEL	834	864	0	0	479	354	388	357	148	0	1,849	1,576
ITALY	4,427	4,540	3,452	3,254	1,211	1,301	27	14	0	0	9,117	9,108
JAPAN	3,707	3,661	292	276	11,790	11,753	34	29	0	0	15,823	15,719
LIBYA	n/a	4,912	n/a	80	n/a	60	n/a	76	n/a	0	n/a	5,128
MACAO, China	0	0	0	0	79	90	0	0	0	0	79	90
MAURITIUS	114	110	0	0	109	106	0	0	0	0	223	217
MEXICO	n/a	30,011	n/a	0	n/a	50,048	n/a	0	n/a	0	n/a	80,059
NETHERLANDS	761	754	0	0	395	394	0	0	10	0	1,166	1,148
NORWAY	12	82	0	1	710	717	0	0	0	0	722	800
POLAND	1,625	1,630	0	0	9,173	9,143	68	58	0	0	10,866	10,830
PORTUGAL	378	313	0	0	845	625	0	0	0	0	1,223	938
ROMANIA	354	469	0	0	825	693	0	0	0	0	1,179	1,162
SOUTH KOREA	556	98	0	0	6,606	7,078	0	0	0	0	7,162	7,175
SPAIN	615	723	135	0	4,156	3,061	152	205	0	0	5,058	3,989
SWEDEN	197	174	0	0	490	521	222	175	0	0	909	870
SWITZERLAND	382	397	369	364	189	174	0	0	0	0	940	935
UNITED STATES OF AMERICA	15,546	11,132	0	0	26,293	36,814	10,329	0	0	6,776	52,169	54,723

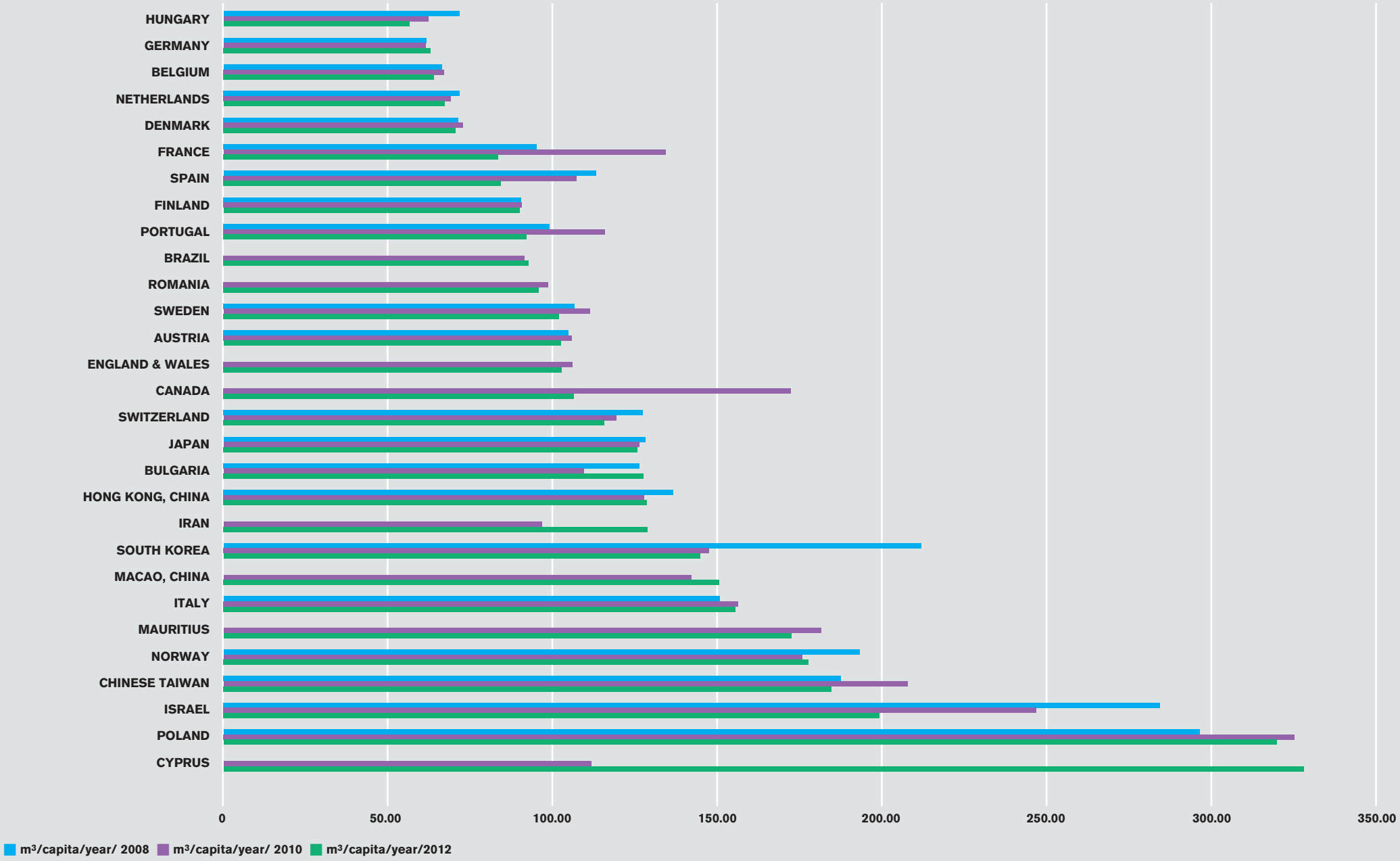
Abstraction source for drinking water supply in 2012

in mio m³/year and %



Total abstraction for water supply in m³/capita/year *

total abstraction/population X supply rate



* Annual volume of water abstraction from any source with the purpose of public water supply.

Water delivered - population - supply rate for drinking water, sewerage and waste water consumption in 2008-2012

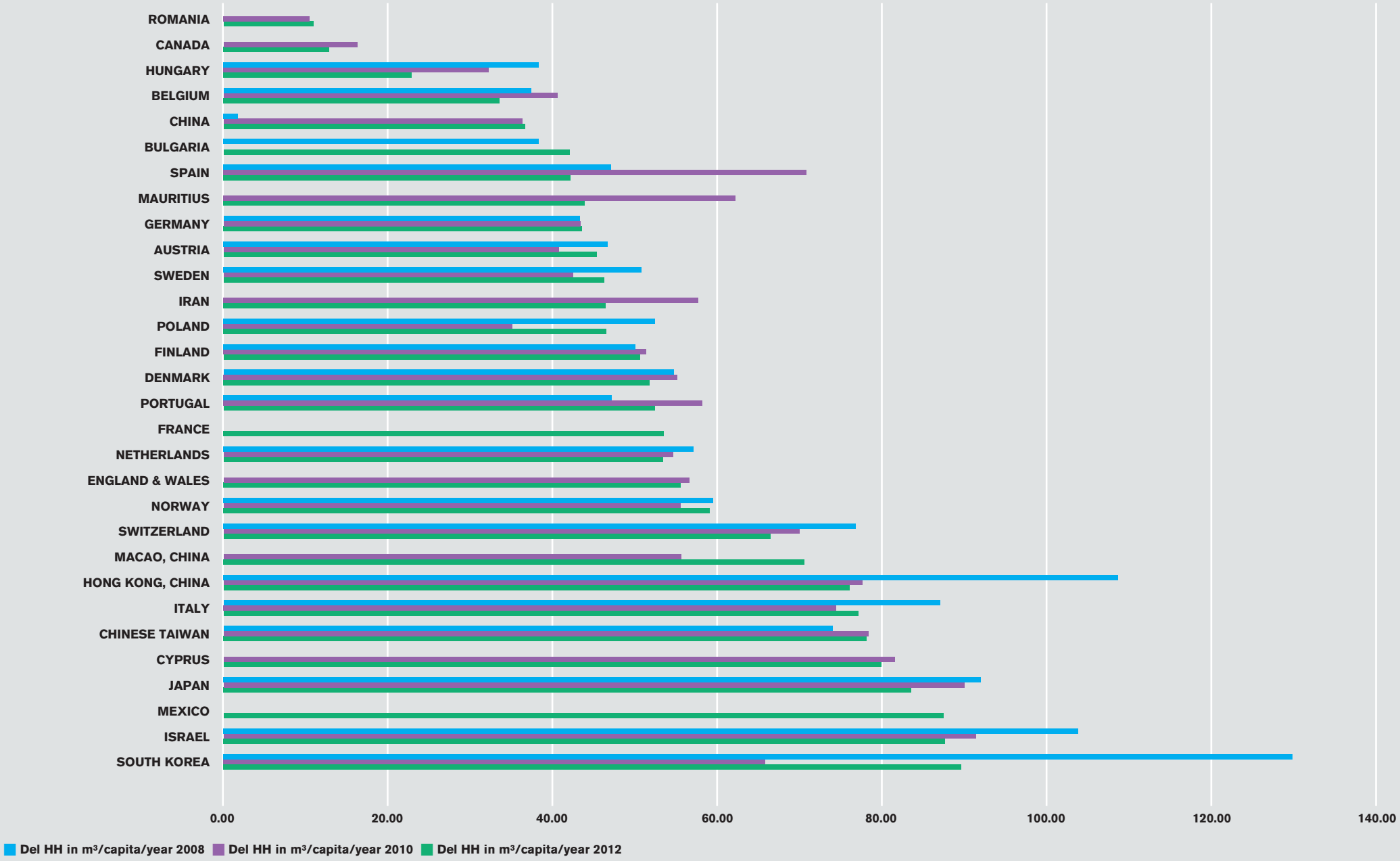
in mio m³, in mio inhabitants and %

	IN MIO m³									IN MIO INHABITANTS			IN %								
	HOUSEHOLD AND SMALL BUSINESS CONSUMPTION (<10,000 m³)			INDUSTRY AND OTHER BILLED WATER CONSUMPTION (>10,000 m³)			TOTAL DELIVERY [1]			POPULATION			SUPPLY RATE			SEWERAGE CONNECTION RATE			WASTE WATER CONNECTION RATE		
COUNTRY/REGION	2008	2010	2012	2008	2010	2012	2008	2010	2012	2008	2010	2012	2008	2010	2012	2008	2010	2012	2008	2010	2012
AUSTRIA	438	381	419	104	102	105	542	483	524	8.33	8.39	8.43	89.20%	89.87%	91.81%	92.00%	93.00%	n/a	92.00%	93.00%	n/a
BELGIUM	405	439	275	169	144	191	574	583	466	10.67	10.77	11.08	99.40%	99.68%	99.79%	85.00%	91.35%	86.41%	85.00%	86.41%	81.01%
BRAZIL	n/a	n/a	n/a	n/a	n/a	n/a	n/a	8,418	9,356	n/a	193.30	195.24	n/a	81.69%	84.60%	n/a	44.50%	54.90%	n/a	44.50%	37.50%
BULGARIA	308	n/a	313	103	n/a	57	411	354	370	7.93	7.36	7.36	99.00%	99.09%	99.30%	64.00%	70.60%	74.30%	64.35%	47.70%	56.10%
CANADA	n/a	1,788	1,228	n/a	0	0	n/a	1,788	1,228	n/a	33.89	34.48	n/a	31.34%	36.40%	n/a	36.19%	30.90%	n/a	37.66%	27.91%
CHINA	12,235	12,625	14,225	6,112	5,857	6,239	18,347	18,482	20,464	1,328.00	317.25	349.74	21.20%	91.80%	90.78%	n/a	n/a	n/a	n/a	n/a	n/a
HONG KONG, China	760	551	546	196	385	389	956	936	935	6.99	7.10	7.17	100.00%	99.92%	99.92%	93.00%	93.00%	93.00%	93.00%	93.00%	93.00%
CHINESE TAIWAN	1,870	1,976	1,982	916	713	750	2,786	2,688	2,732	23.11	23.16	23.32	91.53%	91.89%	91.95%	22.50%	53.02%	69.65%	22.50%	53.02%	62.99%
CYPRUS	n/a	67	66	n/a	2	180	n/a	69	246	n/a	0.82	0.82	n/a	100.00%	100.00%	n/a	58.54%	65.73%	n/a	58.54%	65.73%
DENMARK	313	316	301	48	52	45	361	368	346	5.48	5.56	5.58	96.00%	97.20%	96.24%	90.00%	90.00%	89.99%	90.00%	90.00%	89.99%
ENGLAND & WALES	n/a	3,148	3,148	n/a	1,190	1,190	n/a	4,338	4,338	n/a	55.24	56.57	n/a	99.60%	99.97%	n/a	97.25%	97.20%	n/a	96.82%	97.20%
FINLAND	298	303	303	53	53	53	350	356	356	5.33	5.38	5.43	90.11%	91.16%	90.85%	81.25%	82.01%	81.82%	81.25%	82.01%	81.82%
FRANCE	n/a	n/a	3,509	n/a	n/a	452	4,100	3,800	3,962	65.00	65.00	65.54	100.00%	100.00%	99.93%	95.00%	95.00%	81.69%	95.00%	95.00%	81.69%
GERMANY	3,590	3,580	3,564	900	875	927	4,490	4,455	4,491	82.00	81.75	80.52	99.20%	99.26%	99.32%	96.00%	96.63%	97.05%	95.00%	94.92%	98.42%
HUNGARY	438	341	241	126	113	60	564	455	302	10.30	10.01	9.91	90.72%	94.80%	95.00%	67.00%	72.50%	68.38%	67.49%	72.50%	68.38%
INDONESIA	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	244.78	n/a	n/a	22.38%	n/a	n/a	n/a	n/a	n/a	n/a
IRAN	n/a	4,895	3,853	n/a	0	1,024	n/a	4,895	4,877	n/a	77.54	77.07	n/a	91.52%	92.96%	n/a	25.37%	27.83%	n/a	18.05%	27.83
ISRAEL	759	685	694	1,242	110	123	2,001	795	817	7.30	7.49	7.91	100.00%	100.00%	100.00%	96.00%	93.51%	98.60%	95.78%	93.51%	98.60%
ITALY	5,451	4,703	4,703	n/a	830	830	5,451	5,533	5,533	60.05	60.63	59.57	96.00%	96.00%	98.00%	85.00%	84.70%	87.00%	84.70%	70.40%	78.00%
JAPAN	12,073	11,805	10,947	1,788	1,699	2,392	13,861	13,504	13,339	127.90	127.94	127.71	97.40%	97.54%	97.61%	71.20%	73.16%	73.25%	71.22%	73.16%	73.25%
LIBYA	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	614	n/a	n/a	5.90	n/a	n/a	64.41%	n/a	n/a	44.07%	n/a	n/a	8.98%
MACAO, China	n/a	31	42	n/a	39	33	n/a	71	75	n/a	0.56	0.60	n/a	100.00%	100.00%	n/a	100%	n/a	n/a	0	n/a
MAURITIUS	n/a	77	55	n/a	24	16	n/a	100	71	n/a	1.23	1.26	n/a	100.00%	99.80%	n/a	25.37%	29.08%	n/a	24.39%	29.08%
MEXICO	n/a	n/a	11,004	n/a	n/a	69,002	n/a	n/a	80,006	n/a	n/a	112.34	n/a	n/a	89.49%	n/a	n/a	89.07%	n/a	n/a	45%
NETHERLANDS	940	914	909	153	176	162	1,093	1,090	1,071	16.43	16.74	16.94	100.00%	100.00%	100.00%	100.00%	100%	100%	100.00%	100%	99%
NORWAY	318	337	337	204	380	194	522	717	531	4.80	4.99	5.05	90.00%	82.25%	89.09%	82.00%	84.99%	83.86%	81.96%	n/a	80.40%
POLAND	2,104	1,541	2,031	8,648	7,662	7,769	10,752	9,203	9,800	38.10	38.20	38.40	95.20%	87.50%	88.16%	86.00%	62.10%	64.55%	85.50%	65.24%	68.85%
PORTUGAL	547	617	574	112	126	n/a	659	743	574	10.63	10.56	10.49	92.00%	99.71%	96.39%	80.00%	71.04%	82.37%	80.00%	69.78%	80.60%
ROMANIA	n/a	411	426	n/a	221	210	n/a	632	636	n/a	21.40	21.40	n/a	55.61%	56.56%	n/a	43.69%	43.99%	n/a	30.84%	40.38%
SOUTH KOREA	7,051	3,606	4,896	2,861	1,269	125	9,912	4,875	5,022	50.39	51.43	51.88	92.73%	94.09%	95.13%	88.56%	88.00%	91.63%	88.56%	88.00%	91.63%
SPAIN	2,214	3,344	2,009	996	942	1,099	3,210	4,285	3,107	46.75	47.02	47.27	100.00%	99.96%	99.86%	96.00%	95.46%	97.70%	96.00%	95.46%	95.84%
SWEDEN	536	464	499	106	103	130	642	566	629	9.26	9.42	9.56	88.15%	86.50%	88.73%	87.00%	84.65%	88.56%	87.37%	84.65%	88.56%
SWITZERLAND	602	560	544	171	180	195	773	740	739	7.75	7.92	8.11	99.00%	99.20%	99.21%	97.00%	94.67%	96.99%	97.00%	94.67%	96.99%
UNITED STATES OF AMERICA	n/a	n/a	34,581	n/a	n/a	n/a	n/a	47,917	34,581	n/a	310.00	313.90	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

1 Total delivery without unbilled/water losses and exported water

Total water delivered for households and small businesses in m³/capita/year *

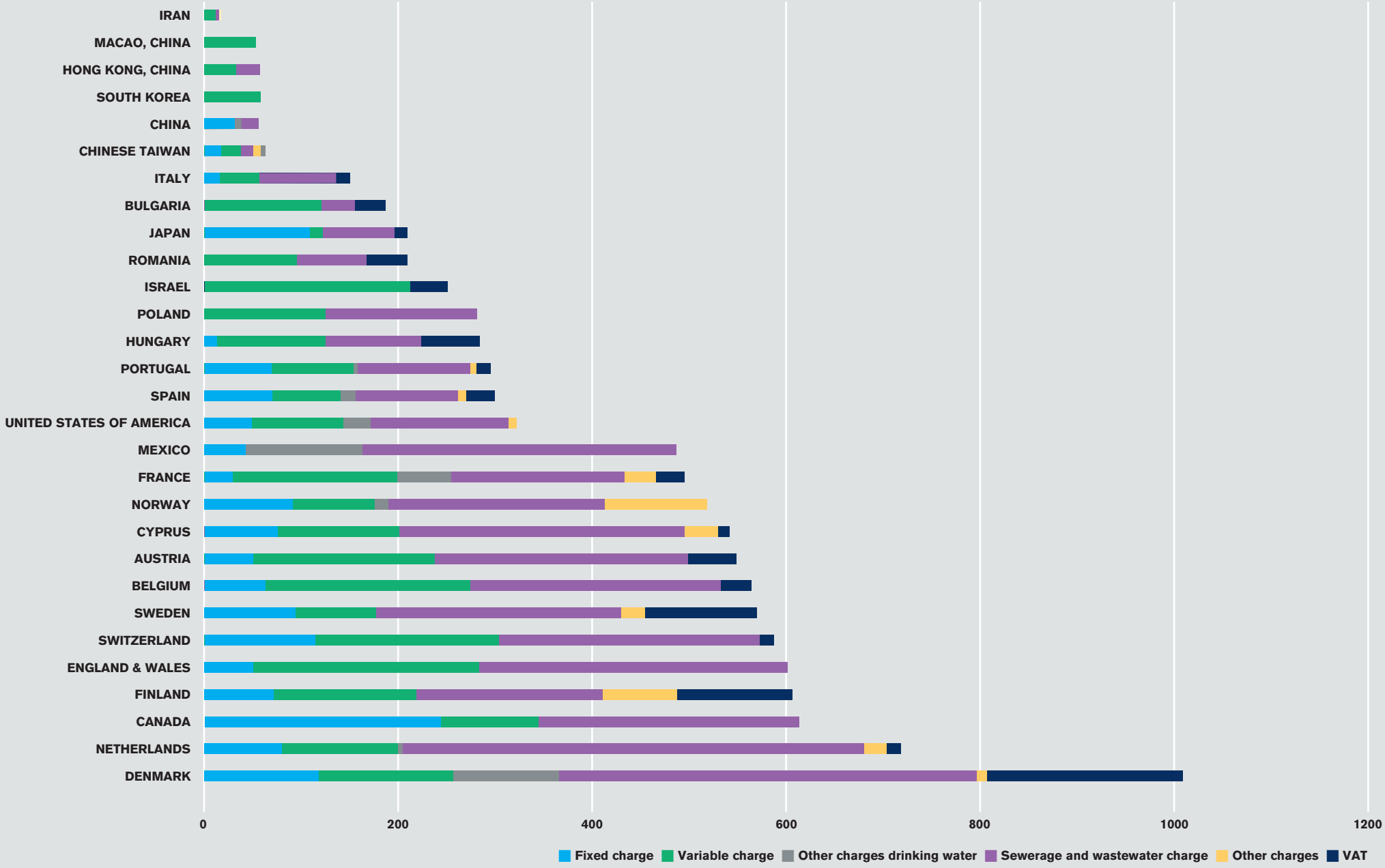
total delivery in household/population X supply rate



* Total water delivered: annual volume of water consumption by households for domestic consumption. This also includes mixed/commercial properties and multiple household properties, e.g. blocks or flats with an annual volume below 10 000 m³.

Average annual water cycle charges in 2013 for a consumption of 100 m³ *

in US$/100 m³



* Average volume of considered main cities in the country/region

Comparison of annual water cycle charges in 2013

related to a consumption of 100 m³ in US$

		ACTUAL CHARGES										AVERAGE CHARGES								
COUNTRY/REGION	TOWN/CITY	GDP PER CAPITA IN US$	FIXED CHARGE	VARIABLE CHARGE	OTHER CHARGES DRINKING WATER	TOTAL CHARGE DRINKING WATER	SEWERAGE CHARGE	WASTE WATER TREATMENT CHARGE	OTHER CHARGES	VAT & OTHER TAXES	TOTAL ANNUAL CHARGES 100 m³	FIXED CHARGE	VARIABLE CHARGE	OTHER CHARGES DRINKING WATER	TOTAL CHARGE DRINKING WATER	SEWERAGE CHARGE	WASTE WATER TREATMENT CHARGE	OTHER CHARGES	VAT & OTHER TAXES	TOTAL ANNUAL CHARGES 100 m³
AUSTRIA	Graz	42,600	84.11	223.74	0.00	307.85	0.00	244.63	0.00	55.25	607.73	51.24	186.66	0.00	237.91	0.00	261.69	0.00	49.96	549.55
	Innsbruck		24.08	180.04	0.00	204.12	0.00	262.91	0.00	46.70	513.73									
	Linz		86.02	113.78	0.00	199.80	0.00	216.38	0.00	41.62	457.79									
	Salzburg		32.16	201.77	0.00	233.93	0.00	340.84	0.00	57.48	632.24									
	Vienna		29.85	213.99	0.00	243.84	0.00	243.67	0.00	48.75	536.26									
BELGIUM	Louvain	37,800	66.20	173.51	0.00	239.71	183.23	130.88	0.00	33.23	587.05	65.28	209.07	0.00	274.35	112.12	145.99	0.49	31.98	564.94
	Antwerp		85.90	121.12	0.00	207.02	109.95	130.88	0.00	26.87	474.71									
	Brussels		32.71	257.06	0.00	289.77	125.22	68.26	0.00	29.00	512.25									
	Liège		72.47	308.00	0.00	380.47	0.00	215.08	1.72	35.84	633.12									
	Kortrijk		66.20	182.97	0.00	249.17	183.23	130.88	0.00	33.80	597.07									
	Genk		66.20	134.86	0.00	201.07	183.23	130.88	0.00	30.91	546.08									
	Charleroi		67.29	285.97	0.00	353.26	0.00	215.08	1.72	34.21	604.27									
BRAZIL	Brazil Average	12,100	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	97.36	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	97.36
	Sao Paulo (SABESP)		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	97.36									
	Brasilia Federal District		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	127.00									
BULGARIA	Sofia	14,400	0.00	81.52	0.00	81.52	16.16	23.89	0.00	24.31	145.89	0.00	120.59	0.00	120.59	11.81	23.89	0.00	31.54	187.83
	Burgas		0.00	89.25	0.00	89.25	16.87	42.87	0.00	29.80	178.78									
	Pleven		0.00	117.36	0.00	117.36	8.43	13.35	0.00	27.83	166.97									
	Razgrad		0.00	167.25	0.00	167.25	9.14	12.65	0.00	37.81	226.84									
	Stara Zagora		0.00	147.58	0.00	147.58	8.43	26.70	0.00	37.95	220.66									
CANADA	Calgary	43,100	165.72	150.47	0.00	316.20	0.00	244.46	0.00	0.00	560.66	245.08	99.43	0.00	344.51	0.00	268.51	0.00	0.00	613.02
	Winnipeg		85.86	130.82	0.00	216.67	0.00	202.33	0.00	0.00	419.00									
	Regina		213.06	138.39	0.00	351.44	0.00	289.20	0.00	0.00	640.64									
	Richmond		604.53	0.00	0.00	604.53	0.00	403.11	0.00	0.00	1,007.63									
	Durham		156.23	77.50	0.00	233.73	0.00	203.45	0.00	0.00	437.19									
CHINA	Beijing	9,800	28.08	0.00	20.81	48.89	0.00	17.18	0.00	0.00	66.07	32.62	0.00	5.20	37.83	0.00	18.75	0.00	0.00	61.45
	Shanghai		31.71	0.00	0.00	31.71	0.00	28.08	0.00	0.00	59.80									
	Tianjin		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	80.94									
	Shenzhen		37.99	0.00	0.00	37.99	0.00	14.87	0.00	0.00	52.86									
	Guangzhou		32.71	0.00	0.00	32.71	0.00	14.87	0.00	0.00	47.57									
HONG KONG, China	Hong Kong	52,700	0.00	33.80	0.00	33.80	0.00	24.12	0.00	0.00	57.92	0.00	33.80	0.00	0.00	0.00	24.12	0.00	0.00	57.92
CHINESE TAIWAN	Taipei	39,600	26.01	15.94	0.00	41.96	16.74	0.00	0.67	2.10	61.46	19.84	19.69	0.00	39.52	13.39	0.00	7.78	1.98	62.67
	Kaohsiung		13.66	23.43	0.00	37.09	10.04	0.00	14.90	1.85	63.88									
CYPRUS	Larnaca	24,500	90.71	129.19	0.00	219.90	68.72	217.15	54.29	10.99	571.04	76.28	125.27	0.00	201.55	68.72	225.28	35.48	10.08	541.10
	Lefkosia		57.72	131.94	0.00	189.66	75.59	309.39	0.00	9.48	584.12									
	Lemesos		90.71	123.69	0.00	214.40	71.47	209.66	46.38	10.72	552.62									
	Paphos		65.97	116.27	0.00	182.24	59.10	164.92	41.23	9.11	456.60									
DENMARK	Aalborg	37,800	184.22	92.19	108.69	385.10	0.00	507.87	8.11	225.27	1,126.35	119.91	137.84	108.69	366.44	0.00	430.44	9.40	201.57	1,007.85
	Aarhus		101.40	199.18	108.69	409.27	0.00	418.52	6.82	208.65	1,043.26									
	Copenhagen		70.01	165.43	108.69	344.13	0.00	292.03	9.21	161.34	806.72									
	Esbjerg		155.49	102.50	108.69	366.68	0.00	428.14	15.47	202.57	1,012.86									
	Odense		88.43	129.91	108.69	327.03	0.00	505.66	7.37	210.02	1,050.08									
FINLAND	Espoo	35,900	49.48	138.55	0.00	188.02	0.00	172.91	74.21	104.44	539.58	73.43	146.67	0.00	220.10	0.00	191.56	77.55	117.41	606.62
	Helsinki		49.48	138.55	0.00	188.02	0.00	172.91	74.21	104.44	539.58									
	Oulu		52.20	155.16	0.00	207.36	0.00	212.80	52.20	113.37	585.73									
	Tampere		91.50	135.22	0.00	226.73	0.00	200.61	91.50	124.52	643.36									
	Turku		148.43	174.01	0.00	322.43	0.00	217.23	98.95	153.27	791.88									
	Vantaa		49.48	138.55	0.00	188.02	0.00	172.91	74.21	104.44	539.58									
FRANCE	Bordeaux	35,700	79.31	145.68	49.48	274.47	0.00	148.43	31.61	29.96	484.47	31.81	168.04	54.85	254.70	48.85	129.19	33.48	29.89	496.12
	SEDIF		31.28	177.29	61.85	270.42	100.33	125.07	42.60	34.85	573.27									
	Lille		49.59	151.18	59.10	259.86	0.00	200.65	34.36	34.41	529.29									
	Lyon		48.46	158.05	48.10	254.61	127.81	0.00	23.36	23.61	429.40									
	Paris		0.00	137.43	65.97	203.40	38.48	118.19	42.60	24.30	426.98									
	Strassbourg		39.00	155.30	59.10	253.40	70.09	61.85	37.11	16.77	439.21									
	Reims		0.00	137.43	65.97	203.40	38.48	118.19	41.23	31.07	432.38									
	Nancy		63.67	127.81	42.60	234.09	162.17	0.00	26.11	26.26	448.64									

Continued...

Source:
For exchange rates to US$ as per 31 December 2013: http://nl.exchange-rates.org/historicalrates/E/USD/31-12-2013
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Comparison of annual water cycle charges in 2013

related to a consumption of 100 m³ in US$

		ACTUAL CHARGES										AVERAGE CHARGES								
COUNTRY/REGION	TOWN/CITY	GDP PER CAPITA IN US$	FIXED CHARGE	VARIABLE CHARGE	OTHER CHARGES DRINKING WATER	TOTAL CHARGE DRINKING WATER	SEWERAGE CHARGE	WASTE WATER TREATMENT CHARGE	OTHER CHARGES	VAT & OTHER TAXES	TOTAL ANNUAL CHARGES 100 m³	FIXED CHARGE	VARIABLE CHARGE	OTHER CHARGES DRINKING WATER	TOTAL CHARGE DRINKING WATER	SEWERAGE CHARGE	WASTE WATER TREATMENT CHARGE	OTHER CHARGES	VAT & OTHER TAXES	TOTAL ANNUAL CHARGES 100 m³
FRANCE continued...	Le Havre		38.58	191.03	54.97	284.59	0.00	237.76	41.23	39.68	603.25									
	Marseille		0.00	244.63	45.35	289.99	0.00	138.81	20.62	25.62	475.03									
	Brest		0.00	222.64	50.85	273.49	0.00	272.12	27.49	42.29	615.39									
HUNGARY	Budapest	19,800	68.77	79.68	0.00	148.44	0.00	138.75	0.00	77.54	364.74	14.78	110.91	0.00	125.68	1.06	96.81	1.02	60.35	284.93
	Debrecen		5.12	101.86	0.00	106.98	3.00	80.98	5.12	52.14	248.23									
	Miskolc		0.00	115.13	0.00	115.13	0.00	88.55	0.00	55.00	258.68									
	Pécs		0.00	157.21	0.00	157.21	2.31	114.63	0.00	73.39	347.54									
	Kaposvár		0.00	100.66	0.00	100.66	0.00	61.14	0.00	43.69	205.49									
IRAN	Tehran	12,800	0.00	15.77	0.00	15.77	2.65	0.00	0.00	1.11	19.52	0.00	14.07	0.00	14.07	2.65	0.00	0.00	1.00	17.73
	Esfahan		0.00	13.81	0.00	13.81	2.65	0.00	0.00	0.99	17.45									
	Shiraz		0.00	12.40	0.00	12.40	2.65	0.00	0.00	0.90	15.95									
	Tabriz		0.00	14.14	0.00	14.14	2.65	0.00	0.00	1.01	17.79									
	Bandar Abbas		0.00	14.25	0.00	14.25	2.65	0.00	0.00	1.01	17.91									
ISRAEL	Jerusalem	34,900	0.00	214.35	0.00	214.35	0.00	0.00	0.00	37.15	251.50	0.00	214.35	0.00	214.35	0.00	0.00	0.00	37.15	251.50
ITALY	Bologna	29,600	24.22	44.94	0.00	69.16	23.57	63.51	0.00	15.63	171.86	16.25	41.84	0.35	58.43	21.31	58.23	0.00	13.80	151.76
	Milan		3.83	15.12	0.00	18.95	14.84	38.07	0.00	7.19	79.05									
	Naples		12.08	68.61	0.00	80.69	14.09	40.36	0.00	13.51	148.65									
	Rome		31.14	28.31	1.73	61.19	22.31	64.35	0.00	14.79	162.63									
	Turin		9.98	52.20	0.00	62.18	31.72	84.85	0.00	17.88	196.63									
JAPAN	Nagoya	37,100	71.20	2.28	0.00	73.48	63.80	0.00	0.00	6.84	144.11	110.58	13.52	0.00	124.10	74.29	0.00	0.00	9.85	208.24
	Osaka		108.23	0.00	0.00	108.23	62.66	0.00	0.00	8.43	179.32									
	Hiroshima		92.28	4.75	0.00	97.03	80.51	0.00	0.00	8.77	186.30									
	Fukuoka		96.84	15.49	0.00	112.33	98.43	0.00	0.00	10.48	221.24									
	Sapporo		150.38	0.00	0.00	150.38	68.35	0.00	0.00	10.94	229.67									
	Sendai		142.40	75.65	0.00	218.05	80.09	0.00	0.00	14.81	312.95									
	Tokyo		133.29	8.35	0.00	141.65	67.97	0.00	0.00	10.37	219.99									
	Yokohama		90.00	1.63	0.00	91.63	72.53	0.00	0.00	8.20	172.37									
MACAO, CHINA	Macao, China Average	82,400	0.00	54.38	0.00	54.38	0.00	0.00	0.00	0.00	54.38	0.00	54.38	0.00	54.38	0.00	0.00	0.00	0.00	54.38
MAURITIUS	Mauritius	16,100	3.96	17.83	0.00	21.79	21.79	0.00	0.00	0.00	43.59	3.96	17.83	0.00	21.79	21.79	0.00	0.00	0.00	43.59
MEXICO	San Luis Potosi	15,600	40.68	0.00	0.00	40.68	192.36	192.36	0.00	0.00	425.40	45.32	0.00	117.62	162.95	162.17	162.17	0.00	0.00	487.29
	Guadalajara		35.77	0.00	0.00	35.77	25.77	25.77	0.00	0.00	87.31									
	León, Guanajuato		78.92	0.00	205.24	284.17	152.78	152.78	0.00	0.00	589.73									
	Monterrey		35.07	0.00	131.61	166.68	152.78	152.78	0.00	0.00	472.24									
	Puebla		36.17	0.00	251.26	287.43	287.16	287.16	0.00	0.00	861.75									
NETHERLANDS	Amsterdam	41,400	57.93	170.42	0.00	228.35	207.53	226.77	22.68	15.06	700.38	80.52	119.02	5.76	205.30	232.72	242.80	22.68	13.68	717.18
	Rotterdam		82.13	125.62	9.29	217.04	269.37	261.13	22.68	14.39	784.60									
	Den Haag		81.42	145.68	25.29	252.38	178.66	350.46	22.68	16.51	820.69									
	Utrecht		48.10	105.82	0.00	153.93	306.48	226.77	22.68	10.60	720.44									
	Eindhoven		96.81	63.43	0.00	160.23	199.28	185.54	22.68	10.98	578.71									
	Maastricht		116.74	103.14	0.00	219.88	235.01	206.15	22.68	14.55	698.28									
NORWAY	Bergen	55,400	188.14	0.00	0.00	188.14	214.50	0.00	0.00	100.66	503.29	92.04	86.49	9.66	188.19	225.97	0.00	0.00	103.57	517.73
	Oslo		40.86	129.98	0.00	170.84	195.22	0.00	0.00	91.60	457.66									
	Trondheim		47.12	129.49	28.99	205.60	268.20	0.00	0.00	118.45	592.25									
POLAND	Bydgoszcz	21,100	0.00	182.33	0.00	182.33	0.00	181.67	0.00	0.00	364.00	0.00	126.47	0.00	126.47	0.00	156.39	0.00	0.00	282.86
	Wroclaw		0.00	135.67	0.00	135.67	0.00	141.30	0.00	0.00	276.97									
	Radom		0.00	108.54	0.00	108.54	0.00	166.78	0.00	0.00	275.31									
	Bialystok		0.00	106.88	0.00	106.88	0.00	105.23	0.00	0.00	212.11									
	Tarnow		0.00	98.94	0.00	98.94	0.00	186.96	0.00	0.00	285.90									
PORTUGAL	Lisbon	22,900	130.45	53.76	14.97	199.18	0.00	156.65	4.07	11.30	371.20	70.23	85.28	2.14	157.65	0.00	119.09	5.73	13.13	295.60
	Sintra		67.12	97.51	0.00	164.63	0.00	145.47	14.09	10.72	334.91									
	Porto		56.50	102.37	0.00	158.87	0.00	62.02	4.22	13.51	238.63									
	Loures		51.04	108.11	0.00	159.15	0.00	128.64	5.63	9.88	303.30									
	Braga		75.86	74.17	0.00	150.04	0.00	101.37	4.21	15.34	270.95									
	Coimbra		67.62	89.74	0.00	157.36	0.00	113.30	3.90	16.48	291.04									
	Faro		43.00	71.30	0.00	114.30	0.00	126.18	3.99	14.66	259.13									
ROMANIA	Cluj	3,200	0.00	81.00	0.00	81.00	0.00	85.93	0.00	40.06	206.99	0.00	96.91	0.00	96.91	0.00	72.31	0.00	40.61	209.83
	Iasi		0.00	98.55	0.00	98.55	0.00	71.76	0.00	40.87	211.19									
	Oradea		0.00	97.32	0.00	97.32	0.00	44.96	0.00	34.15	176.43									
	Brasov		0.00	101.94	0.00	101.94	0.00	70.22	0.00	41.32	213.48									

Continued...

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Comparison of annual water cycle charges in 2013

related to a consumption of 100 m³ in US$

		ACTUAL CHARGES										AVERAGE CHARGES								
COUNTRY/REGION	TOWN/CITY	GDP PER CAPITA IN US$	FIXED CHARGE	VARIABLE CHARGE	OTHER CHARGES DRINKING WATER	TOTAL CHARGE DRINKING WATER	SEWERAGE CHARGE	WASTE WATER TREATMENT CHARGE	OTHER CHARGES	VAT & OTHER TAXES	TOTAL ANNUAL CHARGES 100 m³	FIXED CHARGE	VARIABLE CHARGE	OTHER CHARGES DRINKING WATER	TOTAL CHARGE DRINKING WATER	SEWERAGE CHARGE	WASTE WATER TREATMENT CHARGE	OTHER CHARGES	VAT & OTHER TAXES	TOTAL ANNUAL CHARGES 100 m³
ROMANIA continued...	Timisoara		0.00	81.92	0.00	81.92	0.00	81.31	0.00	39.17	202.40									
	Braila		0.00	106.56	0.00	106.56	0.00	64.06	0.00	40.95	211.57									
	Sibiu		0.00	85.62	0.00	85.62	0.00	48.35	0.00	32.15	166.12									
	Constanta		0.00	116.11	0.00	116.11	0.00	103.17	0.00	52.63	271.91									
	Arad		0.00	89.93	0.00	89.93	0.00	87.47	0.00	42.57	219.97									
	Bistrita		0.00	94.24	0.00	94.24	0.00	61.29	0.00	37.33	192.86									
	Buzau		0.00	125.96	0.00	125.96	0.00	76.69	0.00	48.64	251.29									
	Tg Mures		0.00	92.70	0.00	92.70	0.00	69.60	0.00	38.95	201.26									
	Satu Mare		0.00	95.78	0.00	95.78	0.00	79.77	0.00	42.13	217.68									
	Vrancea		0.00	87.77	0.00	87.77	0.00	65.91	0.00	36.88	190.56									
	Alba		0.00	90.24	0.00	90.24	0.00	85.93	0.00	42.28	218.44									
	Maramures		0.00	93.32	0.00	93.32	0.00	59.75	0.00	36.74	189.80									
	Severin		0.00	95.78	0.00	95.78	0.00	38.19	0.00	32.15	166.12									
	Medias		0.00	98.24	0.00	98.24	0.00	94.55	0.00	46.27	239.06									
	Suceava		0.00	105.64	0.00	105.64	0.00	64.06	0.00	40.73	210.42									
	Pitesti		0.00	99.48	0.00	99.48	0.00	93.32	0.00	46.27	239.06									
SOUTH KOREA	Seoul	33,200	0.00	53.48	0.00	53.48	0.00	0.00	0.00	0.00	53.48	0.00	59.37	0.00	59.37	0.00	0.00	0.00	0.00	59.37
	Busan		0.00	65.31	0.00	65.31	0.00	0.00	0.00	0.00	65.31									
	Daegu		0.00	54.94	0.00	54.94	0.00	0.00	0.00	0.00	54.94									
	Incheon		0.00	60.81	0.00	60.81	0.00	0.00	0.00	0.00	60.81									
	Gwangju		0.00	49.73	0.00	49.73	0.00	0.00	0.00	0.00	49.73									
	Daejeon		0.00	48.63	0.00	48.63	0.00	0.00	0.00	0.00	48.63									
	Ulsan		0.00	82.89	0.00	82.89	0.00	0.00	0.00	0.00	82.89									
	Gyeounggi		0.00	59.19	0.00	59.19	0.00	0.00	0.00	0.00	59.19									
SPAIN	Barcelona	30,100	105.88	106.46	0.00	212.34	21.44	62.67	0.00	27.54	323.99	71.17	70.62	14.71	156.50	29.77	77.40	6.73	29.67	300.07
	Bilbao		31.24	66.85	0.00	98.09	13.74	100.78	5.99	21.15	239.75									
	Madrid		96.11	59.21	0.00	155.31	23.90	68.81	0.00	24.81	272.83									
	Sevilla		63.71	50.85	13.19	127.76	48.98	51.04	27.65	52.40	307.84									
	Valencia		58.89	69.75	60.35	188.99	40.78	103.71	0.00	22.44	355.91									
SWEDEN	Stockholm	40,900	87.23	37.77	0.00	125.00	130.84	33.30	43.12	83.06	415.32	96.11	82.11	0.00	178.22	144.16	107.95	25.12	113.86	569.32
	Göteborg		151.39	78.28	0.00	229.67	227.09	99.90	0.00	139.17	695.83									
	Malmö		81.39	55.54	0.00	136.93	122.08	59.02	82.51	100.13	500.67									
	Uppsala		0.00	166.50	0.00	166.50	0.00	249.75	0.00	104.06	520.32									
	Linköping		160.54	72.44	0.00	232.98	240.81	97.79	0.00	142.89	714.46									
SWITZERLAND	Geneva	46,000	221.71	144.45	0.00	366.17	185.60	0.00	0.00	13.80	565.56	115.75	189.69	0.00	305.44	267.78	0.00	0.00	14.33	587.55
	Zürich		120.94	134.37	0.00	255.31	326.55	0.00	0.00	14.55	596.40									
	Lausanne		152.29	215.00	0.00	367.28	134.37	0.00	0.00	12.54	514.20									
	Basel		78.38	163.49	0.00	241.87	268.74	0.00	0.00	12.77	523.38									
	Bern		5.41	291.14	0.00	296.55	423.64	0.00	0.00	18.01	738.20									
ENGLAND & WALES	Birmingham	37,300	46.65	253.85	0.00	300.49	0.00	293.66	0.00	0.00	594.15	51.74	231.32	0.00	283.05	0.00	318.12	0.00	0.00	601.17
	Cardiff		54.59	220.20	0.00	274.79	0.00	401.20	0.00	0.00	675.99									
	London		46.32	212.44	0.00	258.76	0.00	209.10	0.00	0.00	467.86									
	Manchester		57.90	262.51	0.00	320.41	0.00	362.92	0.00	0.00	683.33									
	Leeds		53.23	207.60	0.00	260.83	0.00	323.70	0.00	0.00	584.53									
UNITED STATES OF AMERICA	New York	52,800	167.90	119.72	0.00	287.62	0.00	190.35	0.00	0.00	477.97	51.65	94.81	24.89	171.36	0.00	142.78	7.65	0.00	321.79
	Washington D.C.		46.32	127.49	174.24	348.05	0.00	155.74	24.72	0.00	528.51									
	Los Angeles		0.00	139.95	0.00	139.95	0.00	131.72	0.00	0.00	271.67									
	Chicago		0.00	76.14	0.00	76.14	0.00	70.05	0.00	0.00	146.19									
	Denver		78.96	71.00	0.00	149.96	0.00	212.05	0.00	0.00	362.01									
	Miami		38.40	13.21	0.00	51.61	0.00	87.87	0.00	0.00	139.48									
	Minneapolis		30.00	116.19	0.00	146.19	0.00	151.69	28.82	0.00	326.70									

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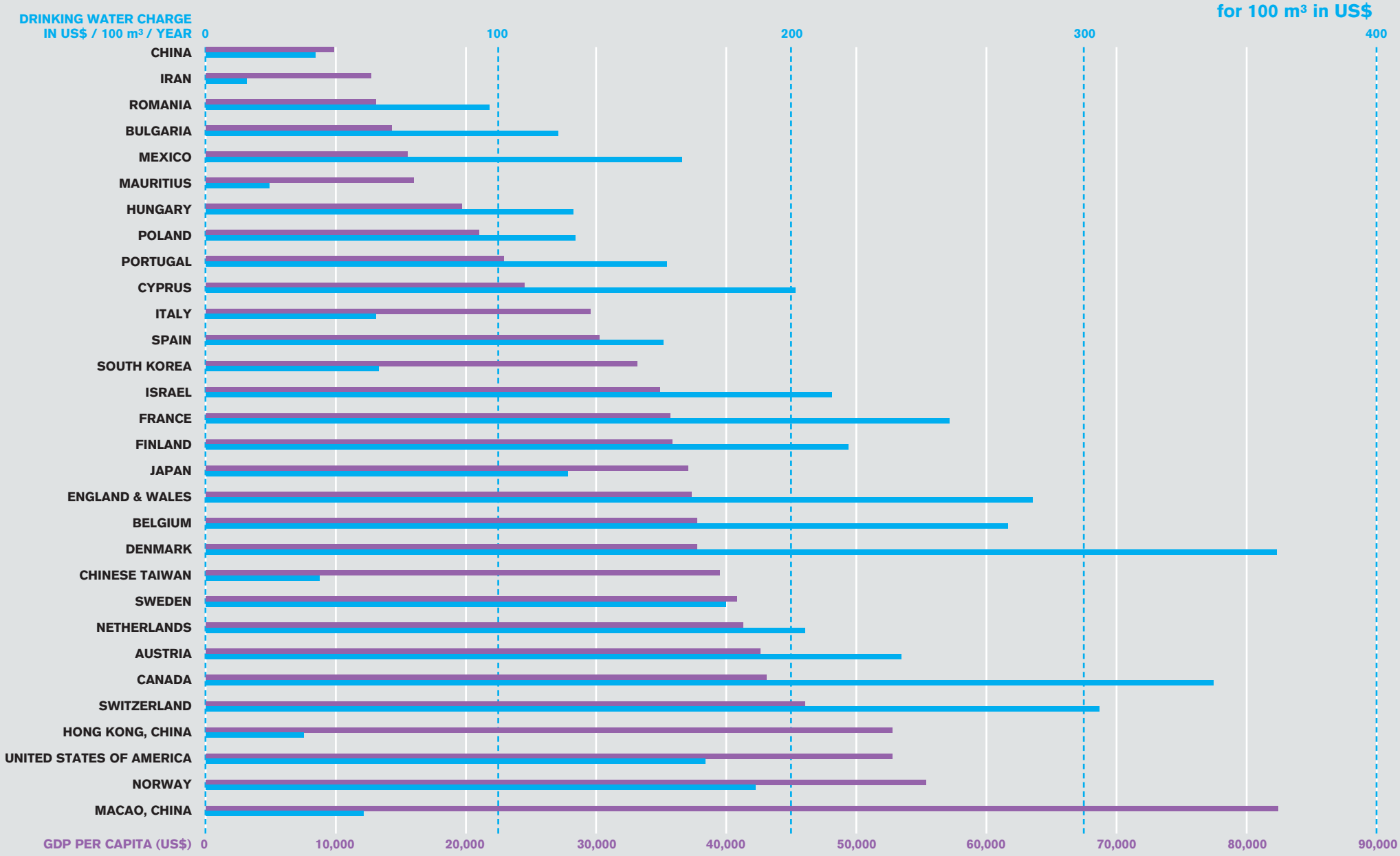
GDP - Drinking water charge in 2013*

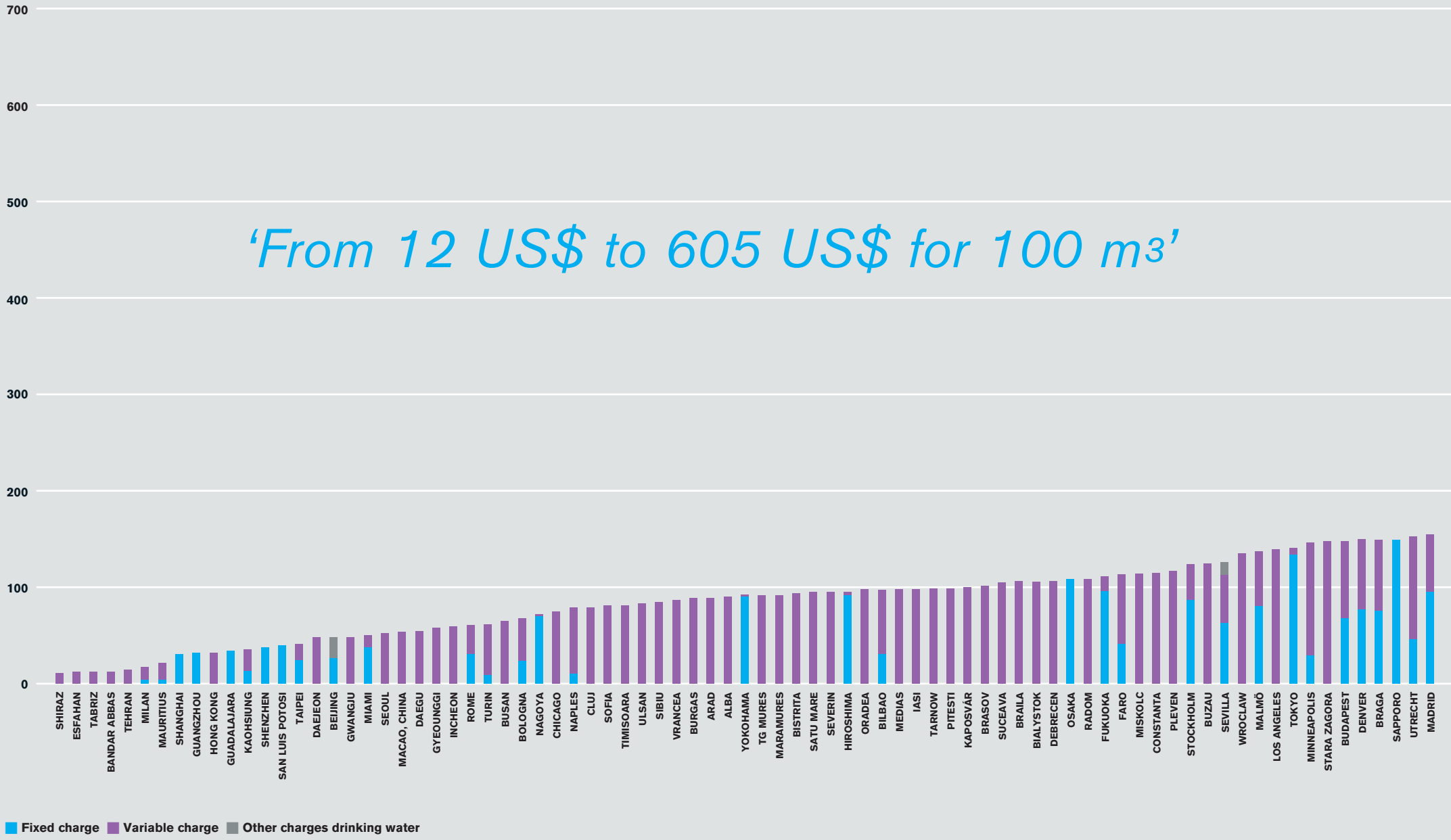
for 100 m³ in US$



* Average volume of considered main cities in the country

Total charge drinking water for 160 cities in 2013

for a consumption of 100 m³ in US$



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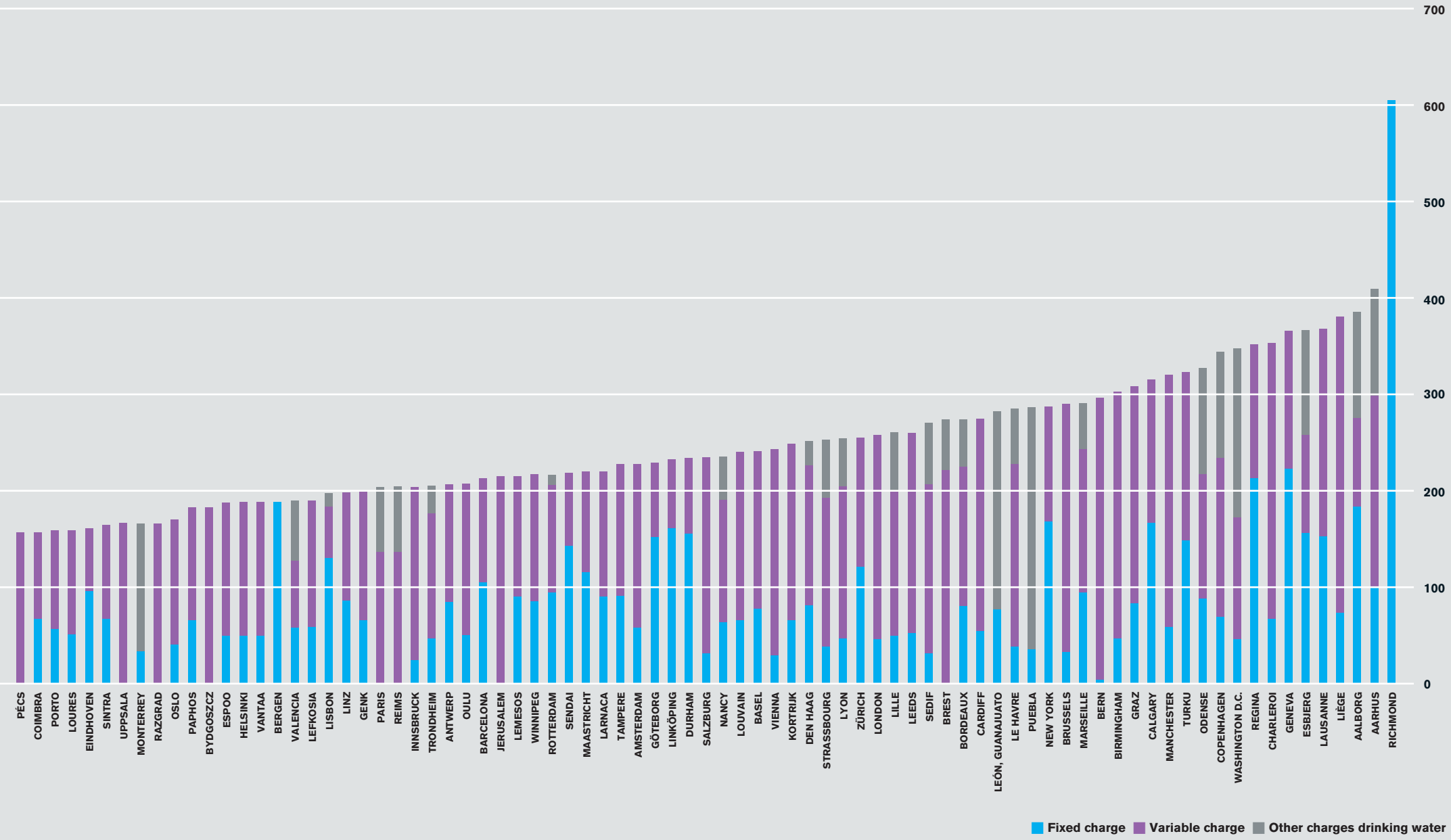
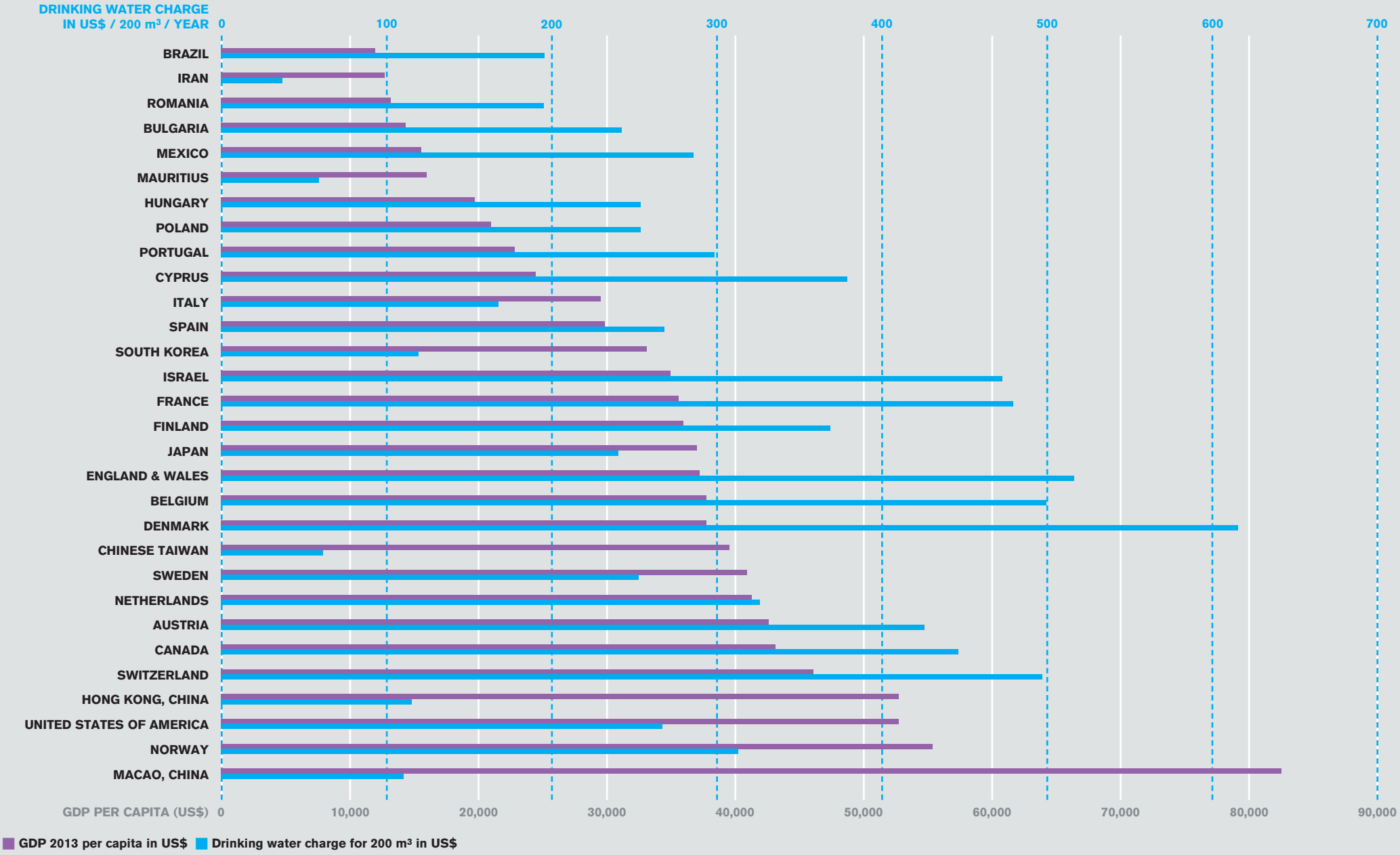


GDP - Drinking water charge in 2013*

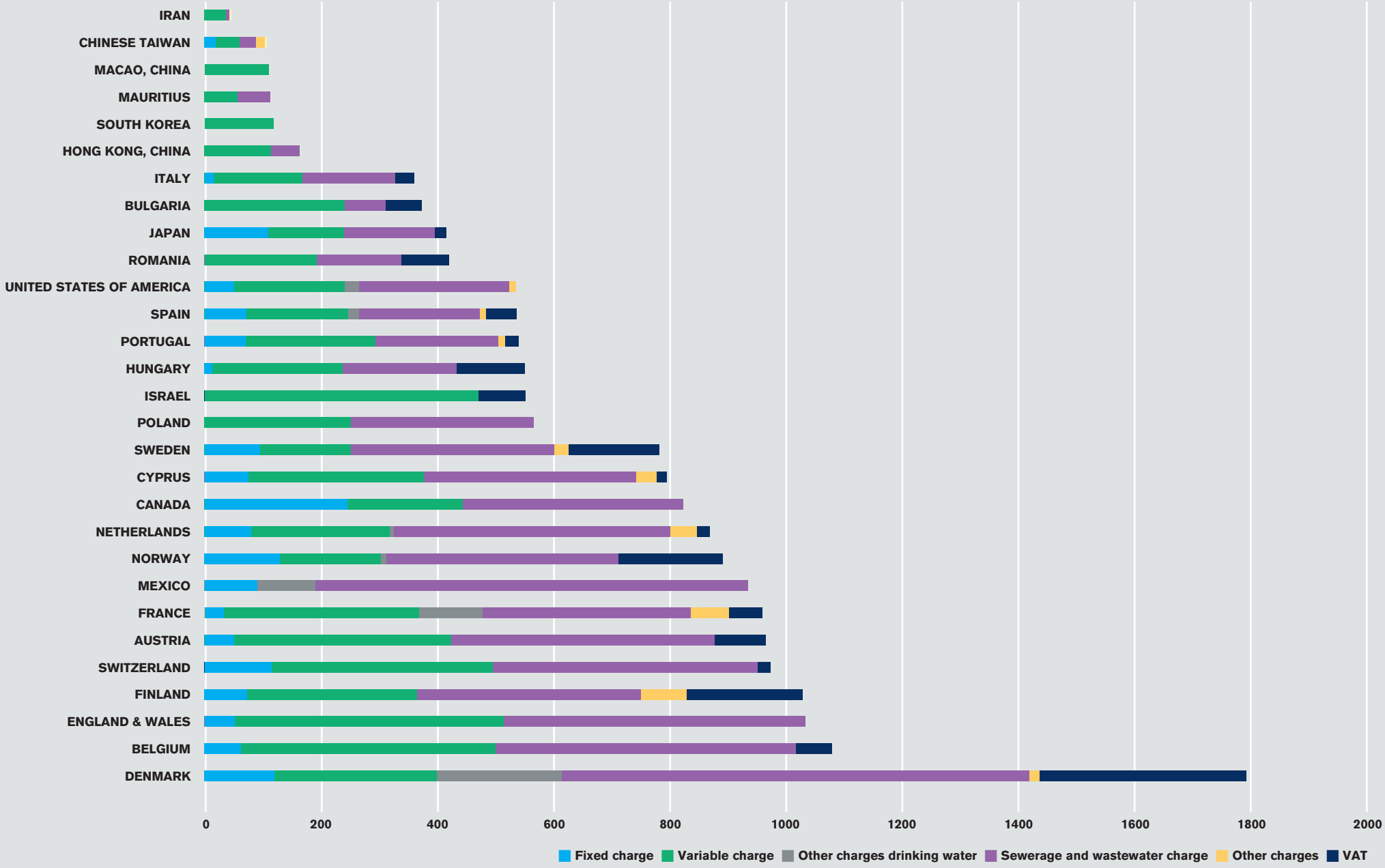
for 200 m³ in US$



* Average volume of considered main cities in the country

Average annual water cycle charges in 2013 for a consumption of 200 m³ *

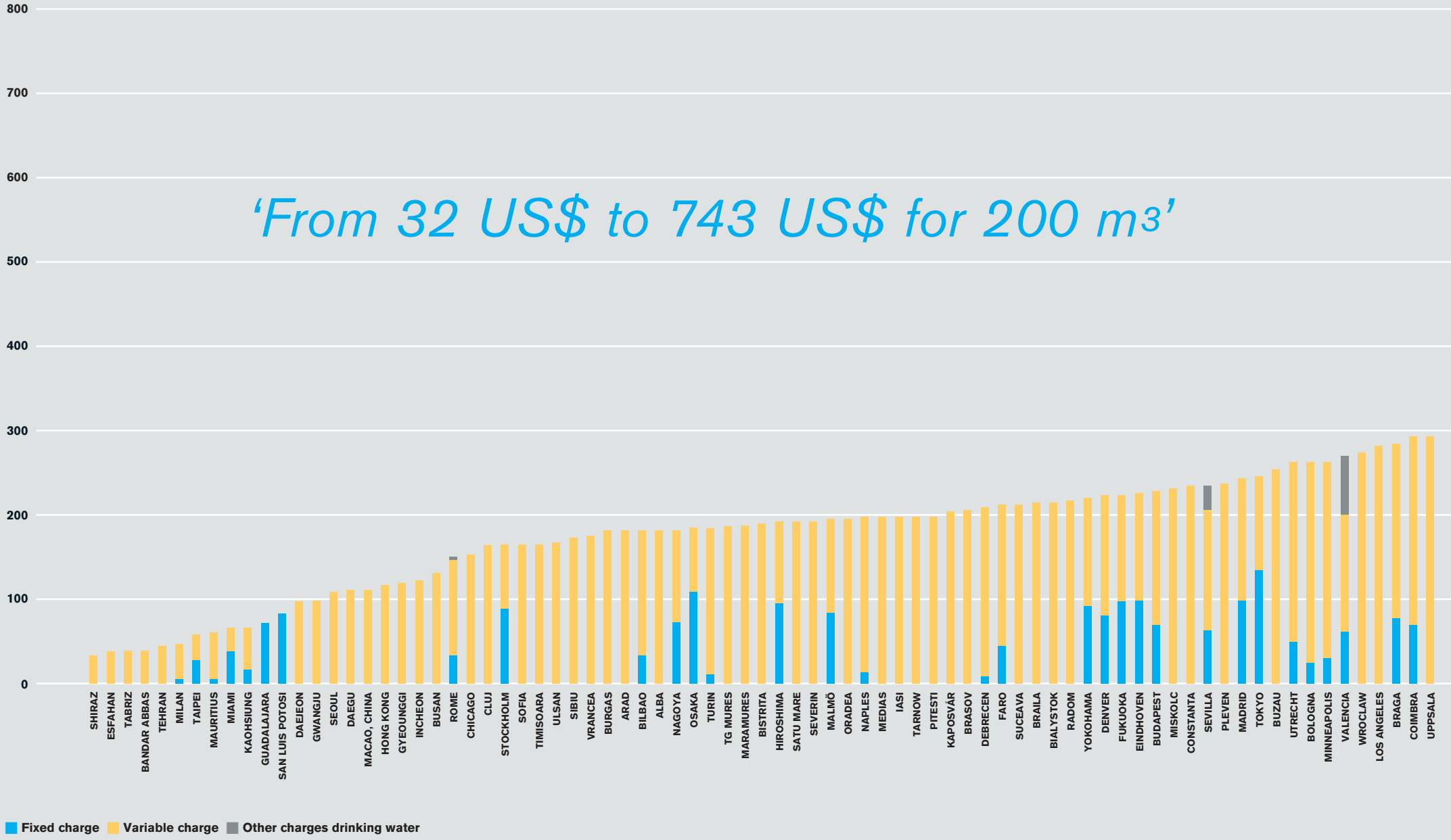
in US$/200 m³



* Average volume of considered main cities in the country

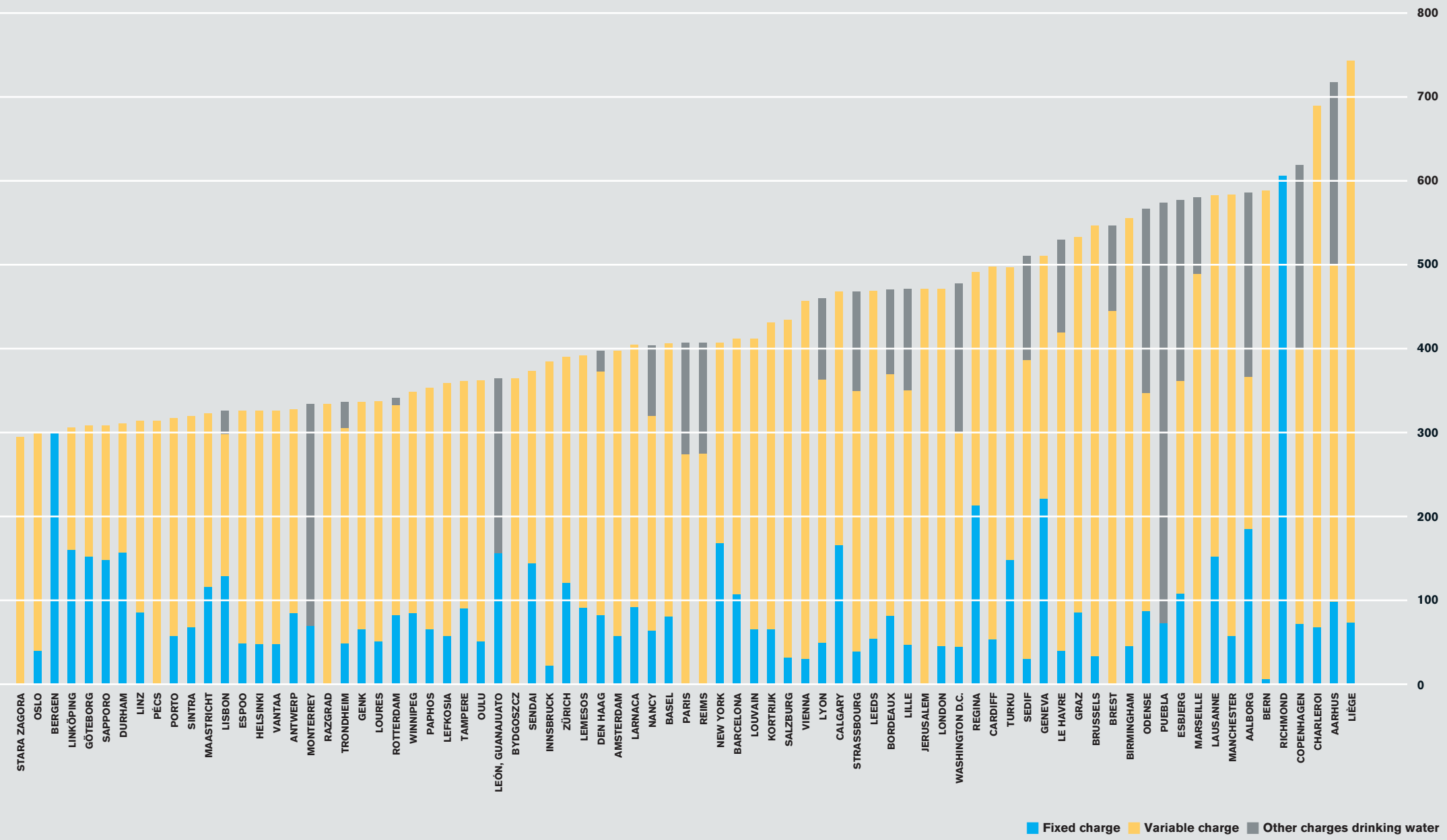
Total charge drinking water for 160 cities in 2013

for a consumption of 200 m³ in US$



Total charge drinking water for 160 cities in 2013

for a consumption of 200 m³ in US$



Specific water consumption in 2008-2012

in litres/capita/day

COUNTRY/REGION	HOUSEHOLDS & SMALL BUSINESS				AVERAGE HOUSEHOLD		
	TOWN/CITY	HH 2008	HH 2010	HH 2012	AV HH 2008	AV HH 2010	AV HH 2012
ARGENTINA	Buenos Aires	n/a	375	n/a	n/a	375	n/a
AUSTRALIA	Brisbane	n/a	80	n/a	n/a	224	n/a
	Adelaide	n/a	215	n/a			
	Melbourne	n/a	148	n/a			
	Perth	n/a	287	n/a			
	Sydney	n/a	200	n/a			
	Canberra	n/a	211	n/a			
	Hobart	n/a	n/a	n/a			
	Darwin	n/a	425	n/a			
AUSTRIA	Austria average	n/a	138	n/a	n/a	138	n/a
	Graz	125	n/a	n/a	125	135	n/a
	Innsbruck	125	121	n/a			
	Linz	125	n/a	n/a			
	Salzburg	125	n/a	n/a			
	Vienna	125	148	143			
BELGIUM	Louvain	107	101	118	107	109	108
	Antwerp	138	155	148			
	Brussels	104	115	95			
	Liège	88	92	94			
	Kortrijk	91	102	107			
	Genk	111	106	112			
	Ghent	n/a	89	n/a			
	Charleroi	n/a	n/a	84			
BRAZIL	Brazil Average	n/a	149	163	n/a	149	163
	Sao Paulo State (SABESP)	n/a	178	176	n/a	149	163
	Brasilia Federal	n/a	172	187			
BULGARIA	Sofia	171	140	134	114	98	103
	Burgas	108	111	116			
	Pleven	94	94	103			
	Razgrad	84	66	77			
	Stara Zagora	110	77	85			
BURKINA FASO	Burkina Faso Average	n/a	45	n/a	n/a	45	n/a
CANADA	Calgary	n/a	198	199	n/a	195	192
	Winnipeg	n/a	149	172			
	Regina	n/a	185	n/a			
	Richmond	n/a	240	n/a			
	Durham	n/a	201	206			
CHILE	Chile Average	n/a	182	n/a	n/a	182	n/a
CHINA	Beijing	142	150	150	178	194	204
	Shanghai	244	199	200			
	Tianjin	119	90	100			
	Shenzhen	206	314	319			
	Guangzhou	n/a	219	252			
HONG KONG, CHINA	Hong Kong	220	221	209	220	221	209
CHINESE TAIWAN	Taipei	340	346	340	306	316	303
	Kaohsiung	272	285	266			
CYPRUS	Larnaca	119	128	153	112	146	151
	Lefkosia	90	152	145			
	Lemesos	120	154	154			
	Paphos	117	151	152			
DENMARK	Aalborg	126	114	105	117	111	107
	Aarhus	113	107	105			
	Copenhagen	113	107	104			
	Esbjerg	118	114	112			
	Odense	116	111	109			

COUNTRY/REGION	HOUSEHOLDS & SMALL BUSINESS				AVERAGE HOUSEHOLD		
	TOWN/CITY	HH 2008	HH 2010	HH 2012	AV HH 2008	AV HH 2010	AV HH 2012
FINLAND	Espoo	131	158	184	139	145	186
	Helsinki	155	158	184			
	Oulu	126	118	163			
	Tampere	143	140	196			
	Turku	139	137	201			
	Vantaa	n/a	158	184			
FRANCE	Bordeaux	n/a	n/a	156	n/a	n/a	159
	SEDIF	n/a	n/a	148			
	Lille	n/a	n/a	98			
	Lyon	n/a	n/a	165			
	Paris	n/a	n/a	120			
	Strassbourg	n/a	n/a	174			
	Reims	n/a	n/a	139			
	Nancy	n/a	n/a	146			
	Le Havre	n/a	n/a	131			
	Marseille	n/a	n/a	360			
	Brest	n/a	n/a	110			
GABON	Gabon Average (urban)	n/a	143	n/a	n/a	143	n/a
GERMANY	Germany Average	121	121	n/a	121	121	n/a
HUNGARY	Budapest	149	147	150	116	106	99
	Debrecen	120	108	100			
	Miskolc	79	82	80			
	Pécs	115	85	85			
	Kaposvár	n/a	n/a	80			
IRAN	Tehran	n/a	n/a	260	n/a	n/a	214
	Esfahan	n/a	n/a	162			
	Shiraz	n/a	n/a	219			
	Tabriz	n/a	n/a	185			
	Bandar Abbas	n/a	n/a	245			
ISRAEL	Jerusalem	119	163	59	119	163	59
ITALY	Bologna	156	147	147	243	236	237
	Milan	478	464	464			
	Naples	175	167	167			
	Rome	208	214	214			
	Turin	198	190	194			
JAPAN	Nagoya	223	223	219	223	224	228
	Osaka	243	253	250			
	Hiroshima	227	223	219			
	Fukuoka	202	203	201			
	Sapporo	200	205	202			
	Sendai	218	221	217			
	Tokyo	236	231	225			
	Yokohama	235	234	288			
LITHUANIA	Kaunas	62	82	n/a	56	75	n/a
	Klaipeda	58	83	n/a			
	Panevezys	53	67	n/a			
	Siauliai	41	61	n/a			
	Vilnius	66	80	n/a			
MACAO, CHINA	Macao, China Average	n/a	154	194	n/a	154	194
MALAWI	Blantyre	n/a	75	n/a	n/a	75	n/a
MAURITIUS	Mauritius	n/a	166	173	n/a	166	173

Continued...

Specific water consumption in 2008-2012
in litres/capita/day

COUNTRY/REGION	HOUSEHOLDS & SMALL BUSINESS				AVERAGE HOUSEHOLD		
	TOWN/CITY	HH 2008	HH 2010	HH 2012	AV HH 2008	AV HH 2010	AV HH 2012
MEXICO	San Luis Potosi	n/a	n/a	182	n/a	n/a	232
	Guadalajara	n/a	n/a	268			
	León, Guanajuato	n/a	n/a	225			
	Monterrey	n/a	n/a	301			
	Puebla	n/a	n/a	183			
MOROCCO	Casablanca	n/a	95	n/a	n/a	109	n/a
	Rabat/Sale	n/a	104	n/a			
	Tanger	n/a	115	n/a			
	Tetouan	n/a	99	n/a			
	Marrakech	n/a	130	n/a			
NETHERLANDS	Amsterdam	n/a	139	134	n/a	121	127
	Rotterdam	n/a	n/a	n/a			
	Den Haag	n/a	n/a	n/a			
	Utrecht	n/a	n/a	n/a			
	Eindhoven	n/a	125	125			
	Maastricht	n/a	100	121			
NEW ZEALAND	Wellington	n/a	230	n/a	n/a	228	n/a
	Dunedin	n/a	228	n/a			
	Palmerston	n/a	231	n/a			
	Tauranga	n/a	270	n/a			
	Whangarei	n/a	179	n/a			
NORWAY	Bergen	173	150	160	174	165	160
	Oslo	197	180	160			
	Trondheim	153	n/a	n/a			
POLAND	Bydgoszcz	95	100	93	99	101	99
	Wroclaw	109	117	116			
	Radom	100	99	95			
	Bialystok	92	93	91			
	Tarnow	97	98	98			
PORTUGAL	Lisbon	159	127	173	227	85	78
	Sintra	212	90	59			
	Porto	122	67	70			
	Loures	198	90	49			
	Braga	179	61	51			
	Coimbra	299	74	71			
	Faro	418	84	73			
ROMANIA	Cluj	n/a	102	102	n/a	101	101
	Iasi	n/a	115	109			
	Oradea	n/a	118	120			
	Brasov	n/a	99	103			
	Timisoara	n/a	110	120			
	Braila	n/a	77	90			
	Sibiu	n/a	121	110			
	Constanta	n/a	118	112			
	Arad	n/a	102	102			
	Bistrita	n/a	100	97			
	Buzau	n/a	87	81			
	Tg Mures	n/a	89	88			
	Satu Mare	n/a	83	80			
	Vrancea	n/a	100	89			
	Alba	n/a	103	97			
	Maramures	n/a	91	110			
	Severin	n/a	109	93			
	Medias	n/a	97	85			
	Suceava	n/a	n/a	125			
	Pitesti	n/a	n/a	100			

COUNTRY/REGION	HOUSEHOLDS & SMALL BUSINESS				AVERAGE HOUSEHOLD		
	TOWN/CITY	HH 2008	HH 2010	HH 2012	AV HH 2008	AV HH 2010	AV HH 2012
SCOTLAND (UK)	Scotland Band A	270	154	n/a	270	154	n/a
	Scotland Band B	270	154	n/a			
	Scotland Band C	270	154	n/a			
	Scotland Band D	270	154	n/a			
	Scotland Band E	270	154	n/a			
	Scotland Band F	270	154	n/a			
	Scotland Band G	270	154	n/a			
	Scotland Band H	270	154	n/a			
SINGAPORE	Singapore	n/a	154	n/a	n/a	154	n/a
SLOVAKIA	Bratislava	96	98	n/a	92	94	n/a
	Nitra	88	89	n/a			
	Ko ice	92	94	n/a			
SOUTH AUSTRALIA	Adelaide	n/a	177	n/a	n/a	177	n/a
SOUTH KOREA	Seoul	311	285	286	320	271	275
	Busan	295	254	256			
	Daegu	323	270	272			
	Incheon	355	301	296			
	Gwangju	321	263	266			
	Daejeon	334	273	295			
	Ulsan	305	251	252			
	Gyeounggi	319	274	280			
SPAIN	Barcelona	110	107	105	118	114	111
	Bilbao	109	109	107			
	Madrid	131	124	124			
	Sevilla	126	122	116			
	alencia	113	107	104			
SWEDEN	Stockholm	273	186	198	237	219	220
	Göteborg	244	235	225			
	Malmö	238	221	219			
	Uppsala	207	210	216			
	Linköping	223	242	240			
SWITZERLAND	Geneva	289	200	189	254	192	183
	Zürich	n/a	165	153			
	Lausanne	n/a	200	189			
	Basel	219	211	207			
	Bern	n/a	182	178			
TUNISIA	Tunisia Average	85	n/a	n/a	85	n/a	n/a
ENGLAND & WALES	Birmingham	128	126	126	143	143	143
	Cardiff	153	150	150			
	London	158	163	163			
	Manchester	136	134	134			
	Leeds	138	142	142			
UNITED STATES OF AMERICA	New York	511	138	469	455	138	432
	Washington D.C.	150	51	n/a			
	Los Angeles	528	151	466			
	Chicago	389	n/a	n/a			
	Denver	721	198	322			
	Miami	428	145	526			
	Minneapolis	429	144	379			

Comparison of annual water cycle charges in 2013

related to a consumption of 200 m³ in US$

		ACTUAL CHARGES										AVERAGE CHARGES									WATER RATE DESIGN FOR DOMESTIC USE						
COUNTRY/REGION	TOWN/CITY	GDP PER CAPITA IN US$	FIXED CHARGE	VARIABLE CHARGE	OTHER CHARGES DRINKING WATER	TOTAL CHARGE DRINKING WATER	SEWERAGE CHARGE	WASTEWATER TREATMENT CHARGE	OTHER CHARGES	VAT & OTHER TAXES	TOTAL ANNUAL CHARGES 200 M³	FIXED CHARGE	VARIABLE CHARGE	OTHER CHARGES DRINKING WATER	TOTAL CHARGE DRINKING WATER	SEWERAGE CHARGE	WASTEWATER TREATMENT CHARGE	OTHER CHARGES	VAT & OTHER TAXES	TOTAL ANNUAL CHARGES 200 M³	FLAT RATE UNMETERED	UNIFORM RATE	DECREASING BLOCK	INCREASING BLOCK	FIXED CHARGES FOR SERVICE	UNIQUE TARIFF SEW & WW	OTHER
AUSTRIA	Graz	42,600	84.11	447.49	0.00	531.60	0.00	302.36	0.00	83.40	917.35	51.24	373.33	0.00	424.57	0.00	452.23	0.00	87.68	964.47		X			X		
	Innsbruck		24.08	360.08	0.00	384.16	0.00	525.82	0.00	91.00	1,000.98											X			X		
	Linz		86.02	227.56	0.00	313.58	0.00	263.93	0.00	57.75	635.26											X			X		
	Salzburg		32.16	403.53	0.00	435.69	0.00	681.67	0.00	111.73	1,229.10											X			X		
	Vienna		29.85	427.97	0.00	457.82	0.00	487.34	0.00	94.51	1,039.68											X			X		
BELGIUM	Louvain	37,800	66.20	347.02	0.00	413.22	366.46	261.76	0.00	62.49	1,103.93	65.28	433.11	0.00	498.39	224.24	291.99	0.98	60.94	1,076.54				X	X		
	Antwerp		85.90	242.23	0.00	328.12	219.90	261.76	0.00	48.58	858.36													X	X		
	Brussels		32.71	514.11	0.00	546.82	250.43	136.53	0.00	56.03	989.82													X	X		
	Liège		72.47	670.36	0.00	742.83		430.17	3.44	70.59	1,247.02													X	X	X	
	Kortrijk		66.20	365.92	0.00	432.12	366.46	261.76	0.00	63.62	1,123.95													X	X		
	Genk		66.20	269.71	0.00	335.92	366.46	261.76	0.00	57.85	1,021.98													X	X		
	Charleroi		67.29	622.41	0.00	689.70	0.00	430.17	3.44	67.40	1,190.70													X	X	X	
BRAZIL	Brazil Average	12,100	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	194.73	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	194.73	X						
	Sao Paulo (SABESP)		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	194.73										X						
	Brasilia Federal District		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	253.99										X						
BULGARIA	Sofia	14,400	0.00	163.04	0.00	163.04	32.33	47.79	0.00	48.63	291.78	0.00	241.18	0.00	241.18	21.93	47.79	0.00	63.08	373.97	X	X				X	
	Burgas		0.00	178.50	0.00	178.50	33.73	85.73	0.00	59.59	357.55										X	X				X	
	Pleven		0.00	234.72	0.00	234.72	16.87	26.70	0.00	55.66	333.94										X	X				X	
	Razgrad		0.00	334.50	0.00	334.50	18.27	25.30	0.00	75.61	453.69										X	X				X	
	Stara Zagora		0.00	295.15	0.00	295.15	8.43	53.41	0.00	75.90	432.89										X	X				X	
CANADA	Calgary	43,100	165.72	301.17	0.00	466.90	0.00	328.28	0.00	0.00	795.18	245.08	198.94	0.00	444.02	0.00	378.36	0.00	0.00	822.38		X			X	X	
	Winnipeg		85.86	261.75	0.00	347.60	0.00	404.88	0.00	0.00	752.48												X		X	X	
	Regina		213.06	276.77	0.00	489.83	0.00	413.46	0.00	0.00	903.29											X			X	X	
	Richmond		604.53	0.00	0.00	604.53	0.00	403.11	0.00	0.00	1,007.63										X				X	X	
	Durham		156.23	154.99	0.00	311.23	0.00	342.07	0.00	0.00	653.29												X		X	X	
HONG KONG, CHINA	Hong Kong	52,700	0.00	114.82	0.00	114.82	0.00	48.23	0.00	0.00	163.05	0.00	114.82	0.00	0.00	0.00	48.23	0.00	0.00	163.05		X					
CHINESE TAIWAN	Taipei	39,600	26.01	31.88	0.00	57.90	33.47	0.00	1.34	2.89	95.60	19.84	42.06	0.00	61.89	26.78	0.00	15.90	3.09	107.67				X	X		
	Kaohsiung		13.66	52.23	0.00	65.89	20.08	0.00	30.46	3.29	119.73													X	X		
CYPRUS	Larnaca	24,500	90.71	313.35	0.00	404.06	137.43	217.15	54.29	20.20	833.13	76.28	301.19	0.00	377.46	137.43	225.28	35.48	18.87	794.53				X	X	X	
	Lefkosia		57.72	302.36	0.00	360.08	151.18	309.39	0.00	18.00	838.65													X	X	X	
	Lemesos		90.71	302.36	0.00	393.06	142.93	209.66	46.38	19.65	811.69													X	X	X	
	Paphos		65.97	286.69	0.00	352.66	118.19	164.92	41.23	17.63	694.63													X	X	X	
DENMARK	Aalborg	37,800	184.22	184.37	217.38	585.98	0.00	914.34	16.21	379.13	1,895.67	119.91	275.69	217.38	612.98	0.00	801.73	18.79	358.37	1,791.87		X			X	X	
	Aarhus		101.40	398.37	217.38	717.15	0.00	837.04	13.63	391.96	1,959.78											X			X	X	
	Copenhagen		70.01	330.87	217.38	618.26	0.00	584.06	18.42	305.19	1,525.93											X			X	X	
	Esbjerg		155.49	205.00	217.38	577.87	0.00	753.99	30.95	340.70	1,703.52											X			X	X	
	Odense		88.43	259.83	217.38	565.64	0.00	919.20	14.74	374.90	1,874.48											X			X	X	
FINLAND	Espoo	35,900	49.48	277.08	0.00	326.56	0.00	345.80	74.21	179.17	925.74	73.43	293.34	0.00	366.77	0.00	383.12	77.55	198.58	1,026.02		X			X	X	
	Helsinki		49.48	277.08	0.00	326.56	0.00	345.80	74.21	179.17	925.74											X			X	X	
	Oulu		52.20	310.34	0.00	362.54	0.00	425.61	52.20	201.68	1,042.03											X			X	X	
	Tampere		91.50	270.43	0.00	361.93	0.00	401.23	91.50	205.12	1,059.78											X			X	X	
	Turku		148.43	348.03	0.00	496.45	0.00	434.47	98.95	247.18	1,277.05											X			X	X	
	Vantaa		49.48	277.08	0.00	326.56	0.00	345.80	74.21	179.17	925.74											X			X	X	
FRANCE	Bordeaux	35,700	79.31	291.36	98.95	469.63	0.00	296.86	63.22	55.56	885.27	31.81	336.09	109.70	477.60	97.70	258.38	66.97	56.00	956.64		X			X		1
	SEDIF		31.28	354.58	123.69	509.55	200.65	250.13	85.21	67.99	1,113.53											X			X		1
	Lille		49.59	302.36	118.19	470.14	0.00	401.31	68.72	66.09	1,006.25											X			X		1
	Lyon		48.46	316.10	96.20	460.76	255.63	0.00	46.73	44.56	807.67											X			X		1
	Paris		0.00	274.87	131.94	406.81	76.96	236.39	85.21	26.21	831.57											X					1
	Strassbourg		39.00	310.60	118.19	467.80	140.18	123.69	74.21	31.39	837.28											X			X		1
	Reims		0.00	274.87	131.94	406.81	76.96	236.39	82.46	62.13	864.75											X					1
	Nancy		63.67	255.63	85.21	404.51	324.35	0.00	52.23	49.02	830.10											X			X		1
	Le Havre		38.58	382.07	109.95	530.59	0.00	475.52	82.46	77.24	1,165.81											X			X		1
	Marseille		0.00	489.27	90.71	579.97	0.00	277.62	41.23	51.24	950.06											X					1
	Brest		0.00	445.29	101.70	546.99	0.00	544.24	54.97	84.56	1,230.77											X					1

Continued...

Source:
For exchange rates to US$ as per 31 December 2013: http://nl.exchange-rates.org/historicalrates/E/USD/31-12-2013
for GDP: World Fact Book: https://www.cia.gov/library/publications/the-world-factbook/fields/2004.html

Notes:
1 Flat rate (unmetered) forbidden since 1992. 2 Increasing block rate, by number of inhabitants, assumed four in household, identical tariff applies to all.
3 Separate tariffs for sewerage and wastewater treatment. 4 Sewerage fee is charged by the multiply factors to drinking water fee.

Comparison of annual water cycle charges in 2013

related to a consumption of 200 m³ in US$

		ACTUAL CHARGES										AVERAGE CHARGES									WATER RATE DESIGN FOR DOMESTIC USE						
COUNTRY/REGION	TOWN/CITY	GDP PER CAPITA IN US$	FIXED CHARGE	VARIABLE CHARGE	OTHER CHARGES DRINKING WATER	TOTAL CHARGE DRINKING WATER	SEWERAGE CHARGE	WASTE.W TREATMENT CHARGE	OTHER CHARGES	VAT & OTHER TAXES	TOTAL ANNUAL CHARGES 200 M³	FIXED CHARGE	VARIABLE CHARGE	OTHER CHARGES DRINKING WATER	TOTAL CHARGE DRINKING WATER	SEWERAGE CHARGE	WASTE.W TREATMENT CHARGE	OTHER CHARGES	VAT & OTHER TAXES	TOTAL ANNUAL CHARGES 200 M³	FLAT RATE UNMETERED	UNIFORM RATE	DECREASING BLOCK	INCREASING BLOCK	FIXED CHARGES FOR SERVICE	UNIQUE TARIFF SEW & WW	OTHER
HUNGARY	Budapest	19,800	68.77	159.35	0.00	228.12	0.00	277.50	0.00	136.52	642.14	14.78	221.81	0.00	236.59	2.13	193.62	1.02	117.01	550.37					X		
	Debrecen		5.12	203.73	0.00	208.85	6.01	161.97	5.12	103.12	485.07														X		
	Miskolc		0.00	230.26	0.00	230.26	0.00	177.11	0.00	109.99	517.36																
	Pécs		0.00	314.41	0.00	314.41	4.62	229.26	0.00	148.04	696.33																
	Kaposvár		0.00	201.31	0.00	201.31	0.00	122.29	0.00	87.37	410.97																
IRAN	Tehran	12,800	0.00	41.50	0.00	41.50	6.36	0.00	0.00	2.87	50.73	0.00	37.03	0.00	37.03	6.36	0.00	0.00	2.60	46.00				X			
	Esfahan		0.00	36.35	0.00	36.35	6.36	0.00	0.00	2.56	45.27													X			
	Shiraz		0.00	32.63	0.00	32.63	6.36	0.00	0.00	2.34	41.33													X			
	Tabriz		0.00	37.21	0.00	37.21	6.36	0.00	0.00	2.61	46.18													X			
	Bandar Abbas		0.00	37.49	0.00	37.49	6.36	0.00	0.00	2.63	46.48													X			
ISRAEL	Jerusalem	34,900	0.00	470.49	0.00	470.49	0.00	0.00	0.00	81.53	552.02	0.00	470.49	0.00	470.49	0.00	0.00	0.00	81.53	552.02				X			2
ITALY	Bologna	29,600	24.22	237.49	0.00	261.70	47.14	127.02	0.00	43.58	479.44	16.25	150.38	0.69	167.32	42.18	119.13	0.00	32.86	361.49				X			
	Milan		3.83	41.71	0.00	45.55	29.69	76.14	0.00	15.13	166.50													X			
	Naples		12.08	183.32	0.00	195.40	28.16	99.83	0.00	32.34	355.74													X	X		
	Rome		31.14	115.32	3.46	149.93	44.61	128.69	0.00	32.32	355.56													X	X		
	Turin		9.98	174.05	0.00	184.02	61.30	163.99	0.00	40.93	450.24													X	X		
JAPAN	Nagoya	37,100	71.20	109.82	0.00	181.03	137.62	0.00	0.00	15.84	334.48	110.58	129.51	0.00	240.09	155.36	0.00	0.00	19.68	415.12	X			X			
	Osaka		108.23	73.67	0.00	181.90	108.99	0.00	0.00	14.39	305.28										X			X			
	Hiroshima		92.28	97.97	0.00	190.25	172.59	0.00	0.00	18.04	380.89										X			X			
	Fukuoka		96.84	125.32	0.00	222.15	205.29	0.00	0.00	21.30	448.75										X			X			
	Sapporo		150.38	159.49	0.00	309.87	121.78	0.00	0.00	21.53	453.19										X			X			
	Sendai		142.40	230.24	0.00	372.65	158.24	0.00	0.00	26.43	557.32										X			X			
	Tokyo		133.29	109.75	0.00	243.04	172.40	0.00	0.00	20.66	436.10										X			X			
	Yokohama		90.00	129.80	0.00	219.80	165.95	0.00	0.00	19.23	404.98										X			X			
MACAO, CHINA	Macao, China Average	82,400	0.00	110.67	0.00	110.67	0.00	0.00	0.00	0.00	110.67	0.00	110.67	0.00	110.67	0.00	0.00	0.00	0.00	110.67				X			
MAURITIUS	Mauritius	16,100	3.96	55.48	0.00	59.44	54.68	0.00	0.00	0.00	114.12	3.96	55.48	0.00	59.44	54.68	0.00	0.00	0.00	114.12							
MEXICO	San Luis Potosi	15,600	81.36	0.00	0.00	81.36	384.72	384.72	0.00	0.00	850.79	90.64	0.00	194.23	284.87	324.34	324.34	0.00	0.00	933.56					X		
	Guadalajara		71.54	0.00	0.00	71.54	51.54	51.54	0.00	0.00	174.63														X		
	León, Guanajuato		157.84	0.00	205.40	363.24	305.56	305.56	0.00	0.00	974.37										X				X	X	
	Monterrey		70.13	0.00	263.23	333.36	305.56	305.56	0.00	0.00	944.49										X				X	X	
	Puebla		72.34	0.00	502.52	574.87	574.31	574.31	0.00	0.00	1,723.49										X				X	X	
NETHERLANDS	Amsterdam	41,400	57.93	340.84	0.00	398.77	207.53	226.77	45.35	26.65	905.06	80.52	238.04	5.76	324.32	232.72	242.80	45.35	22.18	867.38	X	X			X		3
	Rotterdam		82.13	251.23	9.29	342.65	269.37	261.13	45.35	23.28	941.78										X	X			X		3
	Den Haag		81.42	291.36	25.29	398.06	178.66	350.46	45.35	26.61	999.15											X			X		3
	Utrecht		48.10	211.65	0.00	259.75	306.48	226.77	45.35	18.31	856.66											X			X		3
	Eindhoven		96.81	126.85	0.00	223.66	199.28	185.54	45.35	16.13	669.97											X			X		3
	Maastricht		116.74	206.29	0.00	323.03	235.01	206.15	45.35	22.10	831.64											X			X		3
NORWAY	Bergen	55,400	300.99	0.00	0.00	300.99	343.16	0.00	0.00	161.12	805.27	129.65	173.04	9.66	312.35	399.34	0.00	0.00	177.92	889.62	X				X	X	
	Oslo		40.86	259.97	0.00	300.82	390.44	0.00	0.00	172.82	864.08										X	X			X	X	
	Trondheim		47.12	259.14	28.99	335.25	464.41	0.00	0.00	199.83	999.50										X	X			X		
POLAND	Bydgoszcz	21,100	0.00	364.66	0.00	364.66	0.00	363.34	0.00	0.00	727.99	0.00	252.95	0.00	252.95	0.00	312.77	0.00	0.00	565.72		X					
	Wroclaw		0.00	271.34	0.00	271.34	0.00	282.59	0.00	0.00	553.94											X					
	Radom		0.00	217.07	0.00	217.07	0.00	333.55	0.00	0.00	550.63											X					
	Bialystok		0.00	213.77	0.00	213.77	0.00	210.46	0.00	0.00	424.22											X					
	Tarnow		0.00	197.88	0.00	197.88	0.00	373.92	0.00	0.00	571.81											X					
PORTUGAL	Lisbon	22,900	130.45	165.91	29.93	326.30	0.00	160.91	8.14	18.27	513.61	70.23	223.29	4.28	297.79	0.00	206.60	11.46	24.39	540.25				X	X		
	Sintra		67.12	252.25	0.00	319.37	0.00	284.74	28.17	20.85	653.13													X	X		
	Porto		56.50	261.55	0.00	318.05	0.00	124.47	8.44	27.06	478.02													X	X		
	Loures		51.04	286.41	0.00	337.46	0.00	289.11	11.27	20.92	658.75													X	X		
	Braga		75.86	206.78	0.00	282.65	0.00	157.72	8.41	26.92	475.70													X	X		
	Coimbra		67.62	222.96	0.00	290.58	0.00	209.22	7.81	30.46	538.06													X	X		
	Faro		43.00	167.15	0.00	210.15	0.00	220.05	7.97	26.29	464.46													X	X		

Continued...

Source:

For exchange rates to US$ as per 31 December 2013: http://nl.exchange-rates.org/historicalrates/E/USD/31-12-2013
for GDP: World Fact Book: https://www.cia.gov/library/publications/the-world-factbook/fields/2004.html

Notes:

1 Flat rate (unmetered) forbidden since 1992. 2 Increasing block rate, by number of inhabitants, assumed four in household, identical tariff applies to all.
3 Separate tariffs for sewerage and wastewater treatment. 4 Sewerage fee is charged by the multiply factors to drinking water fee.

Comparison of annual water cycle charges in 2013

related to a consumption of 200 m³ in US$

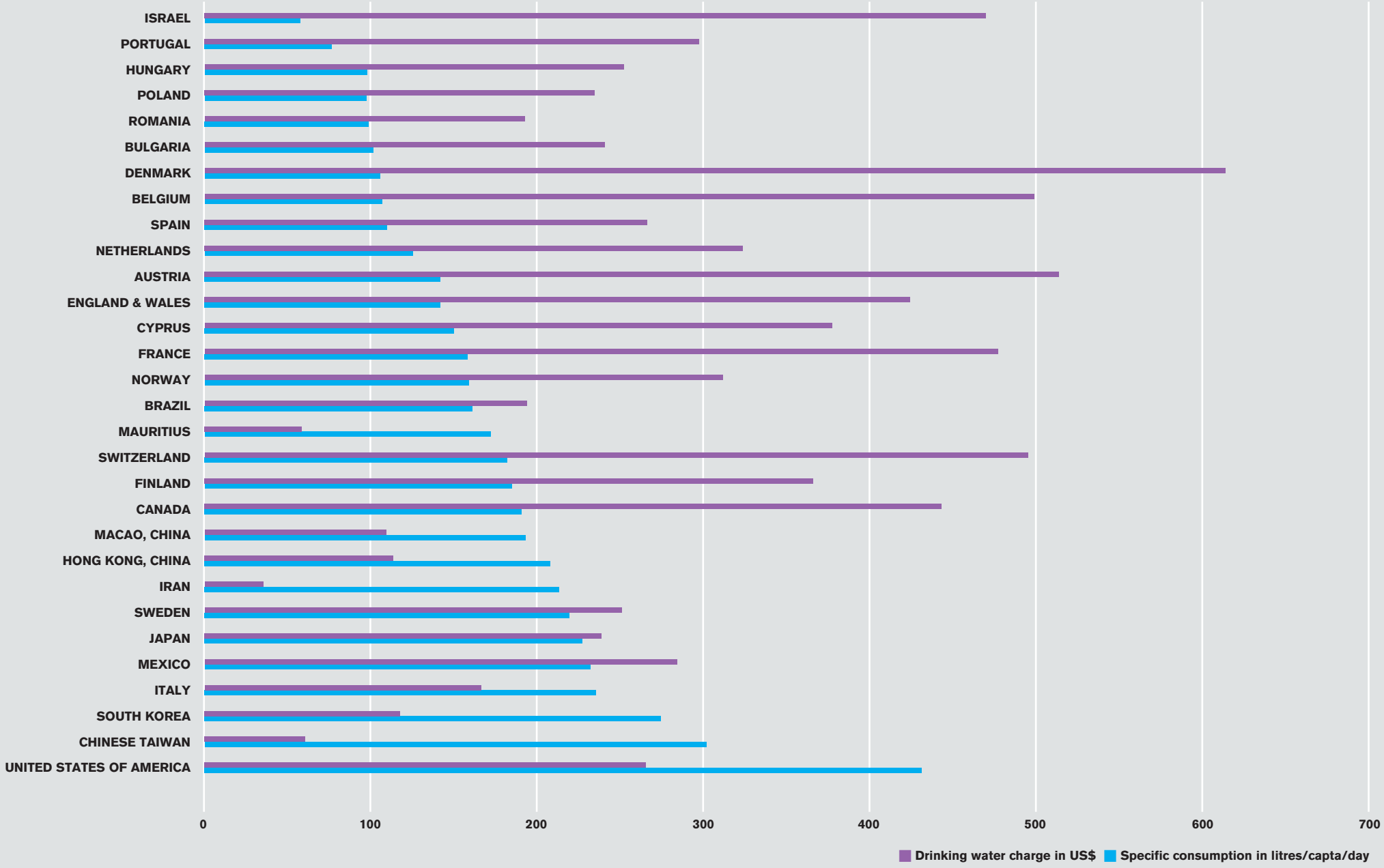
		ACTUAL CHARGES										AVERAGE CHARGES									WATER RATE DESIGN FOR DOMESTIC USE						
COUNTRY/REGION	TOWN/CITY	GDP PER CAPITA IN US$	FIXED CHARGE	VARIABLE CHARGE	OTHER CHARGES DRINKING WATER	TOTAL CHARGE DRINKING WATER	SEWERAGE CHARGE	WASTE.WTREATMENT CHARGE	OTHER CHARGES	VAT & OTHER TAXES	TOTAL ANNUAL CHARGES 200 M³	FIXED CHARGE	VARIABLE CHARGE	OTHER CHARGES DRINKING WATER	TOTAL CHARGE DRINKING WATER	SEWERAGE CHARGE	WASTE.WTREATMENT CHARGE	OTHER CHARGES	VAT & OTHER TAXES	TOTAL ANNUAL CHARGES 200 M³	FLAT RATE UNMETERED	UNIFORM RATE	DECREASING BLOCK	INCREASING BLOCK	FIXED CHARGES FOR SERVICE	UNIQUE TARIFF SEW & WW	OTHER
ROMANIA	Cluj	13,200	0.00	162.00	0.00	162.00	0.00	171.85	0.00	80.12	413.97	0.00	193.81	0.00	193.81	0.00	144.63	0.00	81.22	419.66		X				X	
	Iasi		0.00	197.11	0.00	197.11	0.00	143.52	0.00	81.75	422.37											X				X	
	Oradea		0.00	194.64	0.00	194.64	0.00	89.93	0.00	68.30	352.87											X				X	
	Brasov		0.00	203.88	0.00	203.88	0.00	140.44	0.00	82.64	426.96											X				X	
	Timisoara		0.00	163.84	0.00	163.84	0.00	162.61	0.00	78.35	404.81											X				X	
	Braila		0.00	213.12	0.00	213.12	0.00	128.12	0.00	81.90	423.14											X				X	
	Sibiu		0.00	171.24	0.00	171.24	0.00	96.70	0.00	64.31	332.25											X				X	
	Constanta		0.00	232.22	0.00	232.22	0.00	206.34	0.00	105.25	543.81											X				X	
	Arad		0.00	179.86	0.00	179.86	0.00	174.93	0.00	85.15	439.94											X				X	
	Bistrita		0.00	188.48	0.00	188.48	0.00	122.58	0.00	74.65	385.71											X				X	
	Buzau		0.00	251.93	0.00	251.93	0.00	153.37	0.00	97.27	502.57											X				X	
	Tg Mures		0.00	185.40	0.00	185.40	0.00	139.21	0.00	77.91	402.51											X				X	
	Satu Mare		0.00	191.56	0.00	191.56	0.00	159.53	0.00	84.26	435.36											X				X	
	Vrancea		0.00	175.55	0.00	175.55	0.00	131.81	0.00	73.77	381.13											X				X	
	Alba		0.00	180.47	0.00	180.47	0.00	171.85	0.00	84.56	436.88											X				X	
	Maramures		0.00	186.63	0.00	186.63	0.00	119.50	0.00	73.47	379.60											X				X	
	Severin		0.00	191.56	0.00	191.56	0.00	76.38	0.00	64.31	332.25											X				X	
	Medias		0.00	196.49	0.00	196.49	0.00	189.10	0.00	92.54	478.13											X				X	
	Suceava		0.00	211.27	0.00	211.27	0.00	128.12	0.00	81.45	420.85										X	X				X	
	Pitesti		0.00	198.95	0.00	198.95	0.00	186.63	0.00	92.54	478.13											X				X	
SOUTH KOREA	Seoul	33,200	0.00	106.95	0.00	106.95	0.00	0.00	0.00	0.00	106.95	0.00	118.74	0.00	118.74	0.00	0.00	0.00	0.00	118.74				X			4
	Busan		0.00	130.61	0.00	130.61	0.00	0.00	0.00	0.00	130.61													X			4
	Daegu		0.00	109.89	0.00	109.89	0.00	0.00	0.00	0.00	109.89													X			4
	Incheon		0.00	121.61	0.00	121.61	0.00	0.00	0.00	0.00	121.61													X			4
	Gwangju		0.00	99.45	0.00	99.45	0.00	0.00	0.00	0.00	99.45													X			4
	Daejeon		0.00	97.25	0.00	97.25	0.00	0.00	0.00	0.00	97.25													X			4
	Ulsan		0.00	165.79	0.00	165.79	0.00	0.00	0.00	0.00	165.79													X			4
	Gyeounggi		0.00	118.37	0.00	118.37	0.00	0.00	0.00	0.00	118.37													X			4
SPAIN	Barcelona	30,100	105.88	304.94	0.00	410.82	47.25	164.84	0.00	57.56	680.47	71.17	175.75	19.72	266.64	60.31	145.26	12.26	51.95	536.43				X	X		
	Bilbao		31.24	148.88	0.00	180.12	27.49	180.34	5.99	37.31	431.26													X	X		
	Madrid		96.11	144.20	0.00	240.30	39.72	114.74	0.00	39.47	434.24													X	X		
	Sevilla		63.71	141.26	27.84	232.81	105.54	109.22	55.30	95.28	598.16													X	X		
	Valencia		58.89	139.50	70.78	269.17	81.55	157.17	0.00	30.13	538.01											X			X		
SWEDEN	Stockholm	40,900	87.23	75.55	0.00	162.77	130.84	66.60	43.12	100.83	504.16	96.11	155.91	0.00	252.02	144.16	203.45	25.12	156.19	780.96			X			X	
	Göteborg		151.39	156.56	0.00	307.95	227.09	199.80	0.00	183.71	918.55												X			X	
	Malmö		81.39	111.08	0.00	192.47	122.08	118.04	82.51	128.77	643.87												X			X	
	Uppsala		0.00	291.50	0.00	291.50	0.00	437.25	0.00	182.19	910.94												X			X	
	Linköping		160.54	144.88	0.00	305.42	240.81	195.58	0.00	185.45	927.25												X			X	
SWITZERLAND	Geneva	46,000	221.71	288.90	0.00	510.62	371.20	0.00	0.00	22.05	903.87	115.75	379.38	0.00	495.12	453.97	0.00	0.00	23.73	972.83		X			X		
	Zürich		120.94	268.74	0.00	389.68	517.61	0.00	0.00	22.69	929.98											X			X		
	Lausanne		152.29	429.99	0.00	582.28	268.74	0.00	0.00	21.28	872.30											X			X		
	Basel		78.38	326.97	0.00	405.36	487.10	0.00	0.00	22.32	914.77											X			X		
	Bern		5.41	582.28	0.00	587.69	625.20	0.00	0.00	30.32	1,243.21											X			X		
ENGLAND & WALES	Birmingham	37,300	46.65	507.69	0.00	554.34	0.00	448.84	0.00	0.00	1,003.18	51.74	462.64	0.00	514.37	0.00	517.92	0.00	0.00	1,032.30							
	Cardiff		54.59	440.40	0.00	494.99	0.00	675.03	0.00	0.00	1,170.01																
	London		46.32	424.89	0.00	471.20	0.00	325.57	0.00	0.00	796.77																
	Manchester		57.90	525.03	0.00	582.92	0.00	572.01	0.00	0.00	1,154.93																
	Leeds		53.23	415.19	0.00	468.42	0.00	568.18	0.00	0.00	1,036.61																
UNITED STATES OF AMERICA	New York	52,800	167.90	239.43	0.00	407.33	0.00	380.69	0.00	0.00	788.02	51.65	189.57	24.89	266.11	0.00	257.38	11.18	0.00	534.67		X			X	X	
	Washington D.C.	46.32		254.97	174.24	475.53	0.00	311.48	49.44	0.00	836.45											X			X	X	
	Los Angeles	0.00		279.90	0.00	279.90	0.00	263.45	0.00	0.00	543.35											X				X	
	Chicago	0.00		152.28	0.00	152.28	0.00	140.09	0.00	0.00	292.37											X				X	
	Denver	78.96		141.60	0.00	220.56	0.00	306.63	0.00	0.00	527.19													X	X	X	
	Miami	38.40		26.42	0.00	64.82	0.00	136.74	0.00	0.00	201.56													X	X	X	
	Minneapolis	30.00		232.37	0.00	262.37	0.00	262.58	28.82	0.00	553.77											X			X	X	

Source:
For exchange rates to US$ as per 31 December 2013: http://nl.exchange-rates.org/historicalrates/E/USD/31-12-2013
for GDP: World Fact Book: https://www.cia.gov/library/publications/the-world-factbook/fields/2004.html

Notes:
1 Flat rate (unmetered) forbidden since 1992. 2 Increasing block rate, by number of inhabitants, assumed four in household, identical tariff applies to all.
3 Separate tariffs for sewerage and wastewater treatment. 4 Sewerage fee is charged by the multiply factors to drinking water fee.

Specific water consumption - Drinking water charge*

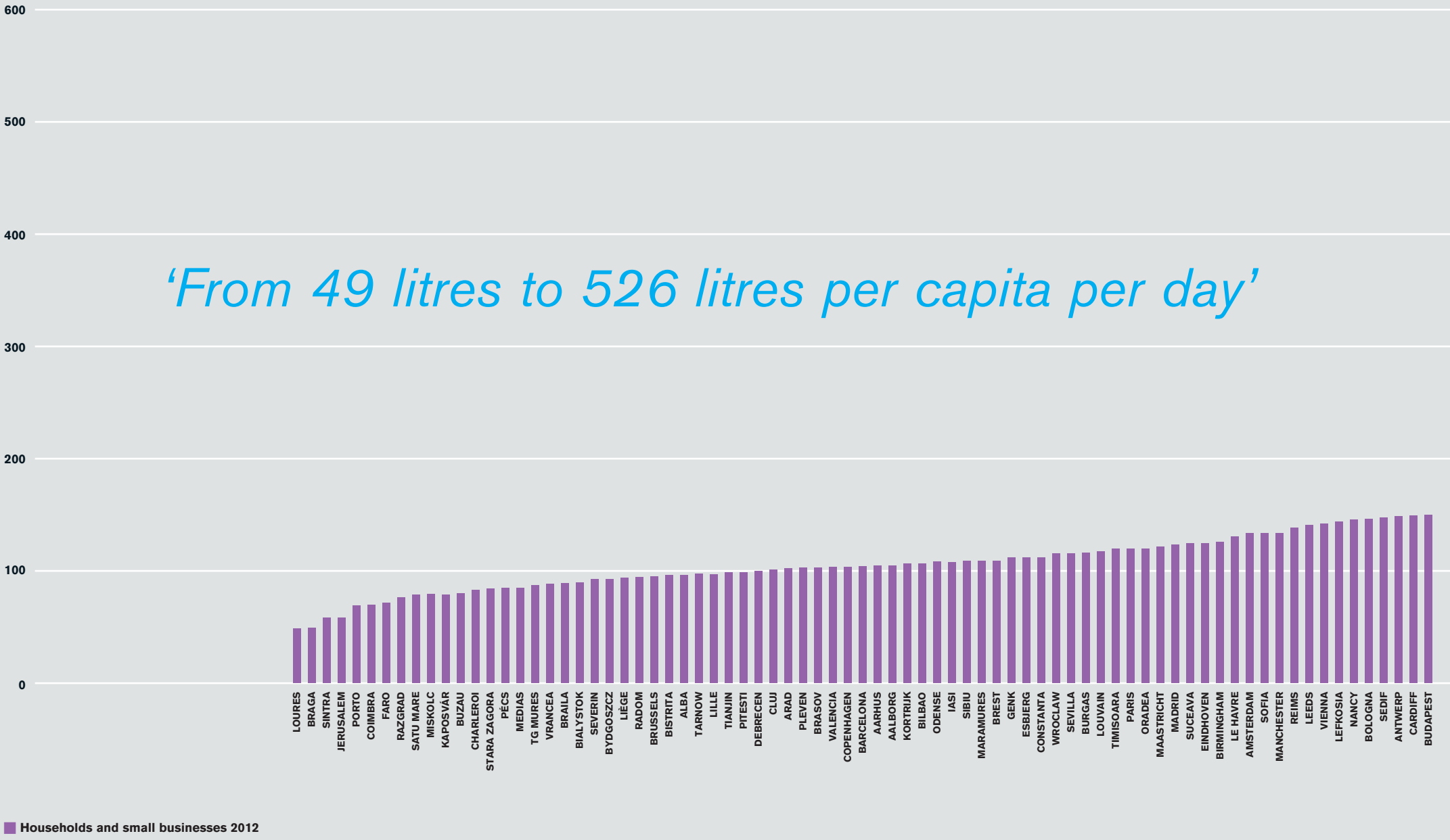
consumption in litres/capita/day and charge in US$ for 200 m³



* Average volume of considered main cities in the country

Specific water consumption for households and small businesses in 2012

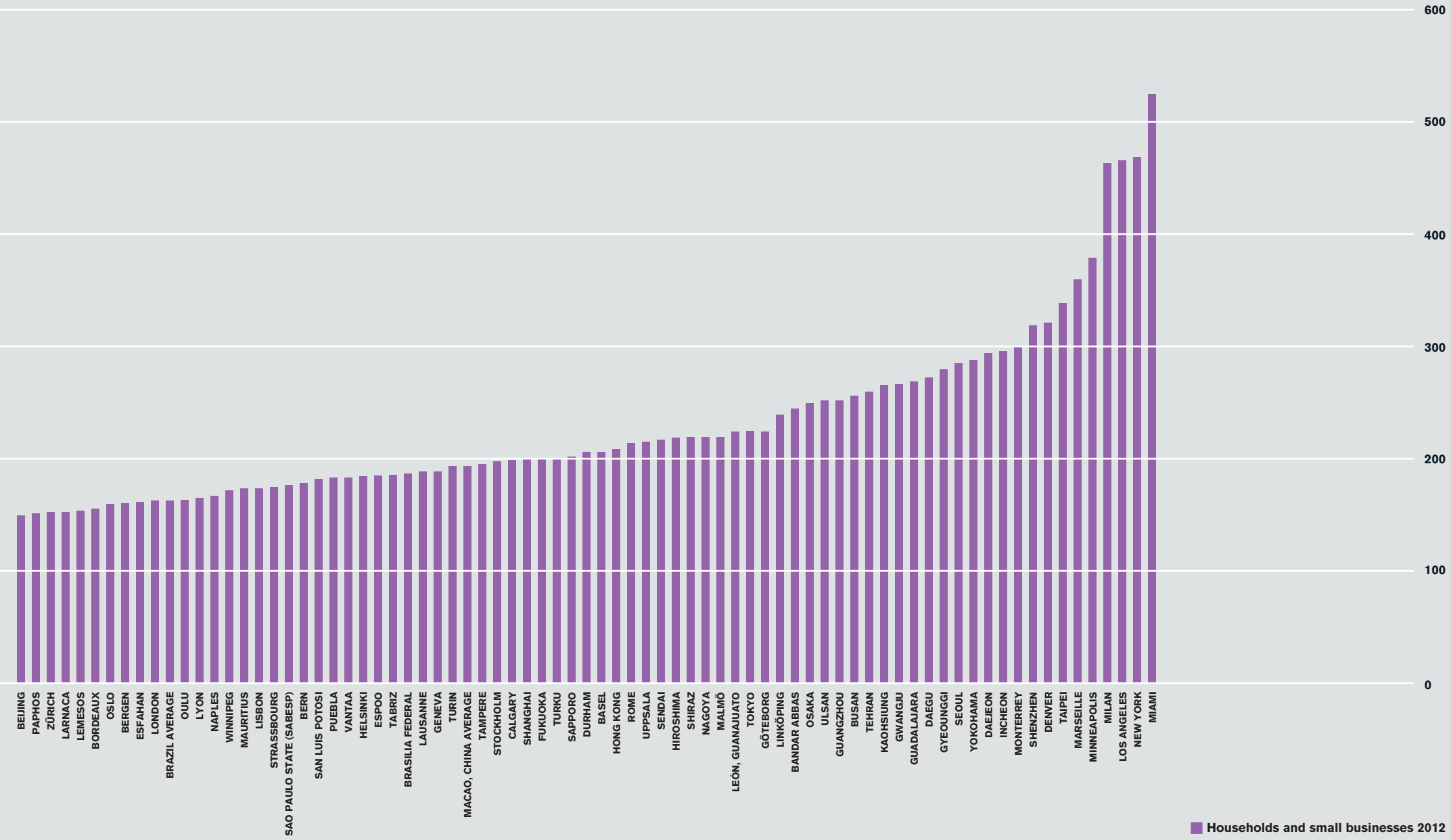
in litres/capita/day



‘From 49 litres to 526 litres per capita per day’

Specific water consumption for households and small businesses in 2012

in litres/capita/day



Water Regulation

RESPONSIBILITIES:	AUSTRIA	BELGIUM	BRAZIL	BULGARIA	CANADA	CHINA	HONG KONG, CHINA	CHINESE TAIWAN	CYPRUS	DENMARK	ENGLAND & WALES	FRANCE	FINLAND	GERMANY
Who is responsible for:														
organizing the water services	M	RG,M	RG,M (1)	M,S	M	RG, M	RG	S	RG,M,S	M (6)	(7)	M	M	M
pricesetting of water services	M	RG,M, S	RG,M	S	M	RG	RG	S	RG,M,S	M, S, WS	(8)	M	M	M (14)
new investments and the way to finance them	WS, S	WS	WS, RWH, S	WS, RWH	RWH	WS, RWH	WS	WS	WS, RWH, S	WS	WS	WS	WS	WS, RWH, M
Responsibilities which can be transferred to private operators:Can they yes/no?														
water service operation	Yes	No	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes (10)	Yes	Yes
customer relation management	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes (10)	Yes	Yes
electromechanical equipment renewal	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes (10)	Yes	Yes
existing infrastructure renewal	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes (10)	Yes	Yes
main infrastructure extension	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes (10)	Yes	Yes
research and development	Yes	Yes	Yes	No	Yes	Yes	No	Yes	No	Yes	Yes	Yes (10)	Yes	Yes
others, please specify	-	-	(2)	-	-	-	-	-	-	-	-	(11)	-	(17
Responsibilities which can be transferred to private operators:Do they exist yes/no?														
water service operation	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes (10)	Yes	Yes
customer relation management	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes (10)	Yes	Yes
electromechanical equipment renewal	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes (10)	Yes	Yes
existing infrastructure renewal	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes (10)	Yes	Yes
main infrastructure extension	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes (10)	Yes	Yes
research and development	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes (10)	No	Yes
others, please specify	-	-	(2)	-	-	-	-	-	-	-	-	(11)	-	(15)
What are the principles for waterpricing?														
cost covering principles	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
inflation rate growth	Yes	n/a	Yes	No	Yes	Yes	Yes	No	No	No	Yes	Yes	No	No
annual price limits	No	n/a	No	Yes	No	No	Yes	No	No	Yes	Yes	No	No	(16)
general principle of price cap	Yes	n/a	No	No	No	Yes	Yes	No	No	Yes	No	Yes	No	No
others, please specify	-	-	(3)	-	-	-	-	-	-	-	-	(12)	-	-
ACCESS TO WATER AND SANITATION FOR NON CONNECTED PEOPLE														
They have portable water from:														
public taps or fountains	No	Yes	Yes	Yes	Yes	Yes	Yes	No	-	-	No	Yes	No	Yes
private wells or springs	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	-	-	Yes	Yes	Yes	Yes
They have sanitation:														
decentralized treatment	No	Yes	-	No	No	Yes	No	No	-	-	Yes	Yes	Yes	Yes
others, please specify	No	-	-	-	-	-	No	-	-	-	-	-	-	Yes (17)
Solidarity mechanism to facilitate to water and sanitation: they are funded by?											(9)			
customers of the watercompanies	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	Yes	No	Yes
local/national tax payers	-	n/a	-	No	-	Yes	Yes	No	-	-	-	No	Yes	No
others, please specify (for example international solidarity)	-	-	(4)	(5)	-	-	-	-	-	-	-	(13)	-	-

Water Regulation Appendice:

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14 Antitrust authorities.

15 Management of surface waters, resource protection.

16 Yes for municipalities and no for others.

17 Without drainage pits, septic tanks.

18 Collecting sewers with special trucks and transported to WWTP-s.

19 Local parliament.

20 Public-Private Partnerships, bank loans.

21 Project funded by international donors.

22 BOT, BOO-contract.

23 Septic tank.

24 Water in urban areas is supplied by companies owned by the municipalities.

25 National Regulatory Authority.

26 Reduction of water charges for lower income people. Grants from government for the expansion of water services.

27 State.

28 Macao water.

29 Subsidiary Programs for the needy and the poor.

30 Water Resources Unit, Central Water Authority, Irrigation Authority.

31 Government, Central Water Authority.

32 Central Water Authority, Ministry of Finance (Government of Mauritius).

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35 Cleaning and maintenance services for filters outsourced.

36 CWA hotline service has been outsourced to Call Services Ltd (private company).

HUNGARY	INDONESIA	IRAN	ISRAEL	ITALY	JAPAN	LIBYA	MACAO, CHINA	MAURITIUS	MEXICO	NETHERLANDS	NORWAY	POLAND	PORTUGAL	ROMANIA	SOUTH KOREA	SPAIN	SWEDEN	SWITZERLAND	UNITED STATES OF AMERICA
M, S	RG, M	RG	S	M	RG, M	S	RG (28)	(30)	RG, M, S	RG, M (42)	M	M	M, S (46)	M	M, S	M	M	M	M (52)
S	RG, M, S (19)	RG	S	(25)	RG, M	S	RG	(31)	RG, M	RG, M	M	M	M, S (46)	M,S	M	RG, M	M	M	M (52)
WS, S	WS (20)	WS (22)	S	WS	WS	S	WS, RWH (28)	(32)	WS, S	WS (43)	WS	WS, S	WS, RWH, S (46)	WS, S	WS, S	WS, RWH, S	WS	WS	WS, S
										(44)									
No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No (33)	Yes	n/a	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No (34)	Yes	n/a	Yes	n/a	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	n/a	Yes	n/a	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	n/a	Yes	n/a	Yes	Yes	Yes	Yes	Yes	Yes	Ye
Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	n/a	Yes	n/a	Yes	Yes	No	Yes	Yes	Yes	Yes
Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	n/a	Yes	n/a	Yes	Yes	Yes	Yes	No	Yes	Yes(
-	-	-	(24)	-	-	-	-	-	-	-	-	-	-	-		-	(49)	-	-
										(44)									
No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes (35)	Yes	n/a	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes (36)	-	n/a	No	n/a	Yes	Yes	Yes	Yes	No	Yes	Yes
Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes (37)	-	n/a	Yes	n/a	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes (38)	-	n/a	Yes	n/a	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes (39)	-	n/a	Yes	n/a	Yes	No	No	Yes	Yes	Yes	Yes
Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes (40)	-	n/a	Yes	n/a	Yes	No	No	Yes	No	Yes	Ye
-	-	-	(24)	-	-	-	-	-	-	-	-	-	-	-		-	(49)	-	-
										(44)									
Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Yes	Yes	No	Yes	Yes	No	No	Yes	No	Yes	n/a	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
No	Yes	Yes	No	Yes	No	No	No	No	No	n/a	No	No	Yes	No	No	No	No	No	Yes (53)
No	No	No	No	Yes	No	No	No	No	No	n/a	No	No	Yes	No	No	Yes	No	No	Yes
-	-	-	-	-	-	-	(29)	(41)	-	-	-	-	-	(47)		-	-	-	-
Yes	No	Yes	Yes	Yes	No	No	Yes	Yes	Yes	(45)	No	n/a	Yes	Yes (48)	Yes	-	No	No	No
Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	(45)	Yes	Yes	Yes	Yes	Yes	-	Yes	Yes	Yes
Yes	No	No	Yes	Yes	Yes	No	Yes	n/a	Yes	(45)	Yes	Yes	Yes	Yes	Yes	-	Yes	Yes (51)	Yes
Yes (18)	Yes	Yes (23)	No	-	-	-	No	n/a	No	(45)	No	-	Yes (23)	-	No	-	No	No	Yes (23)
No	No	No	No	Yes	No	No	Yes	No	No	(45)	No	No	Yes	No	No	Yes	No	No	No
Yes	Yes	Yes	Yes	No	No	No	Yes	No	Yes	(45)	No	Yes	Yes	n/a	No	-	No	No	Yes
-	(21)	-	-	-	(26)	(27)	-	-	-	(45)	-	-	-	-	-	-	(50)	-	-

37 Tender for a Proposed Telemetry and Telesurveillance project which will be open local and international companies soon to be launched to enlist experienced specialists in the field.
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51 Mainly in remote areas (mountains).
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53 Fairly unusual, but there are some places that limit rate increases, thereby limiting rates.

Responsibilities Key:

- **G:** Government
- **M:** Municipalities
- **ME:** Municipalities enterprises
- **O:** Operators
- **O/WC:** Owners/water companies
- **RA:** Regional Agency
- **RG:** Regional governments
- **RM:** Regulation ministry
- **RWH:** Regional water holdings
- **S:** State
- **SH:** Shareholders
- **WC:** Water companies
- **WS:** Water services

Explanation notes for International Statistics for Water Services – Lisbon 2014

Explanation notes for graphs and tables concerning abstraction

1. AUSTRIA

a. Other sources -113 mio m³ unused backflow from springs into nature (not calculated in the figure).

2. BRAZIL

a. Figure in 2010 of year 2009

b. Figure in 2012 of year 2011

3. CHINESE HONG KONG

a. Figures in 2010 and 2012: In Hong Kong the water resources are basically from rainfall and Dongjijang Water (Import from China). We make use of impounding reservoirs to store the raw water as reserve from these two sources to cater for the fluctuating demand. Whenever the water demand exceeds Water Abstraction in a particular year, the water stored as reserve in previous years would be used to meet the demand. As no recycled water was used as fresh water supply in Hong Kong, this means some reserves were used in 2010. This resulted in the total volume of Annual Water Consumption greater than that of Total Water Abstraction in 2010 and 2012.

b. Other sources in 2008: importation.

4. CYPRUS

a. Since 2012 Cyprus included the Agriculture needs as well of 178.000.000m³, analyzed as follows: surface water 42.000.000m³, ground water 129.000.000m³ and recycled water 7.000.000m³.

b. Spring water in 2010 included in ground water.

c. Other sources in 2010: desalination.

d. Other sources in 2012: desalination of 17,6 mio m³ and recycled for agriculture for 7 mio m³.

5. ENGLAND & WALES

a. Other sources in 2012: tidal.

6. HUNGARY

a. Other sources in 2012: river bank filtration (groundwater).

7. IRAN

a. Urban area and rural area for data 2012.

b. Imported/Exported water in 2012: Turkmenistan river (Garagum), Afghanistan river (Helmand), Turkish river (Aras).

8. ISRAEL

a. Other sources in 2008 and 2010: recycled and brackish water.

b. Other sources in 2012: desalination.

c. Imported/Exported water in 2010: desalinated seawater.

9. JAPAN

a. Other sources in 2010: desalination.

10. LIBYA

a. Other sources in 2012: desalination.

11. NETHERLANDS

a. Other sources in 2008: river-ground water.

12. POLAND

a. Other sources in 2008 and 2012: drainage water from mines and buildings (used for productions).

13. SPAIN

a. Groundwater in 2012 including spring water.

b. Other sources in 2010 and 2012: desalination.

14. SWEDEN

a. Other sources in 2008: artificial infiltration.

b. Other sources in 2010 and 2012: artificial groundwater by infiltrated surface water.

15. SWITZERLAND

a. Including Liechtenstein.

16. UNITED STATES OF AMERICA

a. Other sources in 2010: purchased from other utilities (no data on source).

Explanation notes for graphs and tables concerning water delivered, population and connection rates

1. BRAZIL

a. Figure in 2010 of year 2009

b. Figure in 2012 of year 2011

c. Number of persons living in properties connected to a public sewerage system leading to a treatment plant. Not included 45.539.000 inhabitants in properties served by septic tank.

2. CHINA

a. Figures of 2010: in China there are 6 categories, such as government owned affiliation water consumption, business (e.g. restaurant, car washing, office), special organization (e.g. military), and other consumption. Therefore, there is a big gap if only cover the household and industry.

b. Figures of 2012: Data for water supply only included 644 big cities, and excluded small towns or rural areas.

c. Figures of 2010 and 2012: only urban population.

3. CYPRUS

a. Industry & other billed consumption in 2012: included consumption for agriculture 178 mio m³.

4. IRAN

a. Urban area and rural area for data 2012.

5. ITALY

a. Delivered figures in 2012 of year 2010.

6. JAPAN

a. Regarding the sewerage, exclude the service pop of 2 prefectures which have evacuation areas by the accidents of nuclear power plants. Therefore, the coverage ratio of sewerage is as follows: 93 547 831/123 350 023 = 75,8%.

7. MAURITIUS

a. Unbilled water consumption in 2010 represents: approx. 25% of total water consumption and includes: pilferage, firefighting, public fountains and under-recording from old meters.

8. PORTUGAL

a. Only households and small business and unbilled water consumption.

9. SWITZERLAND Population in 2008, 2010 and 2012 is included Liechtenstein.

Explanation notes for graphs and tables concerning charges

General note: Average volume of considered main cities in the country.

1. BRAZIL

a. Brazil Average: SNIS - National System of Information on Water and Sanitation - Reference Year 2011 - last edition published.

b. SABESP: Water Utility of São Paulo State with Full Concession of Water and Sanitation in 364 Municipalities of São Paulo State, deserving around 27 million people. The average tarif ranges from RS 114/100 m³ (Turiúba/SP) to R4 359/100 m³ (Barueri/SP).

c. Brasília -the Federal District: is deserved in water and sanitation by CAESB - the local Water Utility. With the highest income per capita in the country, Brasília is not very representative of the Brazilian Average.

2. DENMARK

a. Waste water tax for discharging nutrients.

b. Fixed bill component and variable component for waste water treatment.

3. ENGLAND & WALES

a. Sewerage charges shown include surface water drainage charges.

b. Households in Birmingham pay for their surface water drainage either through a fixed charge based on property type or a charge based on the rateable value. The figures presented assume a 'zone 4' bill based on a property with a rateable value of £200 as an example.

4. MACAO, CHINA

a. Meter rental depends on meter size.

5. MEXICO

a. San Luis Potosi: Fixed charge is the average between the domestic use, business and farming.

6. NETHERLANDS
a. Rotterdam and Den Haag: Other charges are distribution and concession reimbursements ("precario").
b. Other charges: tap water tax.
7. SWEDEN
a. Stockhölm and Malmö: charge for stormwater (rainwater and drainage) from the houses which are let to the communities pipes for stormwater.
8. SWITZERLAND
a. Tariffs apply to flats in a six-flat building, the typical dwelling type in the cities of Switzerland.

Explanation notes for graphs and tables concerning consumption

1. BURKINA FASO
a. For domestic consumption and standpipes.
2. ENGLAND & WALES
a. Figures in 2012 are data of year 2010-2011.
3. FINLAND
a. Consumption in cities Espoo, Helsinki and Vantaa: total invoiced consumption of Helsinki Region Environmental Services Authority (operating in cities of Espoo, Kauniainen, Helsinki and Vantaa).
b. Consumption in city Tampere: figure in 2010 is data from year 2009.
4. ISRAEL
a. Including use by municipality and institutions (schools…).
5. ITALY
a. Figures in 2012 are of year 2010 due to lack of more recent data.
6. SWITZERLAND
a. Total consumption: including industry, public services and water losses.

Explanation notes for graphs and tables concerning water regulation

Numbers of the explanation notes refer to the footnotes.
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The following people made statistical data available for this publication:

Austria	A. Riha, *OVGW*
Belgium	C. Legros, *Belgaqua*
Brazil	C. Rosito, *Saint-Gobain Canalizaçao Ltda*
Bulgaria	B. Boychev, *Bulgarian Water Association*
Canada	D. Main and A. Kolesov, *AECOM*
China	T. Li, *IWA-China Regional Office*
Hong Kong, China	Ir. C.M. Lam, *Water Supplies Department Hong Kong*
Chinese Taiwan	S-L. Lo, *Chinese Taiwan National Committee*
Cyprus	P. Potamou, *Limassol Water Board*
Denmark	T. Sorensen, *Danish Water and Wastewater Association*
England & Wales	K. Ridout, *Ofwat*
Finland	M. Rontu, *Finnish Water Utilities Association*
France	S. Pouradier-Duteil, *Veolia*
Germany	T. Herkner, *Bundesverband der Energie- und Wasserwirtschaft e.V*
Hungary	B. Balazs, *Kaposvar Waterworks (member of Hungarian Water As.)*
Indonesia	D. Riantara, *PERPAMSI (Indonesian Water Supply Association)*
Iran	A.R.A. Motlagh, *Mahab Ghodss consulting Eng.*
Israel	Y. Kislev, *Hebrew University of Israel*
Italy	C. Cosentino and M. Gatta, *Federutility* and *R. Parena*
Japan	M. Shibuya, *Japan Water Works Association*
Libya	O. Salem, *Ministry of Water Resources*
Macao, China	F. X. Fan, *Macao Water*
Mauritius	K. Heeramun, Central Water Authority and R. Damoree, *Wastewater Management Authority*
Mexico	R. Olivares, *IWA representacion Mexico*
Netherlands	P.J.J.G. Geudens, Vewin and G.E. Oosterom, Rioned and E. Gloudemans, *Unie van Waterschappen*
Norway	A. Haarr, Norsk Vann and *Norwegian Water and Wastewater Ass. BA*
Poland	P. Bartoszczuk, *Warshau School of Economics*
Portugal	D. Alves, *ERSAR*
Romania	S. Lacatusu, *Romanian Water Association* and D. Popa, *Water company Brasov*
South Korea	Z. Yun, *Korean Society on Water Quality*
Spain	J. de Castro, *AEAS*
Sweden	A. Lingsten, *Swedish Water and Waste Water Association*
Switzerland	M. Freiburghaus, *SVGW*
United States of America	R. Craley and P. Brandt, *Raftelis Financial Consultants*

Specialist Group Statistics and Economics Working Group Statistics

Chairman: Ed Smeets, *Stein, The Netherlands.*

Working Group Leader Statistics: Jan Hammenecker, *De Watergroep, Brussels, Belgium.* **Email: IWA@dewatergroep.be**

With compliments to Ann Bijnens and **Katleen De Leu,** *experts in statistics De Watergroep, Brussels, Belgium.*

STATISTICS & ECONOMICS

the international water association

IWA Head Office: Alliance House, 12 Caxton Street, London SW1H 0QS, United Kingdom
Tel: +44 20 7654 5500 Fax: +44 20 7654 5555
General Email: water@iwahq.org Members Email: members@iwahq.org Web: www.iwahq.org
Company registered in England No.3597005. Registered Charity (England) No.1076690

IWA Global Operational Office: Koningin Julianaplein 2 (7th floor), 2595AA The Hague, The Netherlands
Tel: +31 (70) 31 50 792 Fax: +31 (70) 34 77 005
General Email: water@iwahq.org Members Email: members@iwahq.org Web: www.iwahq.org