



International Statistics for Water Services
Information every water manager should know

Index

- 01 Introduction.
- 02 Table of abstraction for water supply according to the source in 2010-2012.
- 02 Graph of abstraction source for drinking water supply in 2012.
- 03 Graph of total abstraction for water supply in m³/capita/year.
- 04 Table of water delivered and connection rates in 2008-2012.
- 05 Graph of total water delivered to households and small businesses with supply rate in 2008-2010-2012.
- 06 Graph of the average annual water cycle charges in 2013 for a consumption of 100 m³.
- 07 Table of the annual water cycle charges in 2013 for a consumption of 100 m³.
- 10 Graph of GDP and the drinking water charges in 2013 for 100 m³.
- 11 Graph of the total charge drinking water for 160 cities in 2013 for a consumption of 100 m³.
- 13 Graph of GDP and the drinking water charges in 2013 for 200 m³.
- 14 Graph of the average annual water cycle charges in 2013 for a consumption of 200 m³.
- 15 Graph of the total charge drinking water for 160 cities in 2013 for a consumption of 200 m³.
- 17 Table of the specific water consumption in 2008-2012.
- 19 Table of the annual water cycle charges in 2013 for a consumption of 200 m³.
- 22 Graph of specific water consumption and drinking water charges.
- 23 Graph of the specific water consumption for households and small businesses in 2012.
- 25 Table of the water regulation.
- 27 Explanation notes for tables and graphs.

The Lisbon edition 2014 of the “Leaflet on International Statistics for Water Services” is an initiative from the IWA Specialist Group on Statistics and Economics (chaired by Ed Smeets, The Netherlands)

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 many aspects of the water cycle. To achieve this goal, IWA organizes international conferences supported by specialist groups and technical and scientific teams.

The scope of the Specialist Group on Statistics and Economics is to provide a forum to debate how utilities are financed, how their various water tariff structures are, which measurement of performance they use, how they analyse their micro economics, how they manage efficiency, etc..

By means of biannual international surveys, the Group provides professional information on water abstraction, consumption, charges, regulation, etc. on country and on city level.

So, we are glad to present you the Lisbon 2014 edition of our “International Statistics for Water Services”, with data of 34 countries and 160 cities.

This report, in particular the charges and consumption part, focuses on water consumption of households and small businesses. For the quantitative information on population, production volumes etc., the years 2008, 2010 and 2012 are included. The information about tariffs is based on the consumption of 100 m³ and 200 m³ in 2013.

The water prices not necessarily reflect the full cost of water services, because some parts of the cost may be covered by sources other than the customer.

In some cases for example, there can be a political motivation to ensure that water is supplied at a socially acceptable price. There are many other factors affecting price levels, but these were out of scope for this survey. All financial data are converted to US\$, exchange rate December 31st, 2013.

Thanks to all water professionals who helped to obtain the data for this survey. They are listed on the last page. Thanks to their contributions, this publication gives a valuable overview of important aspects of the water services all over the world. Special thanks to Ann Bijnens and Katleen De Leu of De Watergroep in Belgium, who did almost all the work.

We hope that you will enjoy this “Lisbon 2014 survey”, and do not hesitate to contact **IWA@dewatergroep.be** for more information.

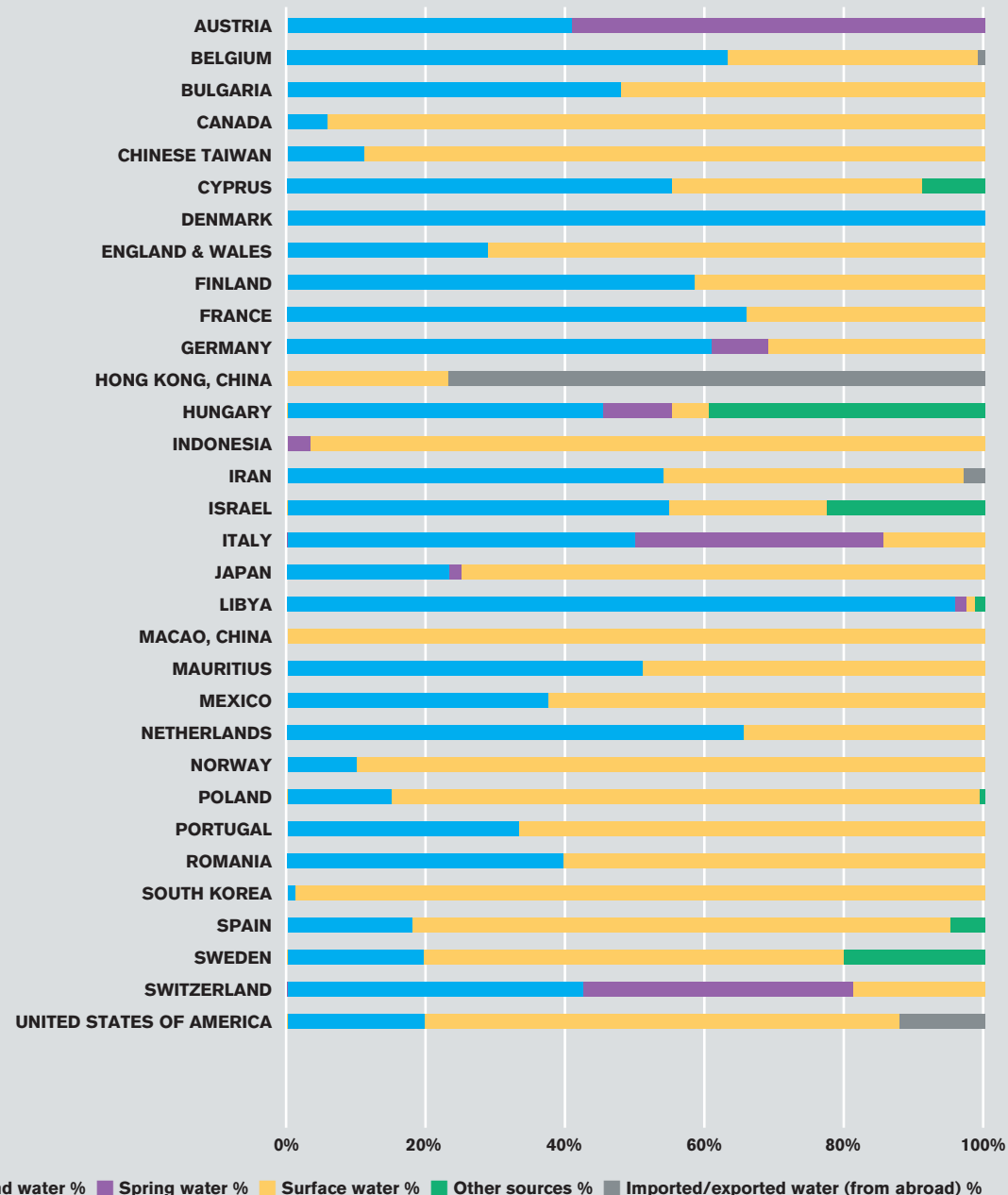
This edition is available on the IWA website group-page of the Specialist Group Statistics and Economics:
<http://www.iwahq.org/8h/networks/specialist-groups/list-of-groups/statistics-and-economics.html>

IWA Specialist Group Statistics and Economics on behalf of the Working Group Statistics
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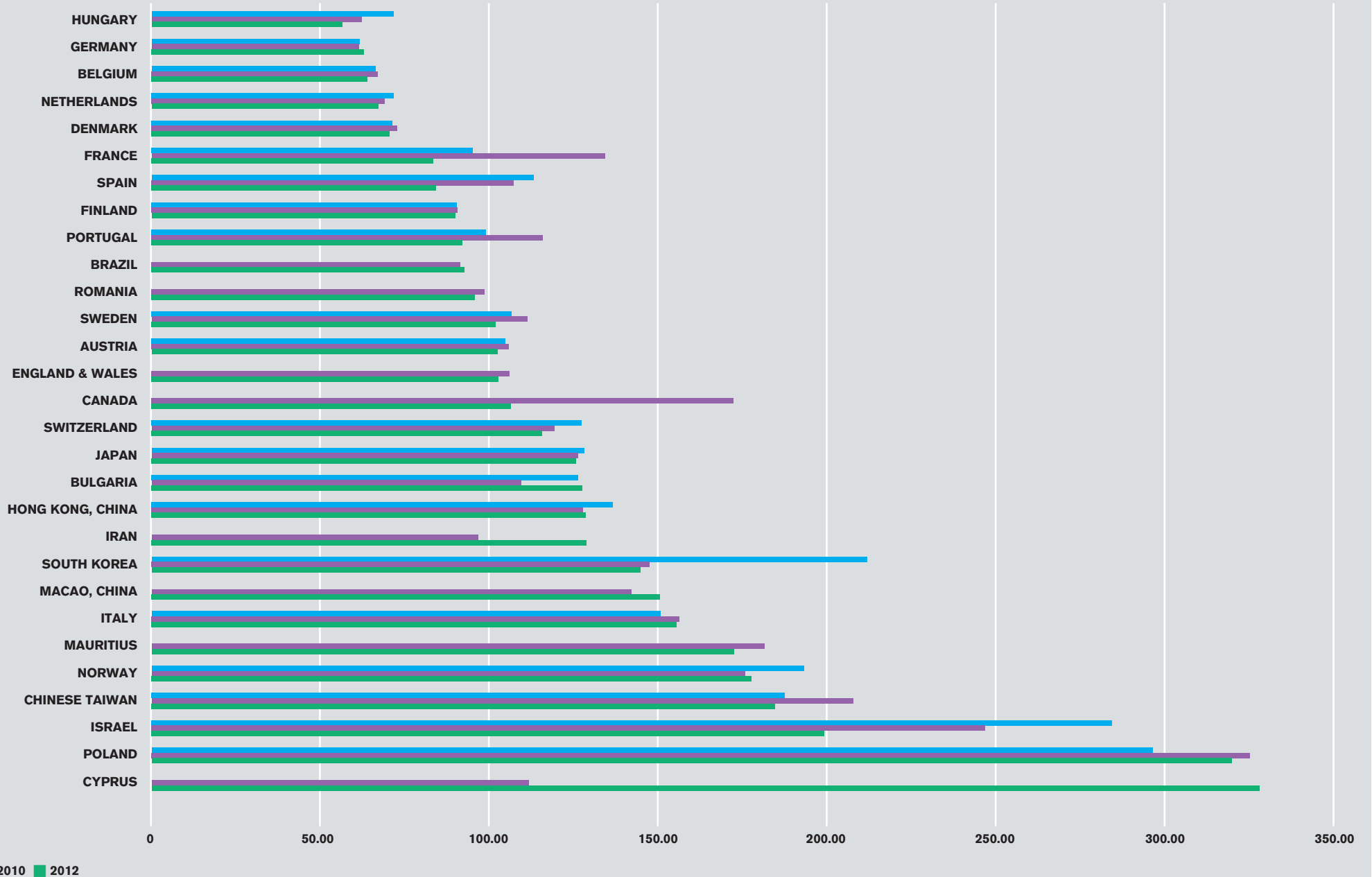
Abstraction for water supply according to source in 2010-2012 in mio m³/year

COUNTRY/REGION	TRUE GROUND WATER		SPRING WATER		SURFACE WATER		OTHER SOURCES		IMPORT WATER		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.

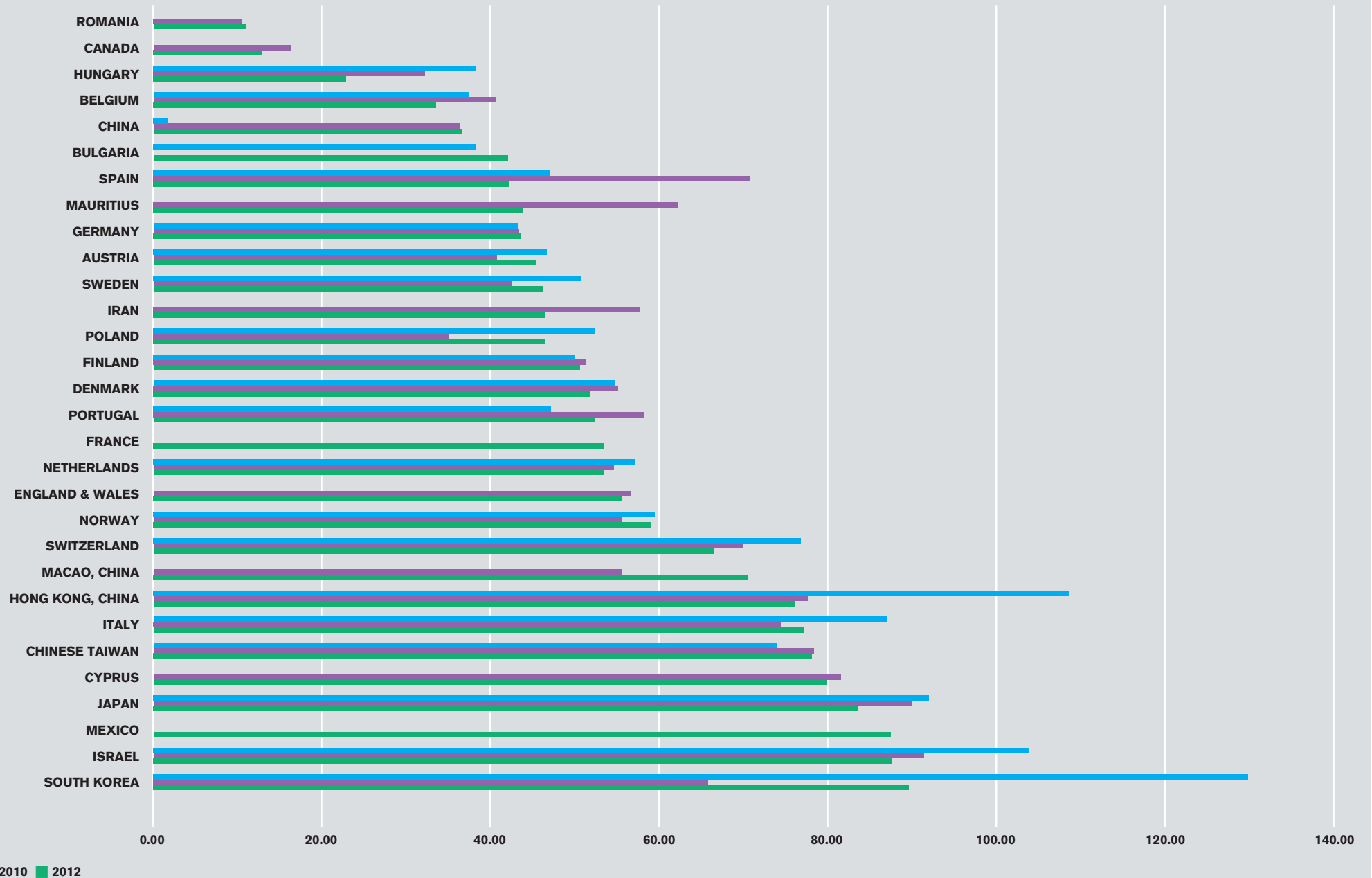
Water delivered - population - supply rate for drinking water, sewerage and waste water consumption in 2008-2012

in mio m³, in mio inhabitants and %

COUNTRY/REGION	IN MIO m ³									IN MIO INHABITANTS			IN %								
	HOUSEHOLD AND SMALL BUSINESS CONSUMPTION (<10,000 m ³)			INDUSTRY AND OTHER BILLED WATER CONSUMPTION (>10,000 m ³)			TOTAL DELIVERY ¹			POPULATION			SUPPLY RATE			SEWERAGE CONNECTION RATE			WASTE WATER CONNECTION RATE		
	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	95.00	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	100.00	n/a	n/a	0.00	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	45.00
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	100.00	100.00	100.00	100.00	99.00
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

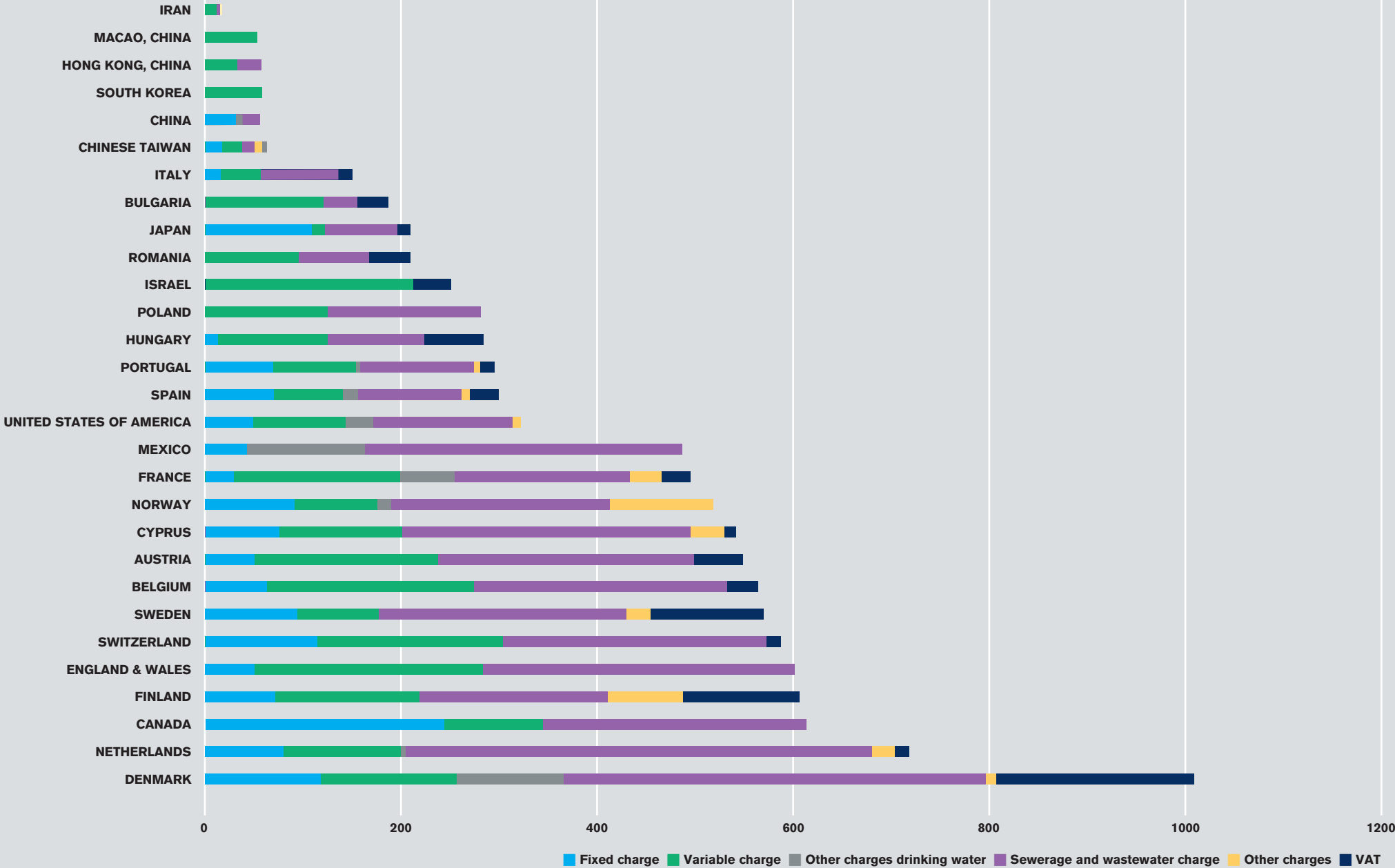
¹ Total delivery without unbilled/water losses and exported water

Total water delivered to households and small businesses in m³/capita/year *
 total delivery to 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 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\$

COUNTRY/REGION	TOWN/CITY	ACTUAL CHARGES										AVERAGE CHARGES									
		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 m ³	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 m ³	
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										
BELGIUM	Vienna		29.85	213.99	0.00	243.84	0.00	243.67	0.00	48.75	536.26										
	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										
BRAZIL	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										
BULGARIA	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										
CANADA	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										
CHINA	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										
HONG KONG, CHINA	Durham		156.23	77.50	0.00	233.73	0.00	203.45	0.00	0.00	437.19										
	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										
CHINESE TAIWAN	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										
CYPRUS	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	
	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										
	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	
DENMARK	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										
	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	
FINLAND	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										
FRANCE	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										
FRANCE	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										
	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										
	Strasbourg		39.00	155.30	59.10	253.40	70.09	61.85	37.11	16.77	439.21										
FRANCE	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>

For GDP: World Fact Book: <https://www.cia.gov/library/publications/the-world-factbook/fields/2004.html> GDP on a purchasing power parity basis divided by population, in some cases an estimation.

Comparison of annual water cycle charges in 2013 related to a consumption of 100 m³ in US\$

COUNTRY/REGION	TOWN/CITY	ACTUAL CHARGES									AVERAGE CHARGES									
		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 m ³	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 m ³
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									
IRAN	Kaposvár		0.00	100.66	0.00	100.66	0.00	61.14	0.00	43.69	205.49									
	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									
ISRAEL	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									
	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									
JAPAN	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									
	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									
MACAO, CHINA	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 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	43.59	3.96	17.83	0.00	21.79	21.79	0.00	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									
	Leon, Guanajuato		78.92	0.00	205.24	284.17	152.78	152.78	0.00	0.00	589.73									
NETHERLANDS	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									
	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									
NORWAY	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									
	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
POLAND	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									
PORTUGAL	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									
ROMANIA	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									
ROMANIA	Faro		43.00	71.30	0.00	114.30	0.00	126.18	3.99	14.66	259.13									
	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									
ROMANIA	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...

Comparison of annual water cycle charges in 2013 related to a consumption of 100 m³ in US\$

COUNTRY/REGION	TOWN/CITY	ACTUAL CHARGES										AVERAGE CHARGES								
		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 m ³	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 m ³
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
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									
SPAIN	Gyeonggi		0.00	59.19	0.00	59.19	0.00	0.00	0.00	0.00	59.19									
	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									
SWEDEN	Valencia		58.89	69.75	60.35	188.99	40.78	103.71	0.00	22.44	355.91									
	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									
SWITZERLAND	Linköping		160.54	72.44	0.00	232.98	240.81	97.79	0.00	142.89	714.46									
	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									
ENGLAND & WALES	Bern		5.41	291.14	0.00	296.55	423.64	0.00	0.00	18.01	738.20									
	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									
UNITED STATES OF AMERICA	Leeds		53.23	207.60	0.00	260.83	0.00	323.70	0.00	0.00	584.53									
	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										

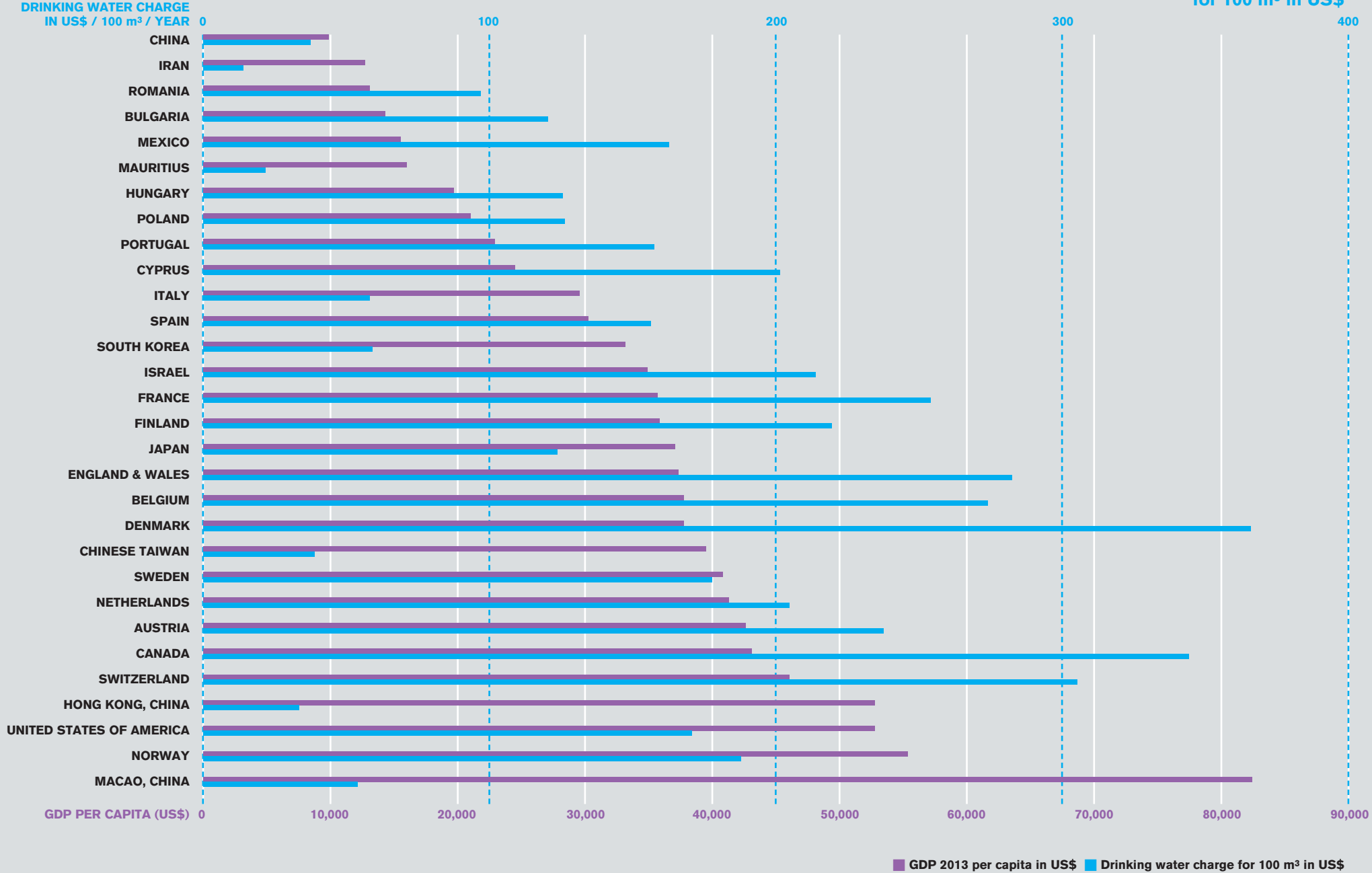
Source:

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> GDP on a purchasing power parity basis divided by population, in some cases an estimation.

GDP - Drinking water charge in 2013*

for 100 m³ in US\$



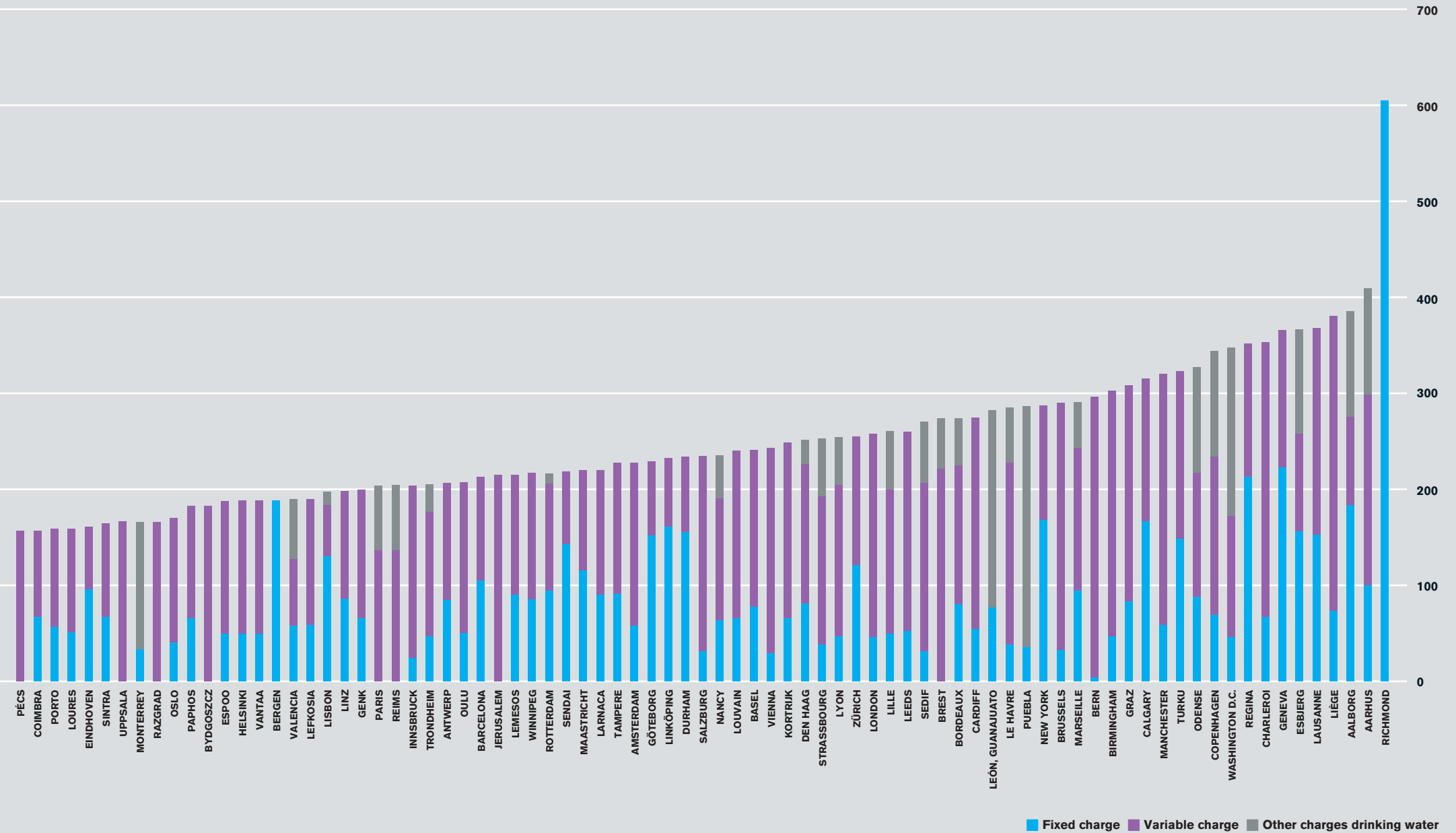
* Average of considered main cities in the country/region

**Total charge drinking water for 160 cities in 2013
for a consumption of 100 m³ in US\$**

'From 12 US\$ to 605 US\$ for 100 m³'



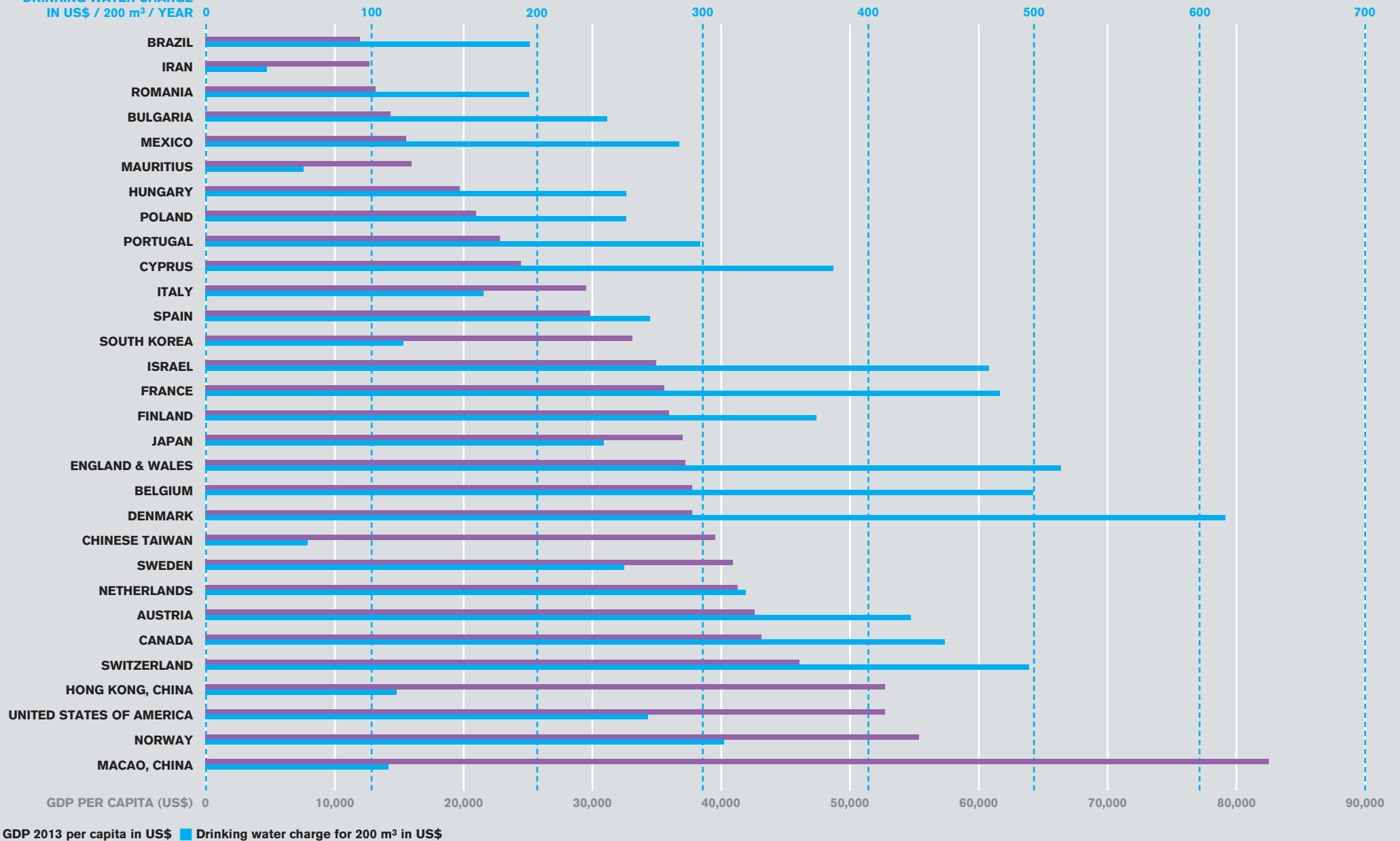
Total charge drinking water for 160 cities in 2013 for a consumption of 100 m³ in US\$



GDP - Drinking water charge in 2013*

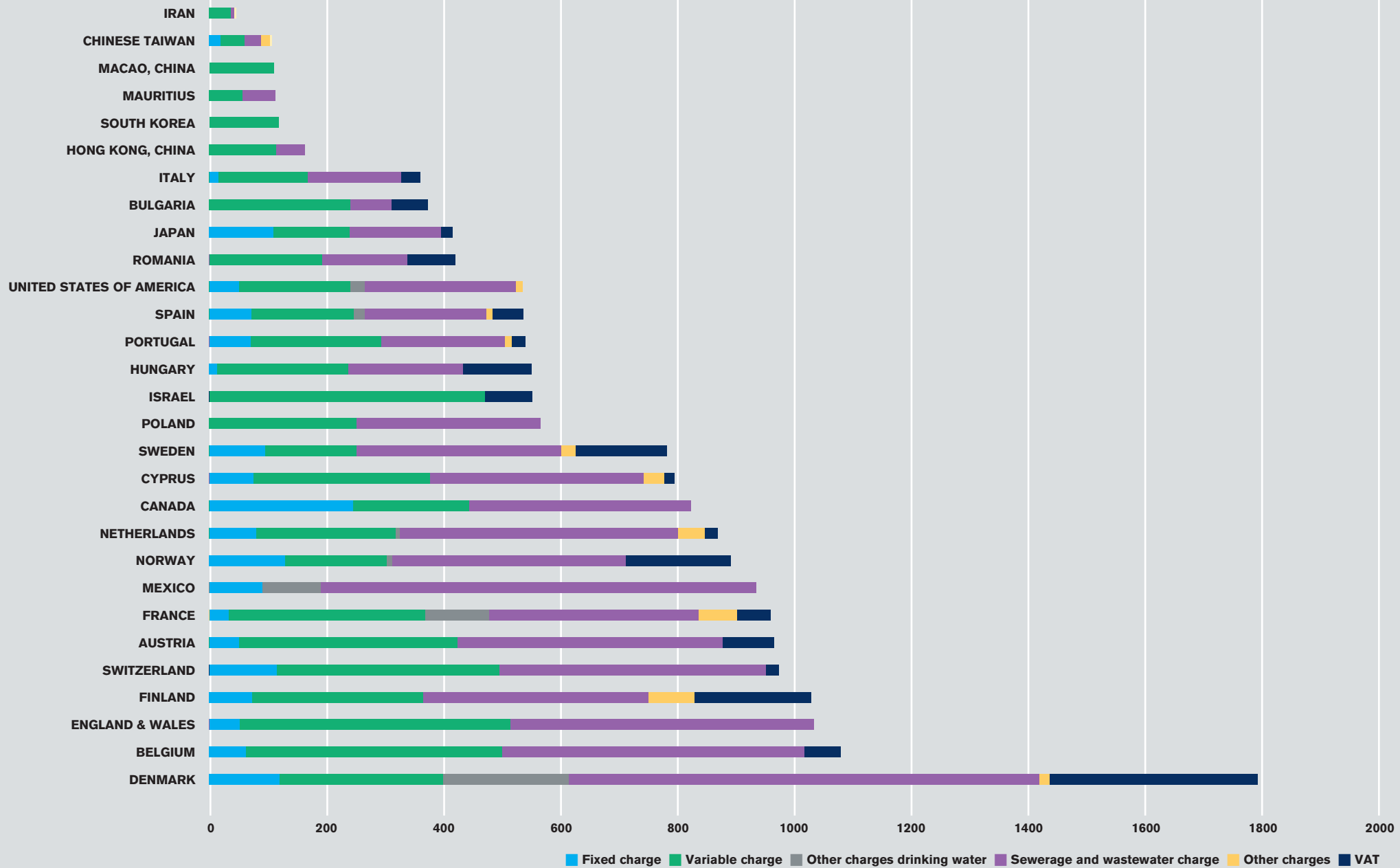
for 200 m³ in US\$

DRINKING WATER CHARGE
IN US\$ / 200 m³ / YEAR



* Average of considered main cities in the country/region

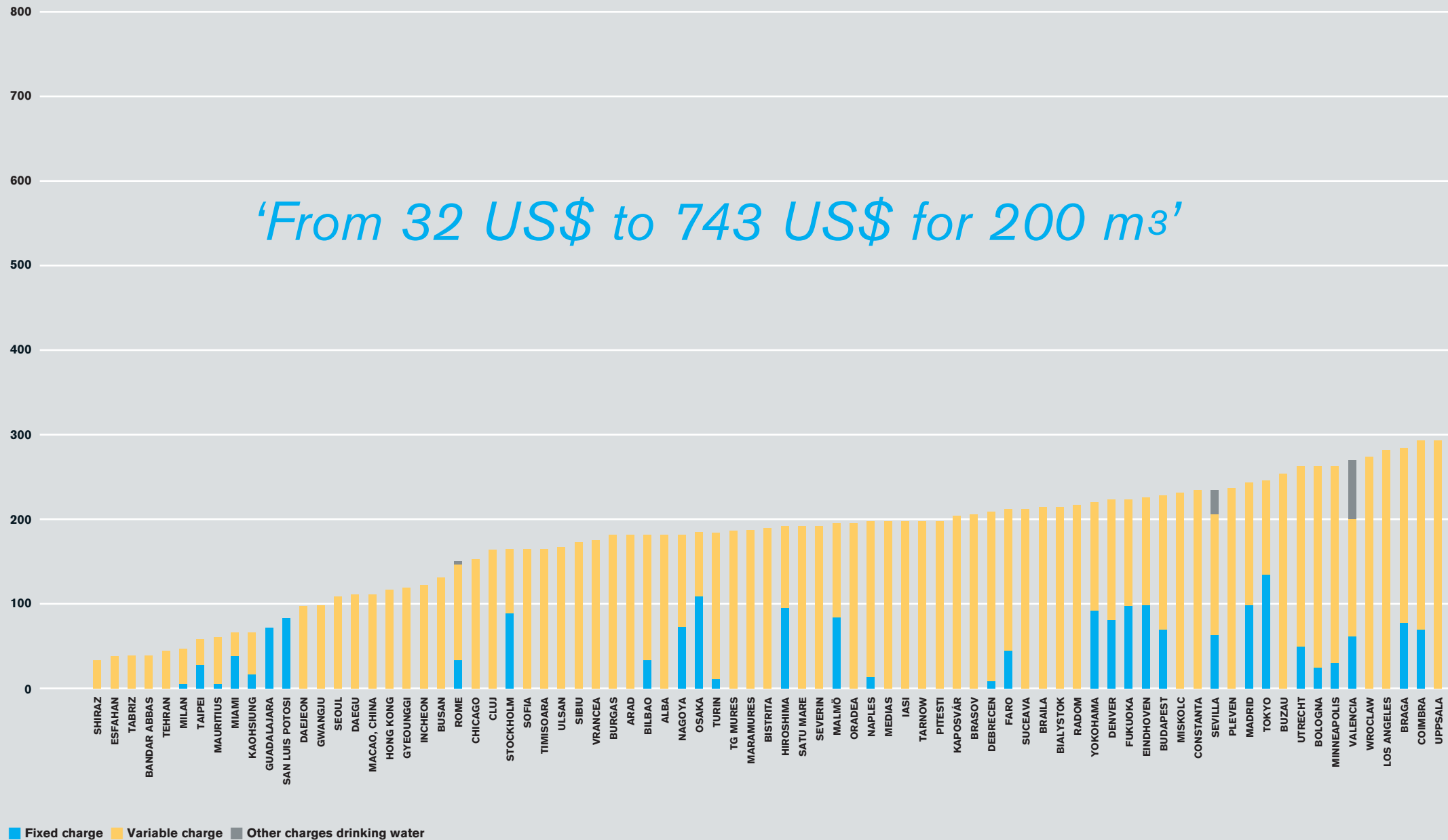
Average annual water cycle charges in 2013 for a consumption of 200 m³ *
in US\$/200 m³



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

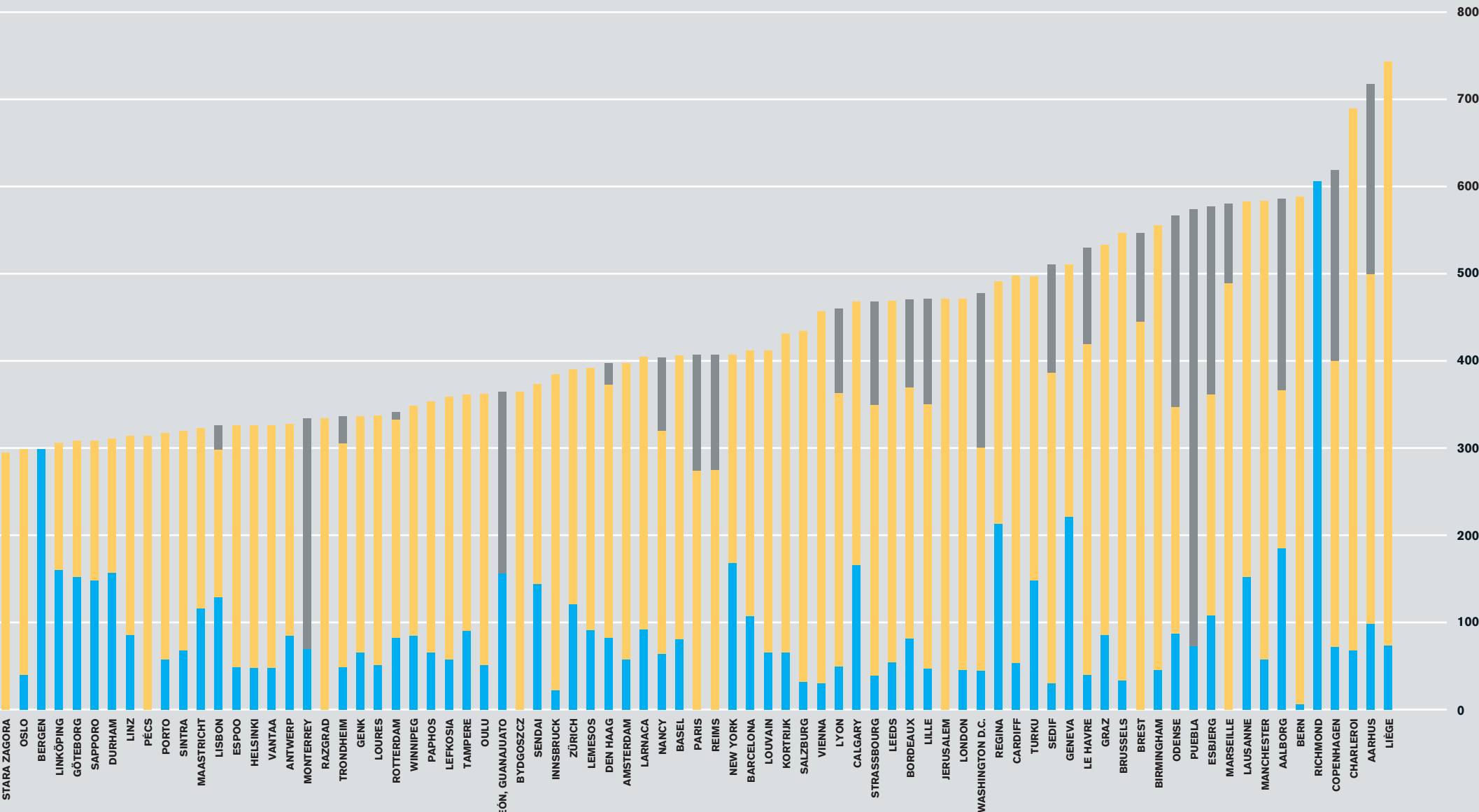
Total charge drinking water for 160 cities in 2013
for a consumption of 200 m³ in US\$

'From 32 US\$ to 743 US\$ for 200 m³'



Total charge drinking water for 160 cities in 2013

for a consumption of 200 m³ in US\$



■ Fixed charge ■ Variable charge ■ Other charges drinking water

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

COUNTRY/REGION	TOWN/CITY	HOUSEHOLDS & SMALL BUSINESS			AVERAGE		
		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
	Lefkosa	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	TOWN/CITY	HOUSEHOLDS & SMALL BUSINESS			AVERAGE		
		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			
	Strasbourg	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			
	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			
MOROCCO	Puebla	n/a	n/a	183			
	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			
NETHERLANDS	Marrakech	n/a	130	n/a			
	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			
NEW ZEALAND	Eindhoven	n/a	125	125			
	Maastricht	n/a	100	121			
	Wellington	n/a	230	n/a	n/a	228	n/a
	Dunedin	n/a	228	n/a			
	Palmerston	n/a	231	n/a			
NORWAY	Tauranga	n/a	270	n/a			
	Whangarei	n/a	179	n/a			
	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			
PORTUGAL	Tarnow	97	98	98			
	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			
ROMANIA	Faro	418	84	73			
	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			
	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
	Bratislava	96	98	n/a	92	94	n/a
SLOVAKIA	Nitra	88	89	n/a			
	Ko ıce	92	94	n/a			
SOUTH AUSTRALIA	Adelaide	n/a	177	n/a	n/a	177	n/a
	Seoul	311	285	286	320	271	275
SOUTH KOREA	Busan	295	254	256			
	Daegu	323	270	272			
	Incheon	355	301	296			
	Gwangju	321	263	266			
	Daejeon	334	273	295			
	Ulsan	305	251	252			
	Gyeonggi	319	274	280			
	Barcelona	110	107	105	118	114	111
SPAIN	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			
TUNISIA	Bern	n/a	182	178			
	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\$

COUNTRY/REGION	TOWN/CITY	GDP PER CAPITA IN US\$	ACTUAL CHARGES										AVERAGE CHARGES								WATER RATE DESIGN FOR DOMESTIC USE						
			FIXED CHARGE	VARIABLE CHARGE	OTHER CHARGES DRINKING WATER	TOTAL CHARGE DRINKING WATER	SEWER-AGE CHARGE	WASTE.W TREATMENT CHARGE	OTHER CHARGES	VAT & OTHER TAXES	TOTAL ANNUAL CHARGES 200 M ³	FIXED CHARGE	VARIABLE CHARGE	OTHER CHARGES DRINKING WATER	TOTAL CHARGE DRINKING WATER	SEWER-AGE CHARGE	WASTE.W TREATMENT CHARGE	OTHER CHARGES	VAT & OTHER TAXES	TOTAL ANNUAL CHARGES 200 M ³	FLAT RATE UN-METERED	UNI-FORM RATE	DE-CREASING BLOCK	IN-CREASING 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																
IRAN	Kaposvár		0.00	201.31	0.00	201.31	0.00	122.29	0.00	87.37	410.97																
	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			
ISRAEL	Bandar Abbas		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			
	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	
	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			
ITALY	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			
MACAO, CHINA	Yokohama		90.00	129.80	0.00	219.80	165.95	0.00	0.00	19.23	404.98										X			X			
	Macao, China Average	82,400	0.00	110.67	0.00	110.67	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	114.12	3.96	55.48	0.00	59.44	54.68	0.00	0.00	0.00	114.12					X			
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	
NETHERLANDS	Puebla		72.34	0.00	502.52	574.87	574.31	574.31	0.00	0.00	1,723.49										X			X	X		
	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		X		3	
	Utrecht		48.10	211.65	0.00	259.75	306.48	226.77	45.35	18.31	856.66										X	X		X		3	
	Eindhoven		96.81	126.85	0.00	223.66	199.28	185.54	45.35	16.13	669.97										X	X		X		3	
	Maastricht		116.74	206.29	0.00	323.03	235.01	206.15	45.35	22.10	831.64										X	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			
POLAND	Trondheim		47.12	259.14	28.99	335.25	464.41	0.00	0.00	199.83	999.50										X			X			
	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			
PORTUGAL	Tarnow		0.00	197.88	0.00	197.88	0.00	373.92	0.00	0.00	571.81													X			
	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> GDP on a purchasing power parity basis divided by population, in some cases an estimation.

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\$

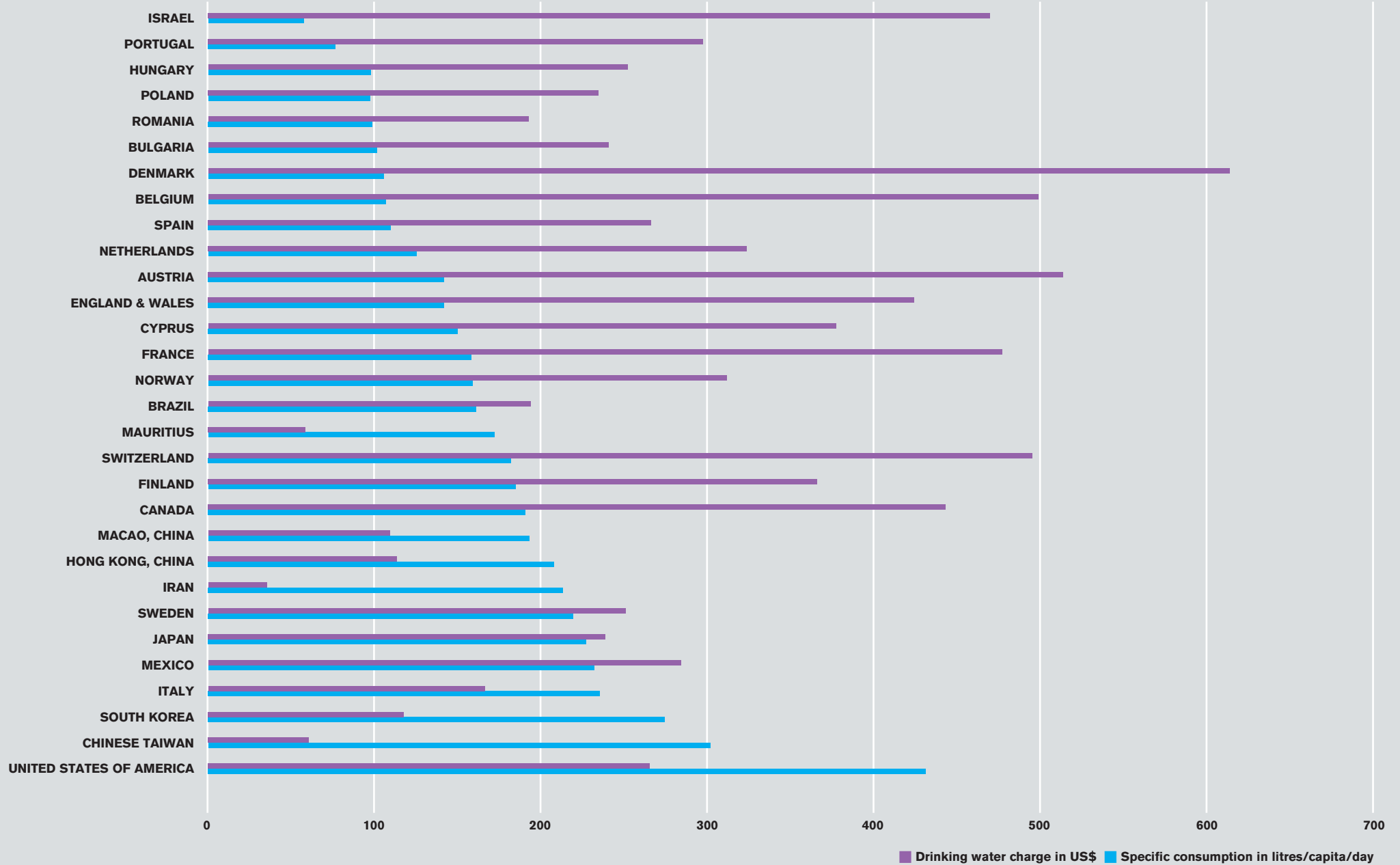
COUNTRY/REGION	TOWN/CITY	GDP PER CAPITA IN US\$	ACTUAL CHARGES									AVERAGE CHARGES							WATER RATE DESIGN FOR DOMESTIC USE									
			FIXED CHARGE	VARIABLE CHARGE	OTHER CHARGES DRINKING WATER	TOTAL CHARGE DRINKING WATER	SEWER-AGE CHARGE	WASTE.W TREATMENT CHARGE	OTHER CHARGES	VAT & OTHER TAXES	TOTAL ANNUAL CHARGES 200 M ³	FIXED CHARGE	VARIABLE CHARGE	OTHER CHARGES DRINKING WATER	TOTAL CHARGE DRINKING WATER	SEWER-AGE CHARGE	WASTE.W TREATMENT CHARGE	OTHER CHARGES	VAT & OTHER TAXES	TOTAL ANNUAL CHARGES 200 M ³	FLAT RATE UN-METERED	UNI-FORM RATE	DE-CREASIN G BLOCK	IN-CREASIN G 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		
	Braia		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			
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	106.95	0.00	118.74	0.00	118.74	0.00	0.00	0.00	0.00	118.74									
	Busan		0.00	130.61	0.00	130.61	0.00	0.00	0.00	130.61																		4
	Daegu		0.00	109.89	0.00	109.89	0.00	0.00	0.00	109.89																		4
	Incheon		0.00	121.61	0.00	121.61	0.00	0.00	0.00	121.61																		4
	Gwangju		0.00	99.45	0.00	99.45	0.00	0.00	0.00	99.45																		4
	Daejeon		0.00	97.25	0.00	97.25	0.00	0.00	0.00	97.25																		4
	Ulsan		0.00	165.79	0.00	165.79	0.00	0.00	0.00	165.79																		4
Gyeonggi		0.00	118.37	0.00	118.37	0.00	0.00	0.00	118.37																		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		
	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	
	Stockholm		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	
SWEDEN	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	
	Geneva		46,000	221.71	288.90	0.00	510.62	371.20	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	X	
ENGLAND & WALES	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	
UNITED STATES OF AMERICA	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	
	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		
	Miami		38.40	26.42	0.00	64.82	0.00	136.74	0.00	0.00	201.56														X	X		
Minneapolis		30.00	232.37	0.00	262.37	0.00	262.58	28.82	0.00	553.77														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/20](https://www.cia.gov/library/publications/the-world-factbook/fields/2004.html)

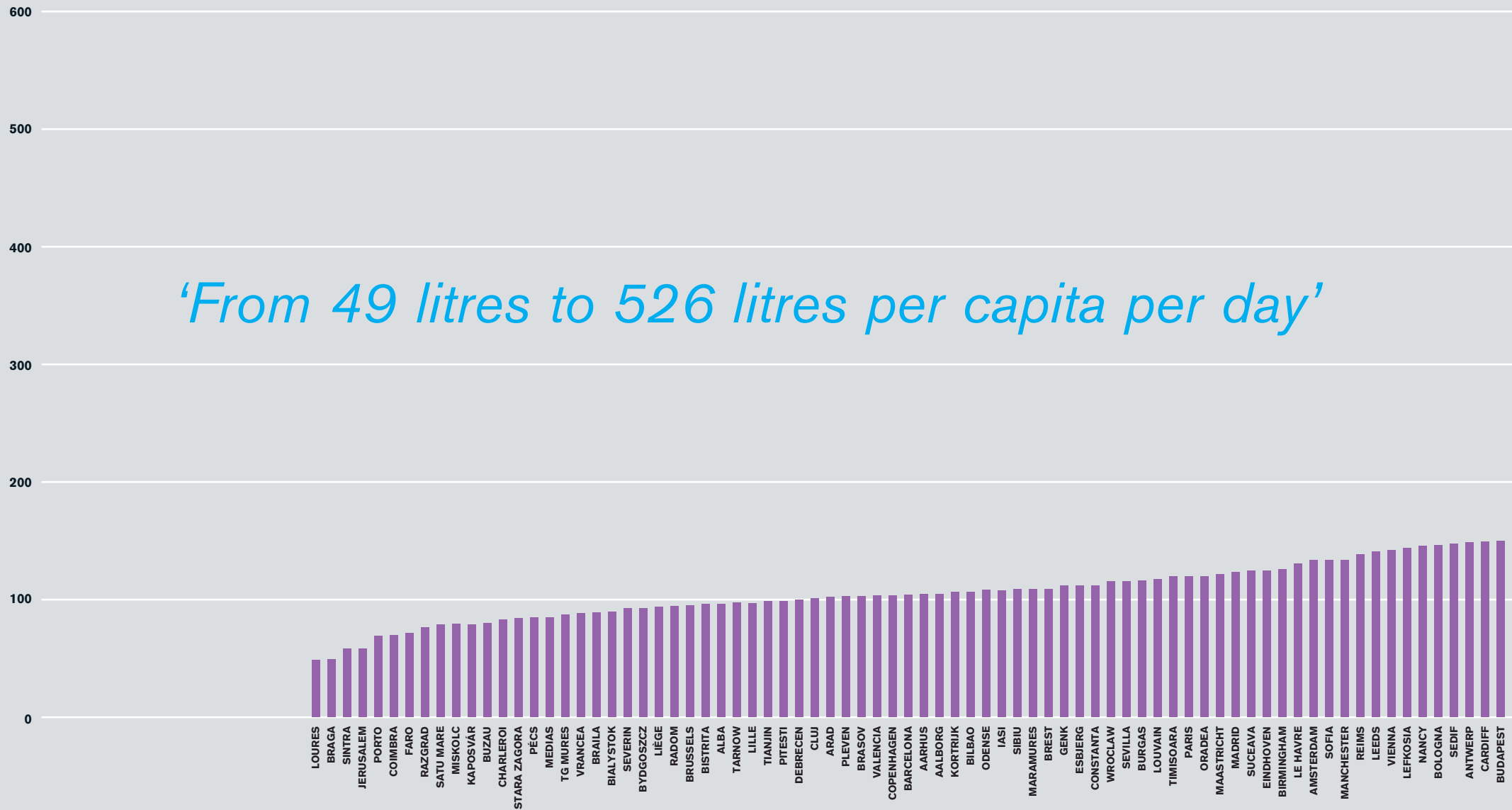
Specific water consumption - Drinking water charge*
consumption in litres/capita/day and charge in US\$ for 200 m³



■ Drinking water charge in US\$ ■ Specific consumption in litres/capita/day

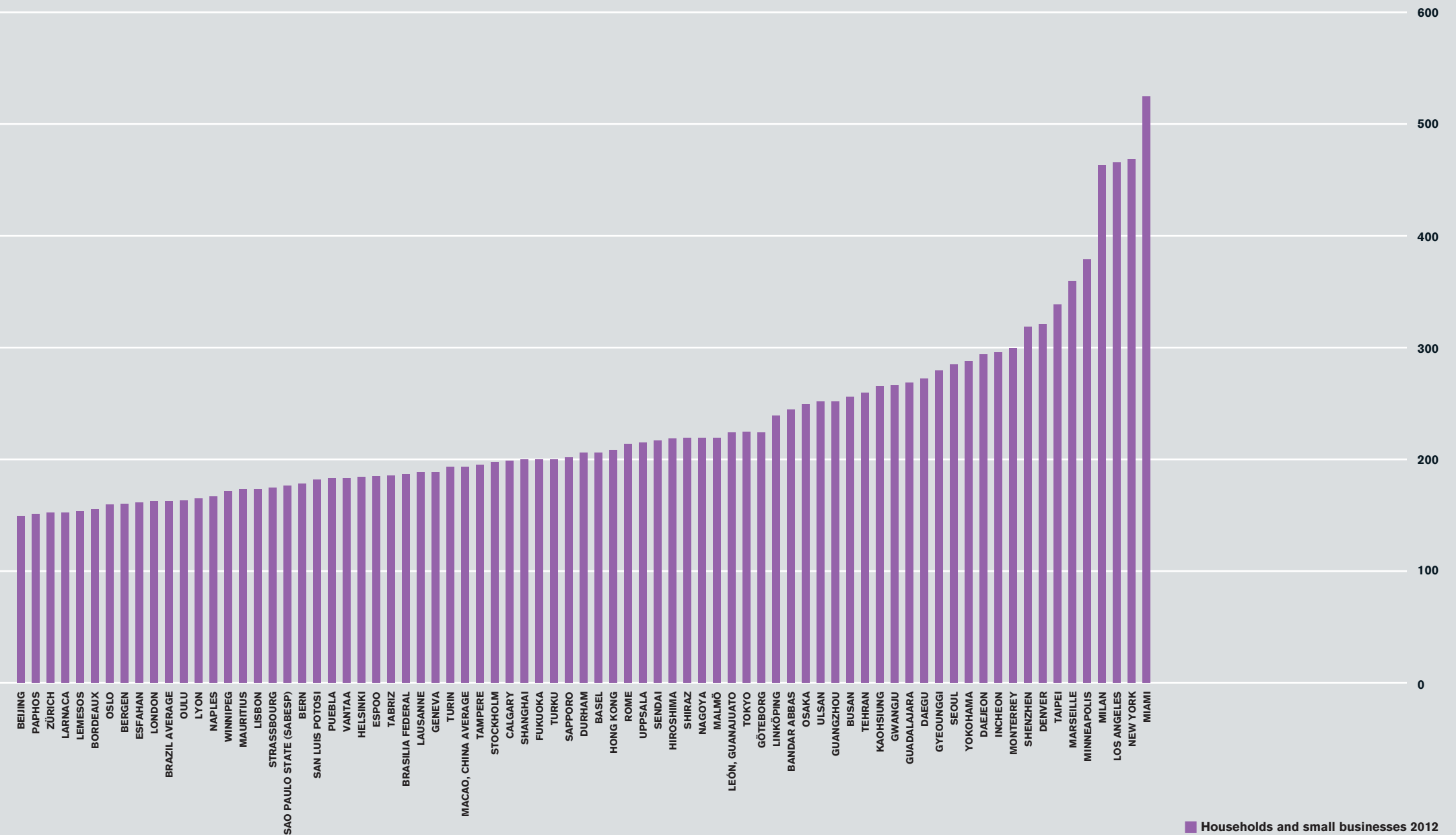
* Average of considered main cities in the country/region

Specific water consumption for households and small businesses in 2012
in litres/capita/day



Households and small businesses 2012

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
pricessetting 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, RW, S	WS, RW, H	RWH	WS, RW, H	WS	WS	WS, RW, H, S	WS	WS	WS	WS	WS, RW, H, 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)	-	(15)
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)	-	-	-	-	-	-	-	-	(11)	-	(15)
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?														
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:

- The regulation of the Water and Sanitation Sector is not yet established for the more than 50.000 municipalities in the Country. The Water Utilities of São Paulo Sate - SABESP - and Brasilia - CAESB - are already regulated and the tariffs are established by the Regulators.
- The first concession of Water Service to a private company was established in 1995. Currently about 5% of the Brazilian Population is deserved by a Private Company. There are also some relevant PPP's in the sector.
- The so called Regional Operators (one for each of the 26 States and 1 for the Federal District are in charge of the Water and Sanitation Services for 75% of the Brazilian Population. 20% are in charge of local Public Services. The 5% remaining are served by Private Companies.
- In the 26 Regional Operators, serving approximately the 75% of the Brazilian Population there are the so called "crossed subsidies" between municipalities and also inside each municipality the so called SOCIAL TARIFF.
- European Union's funds.
- All waterservices owned by municipalities were converted into private companies in 2010, but are still owned by the municipality.
- Privately owned companies hold licences to provide water services in a regulated environment.

- The economic regulator (Ofwat) sets price limits (limits on the amount by which companies are allowed to vary their charges to customers).
- The physical connection to the public water supply or public sewer is funded by the developer (or self-lay organisation), while the new customer pays an "infrastructure charge" to fund local reinforcement of the public system and the general customer base funds any non-local reinforcement costs.
- If defined in the contract and asked by the municipalities.
- The ownership of the assets always belong to the municipalities.
- The prices are always defined and negotiated by the municipalities.
- The operators have created a solidarity fund for the low income people, social tariffs are now authorised by the law.
- Antitrust authorities.
- Management of surface waters, resource protection.
- Yes for municipalities and no for others.
- Without drainage pits, septic tanks.
- Collecting sewers with special trucks and transported to WWTP-s.
- Local parliament.
- Public-Private Partnerships, bank loans.
- Project funded by international donors.

- BOT, BOO-contract.
- Septic tank.
- Water in urban areas is supplied by companies owned by the municipalities.
- National Regulatory Authority.
- Reduction of water charges for lower income people. Grants from government for the expansion of water services.
- State.
- Macao water.
- Subsidiary Programs for the needy and the poor.
- Water Resources Unit, Central Water Authority, Irrigation Authority.
- Government, Central Water Authority.
- Central Water Authority, Ministry of Finance (Government of Mauritius).
- Privatisation of core services not envisaged as yet.
- Public relations is being undertaken by CWA staff who get the necessary training in customer care.
- Cleaning and maintenance services for filters outsourced.
- 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	M	M	M, S (46)	M	M, S	M	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	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	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	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	Yes	No	Yes	Yes	Yes	Yes	n/a	Yes	n/a	Yes	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	Yes	No	Yes	Yes	Yes	Yes	n/a	Yes	n/a	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	n/a	Yes	n/a	Yes	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	Yes	No	Yes	Yes
No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes (36)	-	n/a	No	n/a	Yes	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	Yes	No	Yes	Yes	Yes (38)	-	n/a	Yes	n/a	Yes	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
Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes (40)	-	n/a	Yes	n/a	Yes	No	No	Yes	No	Yes	No	Yes
-	-	-	(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	Yes	No	Yes	Yes	No	No	Yes	No	Yes	n/a	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
No	Yes	Yes	No	Yes	No	No	No	No	No	n/a	No	No	Yes	No	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	No	Yes
-	-	-	-	-	-	-	(28)	(41)	-	-	-	-	-	(47)	-	-	-	-	-	-
(44)																				
Yes	No	Yes	Yes	Yes	No	No	Yes	Yes	Yes	(45)	No	n/a	Yes	Yes (48)	Yes	-	No	No	No	No
Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	(45)	Yes	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
Yes (18)	Yes	Yes (23)	No	-	-	-	No	n/a	No	(45)	No	-	Yes (23)	-	No	-	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	No
Yes	Yes	Yes	Yes	No	No	No	Yes	No	Yes	(45)	No	Yes	Yes	n/a	No	-	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.

38 The design/ preparation of tender docs, supervision of projects for infrastructure renewal have been contracted out to private consultants for important projects due to lack of technical capacity inhouse. The Non Revenue Water(MAV Upper) project is being implemented with technical input from a team of international consultants whose services has been enlisted for a period of 2 years.

39 The design/ preparation of tender docs, supervision of works for major infrastructure extension works have been contracted out to private consultants for due to lack of capacity inhouse.

40 Research is underway at CWA on the potential threat from the proliferation of algae in our water courses and reservoirs. The study should also determine the best possible treatment processes for water in the eventuality of algal bloom. AFD is closely following the progress of the study.

41 Pricing policy aims to keep prices affordable so as not to hamper social and economic development.

42 Drinking water: water supply companies/Sewerage: municipalities/Sewage treatment: Regional Governments.

43 Regional Water authorities (water boards) and municipalities.

44 Different per service: water supply, sewerage, waste water treatment.

45 Not applicable: in the Netherlands 100% acces=100% connected.

46 Regulator.

47 Tariff policy paper (e.g. for 5 years within investment programme supported by EU and cofinance by local actors).

48 Depend on the area (in same cases there are available public taps, in most of the cases there are no public network, only wells).

49 Private operators can not own the infrastructure and not be responsible for service, but they can work as an entrepreneur for the public service after an order is given.

50 The owner of the estate.

51 Mainly in remote areas (mountains).

52 Typically municipalities, but sometimes regional governments or the state may be involved.

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. HONG KONG, CHINA

a. Figures in 2010 and 2012: In Hong Kong the water resources are basically from rainfall and Dongjiang Water (Import from mainland 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

a. Including Liechtenstein.

Explanation notes for graphs and tables concerning charges

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

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 R\$ 114/100 m³ (Turiúba/SP) to R\$ 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.

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.

1: The regulation of the Water and Sanitation Sector is not yet established for the more than 5.0000 municipalities in the Country. The Water Utilities of SãoPaulo Sate - SABESP - and Brasília - CAESB - are already regulated and the tariffs are established by the Regulators.

2: The first concession of Water Service to a private company was established in 1995. Currently about 5% of the Brazilian Population is served by a Private Company. There are also some relevant PPP's in the sector.

3: The so called Regional Operators (one for each of the 26 States and 1 for the Federal District) are in charge of the Water and Sanitation Services for 75% of the Brazilian Population. 20% are in charge of local Public Services. The 5% remaining are served by Private Companies.

4: In the 26 Regional Operators, serving approximately the 75% of the Brazilian Population there are the so called "crossed subsidies" between municipalities and also inside each municipality the so called SOCIAL TARIFF.

5: European Union's funds.

6: All waterservices owned by municipalities were converted into private companies in 2010, but are still owned by the municipality.

7: Privately owned companies hold licences to provide water services in a regulated environment.

8: The economic regulator (Ofwat) sets price limits (limits on the amount by which companies are allowed to vary their charges to customers).

9: The physical connection to the public water supply or public sewer is funded by the developer (or self-lay organisation), while the new customer pays an "infrastructure charge" to fund local reinforcement of the public system and the general customer base funds any non-local reinforcement costs.

10: If defined in the contract and asked by the municipalities.

11: The ownership of the assets always belong to the municipalities.

12: The prices are always defined and negotiated by the municipalities.

13: The operators have created a solidarity fund for the low income people, social tariffs are now authorised by the law.

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).

33: Privatisation of core services not envisaged as yet.

34: Public relations is being undertaken by CWA staff who get the necessary training in customer care.

35: Cleaning and maintenance services for filters outsourced.

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

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.

38: The design/ preparation of tender docs, supervision of projects for infrastructure renewal have been contracted out to private consultants for important projects due to lack of technical capacity inhouse. The Non Revenue Water(MAV Upper) project is being implemented with technical input from a team of international consultants whose services has been enlisted for a period of 2 years.

39: The design/ preparation of tender docs, supervision of works for major infrastructure extension works have been contracted out to private consultants for due to lack of capacity inhouse.

40: Research is underway at CWA on the potential threat from the proliferation of algae in our water courses and reservoirs. The study should also determine the best possible treatment processes for water in the eventuality of algal bloom. AFD is closely following the progress of the study.

41: Pricing policy aims to keep prices affordable so as not to hamper social and economic development.

42: Drinking water: water supply companies/Sewerage: municipalities/Sewage treatment: Regional Governments.

43: Regional Water authorities (water boards) and municipalities.

44: Different per service: water supply, sewerage, waste water treatment.

45: Not applicable: in the Netherlands 100% access=100% connected.

46: Regulator.

47: Tariff policy paper (e.g. for 5 years within investment programme supported by EU and cofinance by local actors).

48: Depend on the area (in some cases there are available public taps, in most of the cases there are no public network, only wells).

49: Private operators can not own the infrastructure and not be responsible for service, but they can work as an entrepreneur for the public service after an order is given.

50: The owner of the estate.

51: Mainly in remote areas (mountains).

52: Typically municipalities, but sometimes regional governments or the state may be involved.

53: Fairly unusual, but there are some places that limit rate increases, thereby limiting rates.

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