مجلس تنظيم قطاع المياه
WATER SECTOR REGULATORY COUNCIL

Performance monitoring report for water and wastewater providers in Palestine 2020

Sep 2021

Contents

Mohammed Awni Abu Ramadan
Chairman of the Board

The agreement with the Palestinian Water Authority (PWA) and delineated complementary roles between the Water Sector Regulatory Council (WSRC) and PWA have contributed to enhancing the confidence of water and sanitation service providers in the WSRC. This has enabled the Council to reach out to all service providers in 2020.

Beyond doubt, direct and indirect support provided by the Palestinian government, represented by the Prime Minister, has been key to the sustainable and improved operations of the WSRC. In addition to direct financial support, the government directly intervened to help the WSRC access funding and sign a memorandum of understanding with the PWA.

Financial and technical support provided by the Dutch government also had a major influence on the continuity of operations and performance of tasks entrusted to the WSRC. It allowed the Council to expand its activities within the framework of the tasks set by the Law by Decree on Water No. 14 of 2014, as amended.

Effective engagement by the Board members contributed to sustainable operations of the WSRC. Most notably, direct dialogue was initiated with the Prime Minister and obstacles to the WSRC operations were overcome. In addition to facilitating communication with relevant ministries and institutions, Board members reviewed the annual budget, annual plans of action, and outputs of operations.

In 2021, the WSRC finalised the plan of action and agreed to the Council's role in the groundwater recharge project in Northern Gaza. Groundwater will be recharged by treated wastewater to be used for agriculture. This was in agreement with relevant institutions, including the PWA, Ministry of Agriculture (MoA), and Ministry of Finance (MoF). Funded by the French Development Agency, implementation of the project is expected to be initiated in 2021 for a period of four years.

The Board would like to express its heartfelt thanks to the Palestinian government, represented by the Prime Minister, and Dutch government, represented the Netherlands Representative Office to the State of Palestine and its staff, for the unlimited support they have provided to the WSRC.

Finally, the Board would like to extend all thanks and appreciation to the WSRC staff for their dedicated work and achievements in spite of all difficulties.

Mohammed Awni Abu Ramadan
Chairman of the Board

At last, following ongoing preparation and coordination with relevant agencies, the WSRC has managed to collect data of all water and sanitation service providers across Palestine in 2020. Of note, the varied amount of collected data was attributed to the fact that a large number of service providers included village councils. Validated data is a rarity at some of these councils.

Meantime, the WSRC was able to rebuild the performance monitoring database. While access to information has been easier, uploading data to the database by service providers or the WSRC has been more user friendly. This has encouraged many researchers from local universities to use the database on a continuous basis.

In 2020, not only did the WSRC collect data on the performance of service providers, but it also covered all functions provided for under the Law by Decree on Water No. 14 of 2014. To this avail, the Council revised and examined the tariff rate set by some service providers, worked with the PWA towards finalising the tariff system and relevant instructions, and investigated compliance with the principle of governance in service provision. The WSRC began to compile a training manual on monitoring operations and followed up on pending complaints between consumers and service providers. Jointly with the PWA, the WSRC completed the licensing system and relevant instructions.

The WSRC finalised preparations to initiate monitoring the programme for the recovery and reuse of treated wastewater from the aquifer for irrigation in Northern Gaza. The programme is coordinated with the MoA, PWA, and French Development Agency.

On a related level, in 2020, the WSRC cooperated to a considerable degree with many institutions in the water sector as well as with the PWA. The Council collaborated with the Office of the Quartet on water tariff scenarios and willingness to pay water bills in the Gaza Strip. Besides cooperation with the World Health Organisation (WHO) through the International Water Regulators Forum (IWRF), the WSRC worked with the UNICEF on data collection at the level of communities.

At the local level, the WSRC provided easy access to studies and data for Palestinian university students to complete their research for an MA degree in water and wastewater science and engineering.

WSRC commitment

The WSRC is committed to regulate the water sector by monitoring the performance of service providers both transparently and professionally. It provides access to needed information on the production, transmission, distribution, consumption, and management of water and sanitation services, ensuring service quality and affordable prices.

Indicators not included in the report

The report includes many technical, financial, quality, and other indicators. It does not, however, come across other indicators, such as governance. Covering the same reporting period, a separate report on these and other indicators of complaints was developed by the WSRC. While relevant concepts could not be unified and rolled out to service providers, documentation mechanisms are poor. Hence, the WSRC could not review the accuracy of data provided by many service providers.

While underscoring its importance, detailed information on drinking water quality is not published by the WSRC. This is due to the lack of such information from service providers. Although the Ministry of Health (MoH) takes samples from most areas, sources, networks, etc., service providers do not have access to a number of required tests in line with Palestinian and international standards.

WSRC's general directions for the comping period

- Monitor operations: The WSRC is determined to provide intensive training in this area to service providers. This will be premised on the manual recently developed by the Council.
- Monitor compliance with rules for the governance of service delivery: This issue will remain on the WSRC agenda and under observation on a yearly basis.
- Control water and service prices: Following the issuance of tariff instructions, the WSRC will develop a plan for a comprehensive review of the tariff rates applied by all service providers. The plan implementation will be based on priorities, taking account of the results of financial performance monitoring, size of service provider, and status of currently applicable tariff rates.
- Publish reports: Given that the number of audited service providers has increased to nearly 300, the WSRC will upload all data to the database. It will only publish some indicators with higher impact on service delivery and policy assessment.
- In coordination with the PWA, the WSRC will soon draft a performance incentive programme for service providers.

Significance of the report on performance indicators

The WSRC firmly believes that publishing both descriptive and comparative reports contributes to improving performance. In particular, these reports give a comparison between service providers, providing a catalysts for enhancing performance. At the same time, the reporting mechanism and discussion of data with service providers has encouraged the transfer of expertise and knowledge. It has opened a window for service providers to engage in professional debate, also contributing to scaling up performance.

Beyond doubt, service providers worked so hard in 2020, which witnessed the outbreak of the coronavirus (COVID-19) pandemic. This global force majeure did not prevent any service provider from submitting the data requested by the WSRC, reflecting their belief in the importance of data collection and publication.

Affirming the relevance of performance reports, Article 20 of the Law by Decree on Water No. 14 of 2014 assigns the Palestinian Council of Ministers as a recipient of these reports. Article 24 further requests that the Council of Ministers create, and regularly release on, a database technical, financial, and statistical information.

Relevance of the report to service providers

- Including performance indicators, the report provides a tool for assessing the WSRC functions over an entire year as well as a compass to point out the course of action for the next year and beyond. It diagnoses the situation of water and sanitation service operations.
- The report furnishes an opportunity to exchange views between service providers while debating or after presenting data. A nationwide comparison of service providers provides a tool for motivation and drawing insights.
- The report serves to reflect service providers' compliance with the principles of governance, including a transparent presentation of performance indicators.
- When it is rolled out to municipal councils or boards of directors, the report provides an incentive to address weaknesses, such as low collection rate of water charges, requiring intervention by these councils and boards.

To the Palestinian government and relevant ministries

- Assess the impacts of direct and indirect support to the water sector and provide an opportunity to review and adjust these policies, if needed, based on reporting and performance outputs.

- Guide relevant policies, support, and projects based on findings of the report.
- Undertake to make data on sector planning available, carry out the tasks mandated by the law, adhere to the institutional structure, and make decisions in relation to the water sector reform.
- Assess success or failure in the implementation of sector policies, plans, and strategies.

To citizens

- Fulfil citizens' right to freedom of access to information.
- Identify whether the service provider is complying with annual objectives, electoral promises, and decisions made by the board of directors and municipal councils.
- Set a mechanism for public engagement in the responsibility for decision making processes and give citizens' the role of partners, rather than just a service recipients.
- Provide an opportunity to assess the performance of service providers. Citizens have contributed to assigning these providers to their posts through elections.
- Learn some significant information which impact citizens, such as operating cost, average selling price, and commitment to the principles of governance and justice.

To the donor community

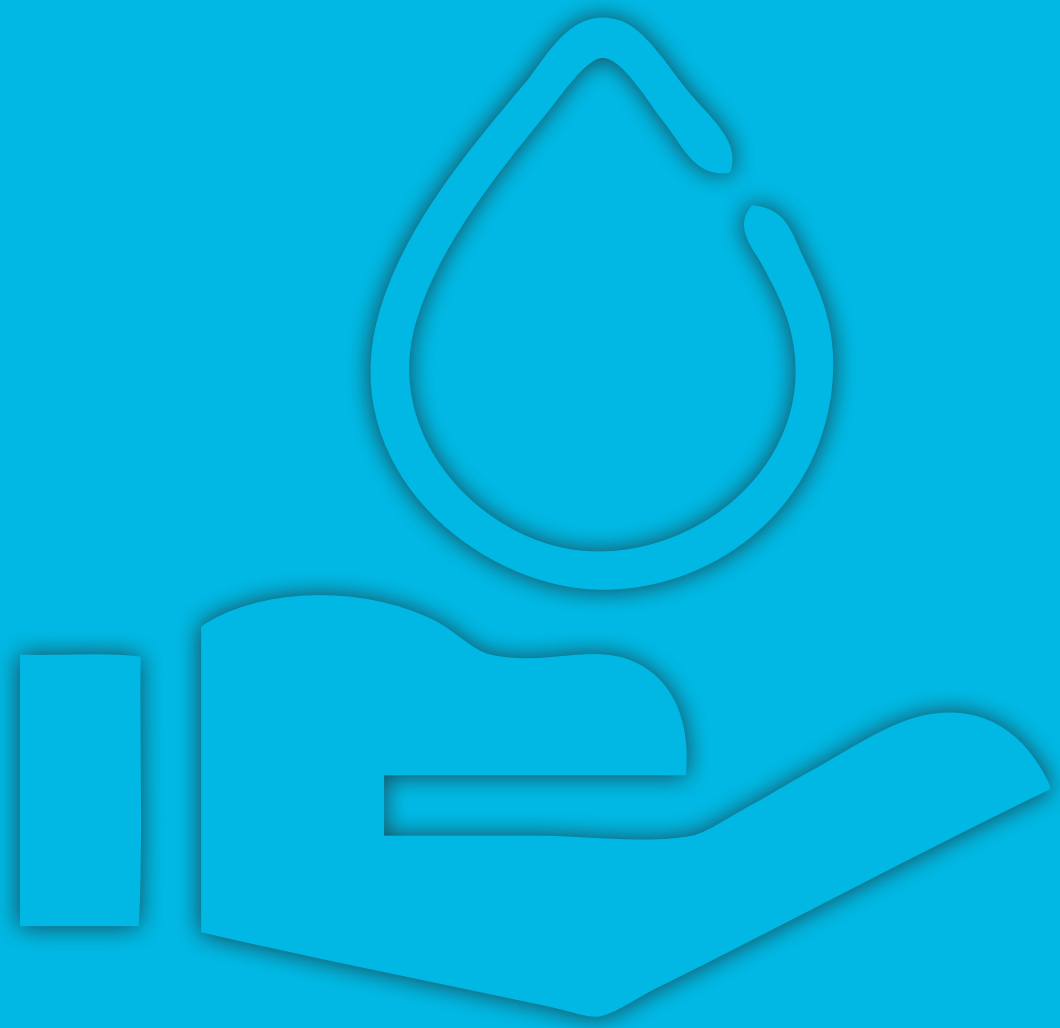
- Assess mechanisms for the disbursement, and outcomes, of funds provided in support of the Palestinian people by monitoring and measuring the improvement of water and sanitation services in Palestine.
- Provide sound guidance for projects based on accurate figures and results.

To researchers and others with interest in the water sector

- Benefit from some figures and percentages in the report for analysis and research purposes.

To others (private sector)

- The private sector can only be involved in water and sanitation service delivery by providing comprehensive and precise information on these services, which the WSRC seeks to make available through a reporting process.

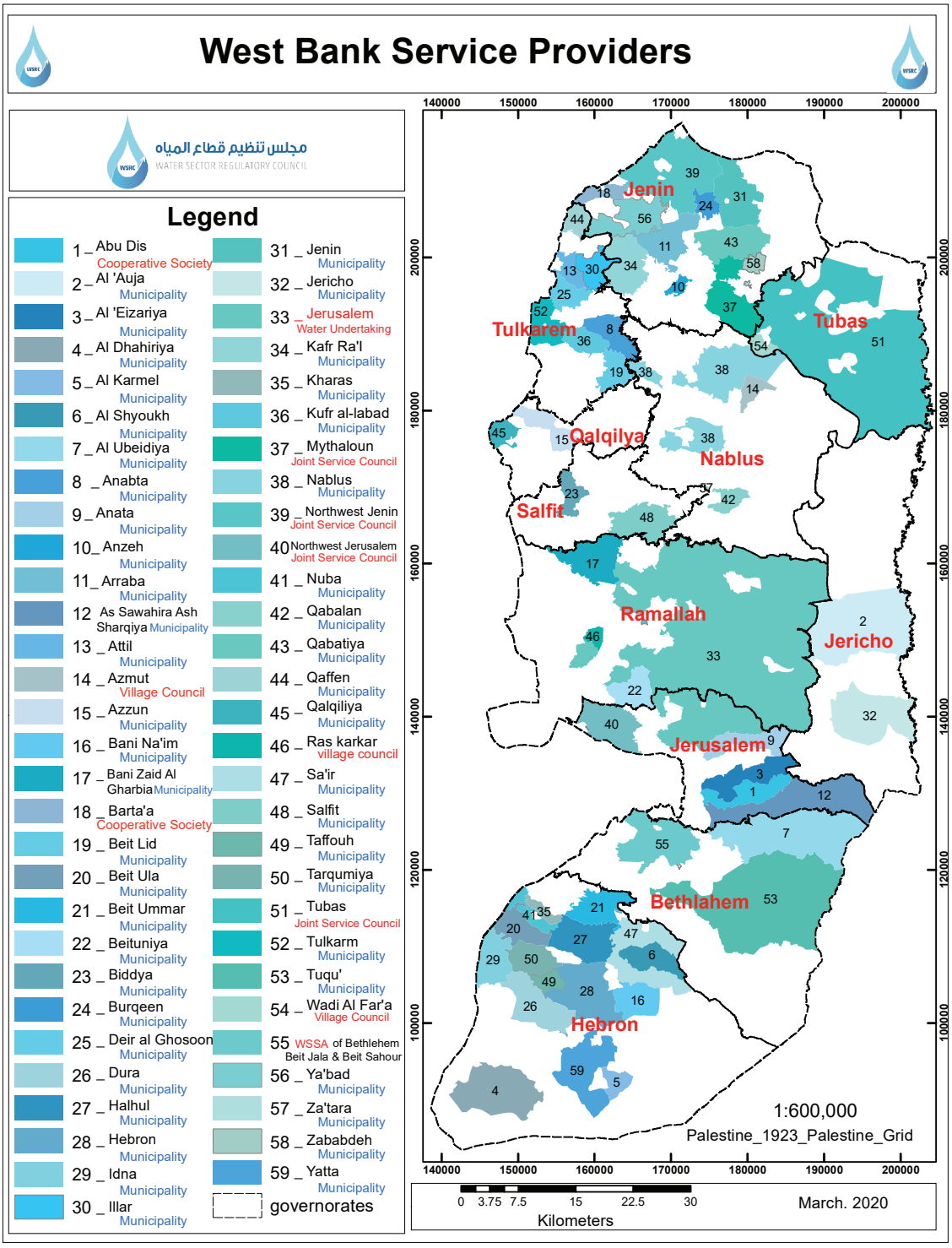


Water and sanitation service providers in Palestine

The Law by Decree on Water No. 14 of 2014 defines service providers as the "National Water Company and regional water facilities, including local government units, joint councils, and associations which provide water or sanitation services."

In 2020, the WSRC worked hard to reach out to all water and sanitation service providers across Palestine.

In the West Bank, general data were collected from 269 water and sanitation service providers, serving some 95 percent of the West Bank population. In the Gaza Strip,



data were collated from 25 service providers, who deliver water and sanitation services to 100 percent of the Gaza population.

Additionally, to develop the 2020 annual report on performance indicators, detailed data were collected from 92 service providers, including 67 in the West Bank (serving 73 percent of the West Bank residents) and 25 others in the Gaza Strip (providing services to all the Gaza population).

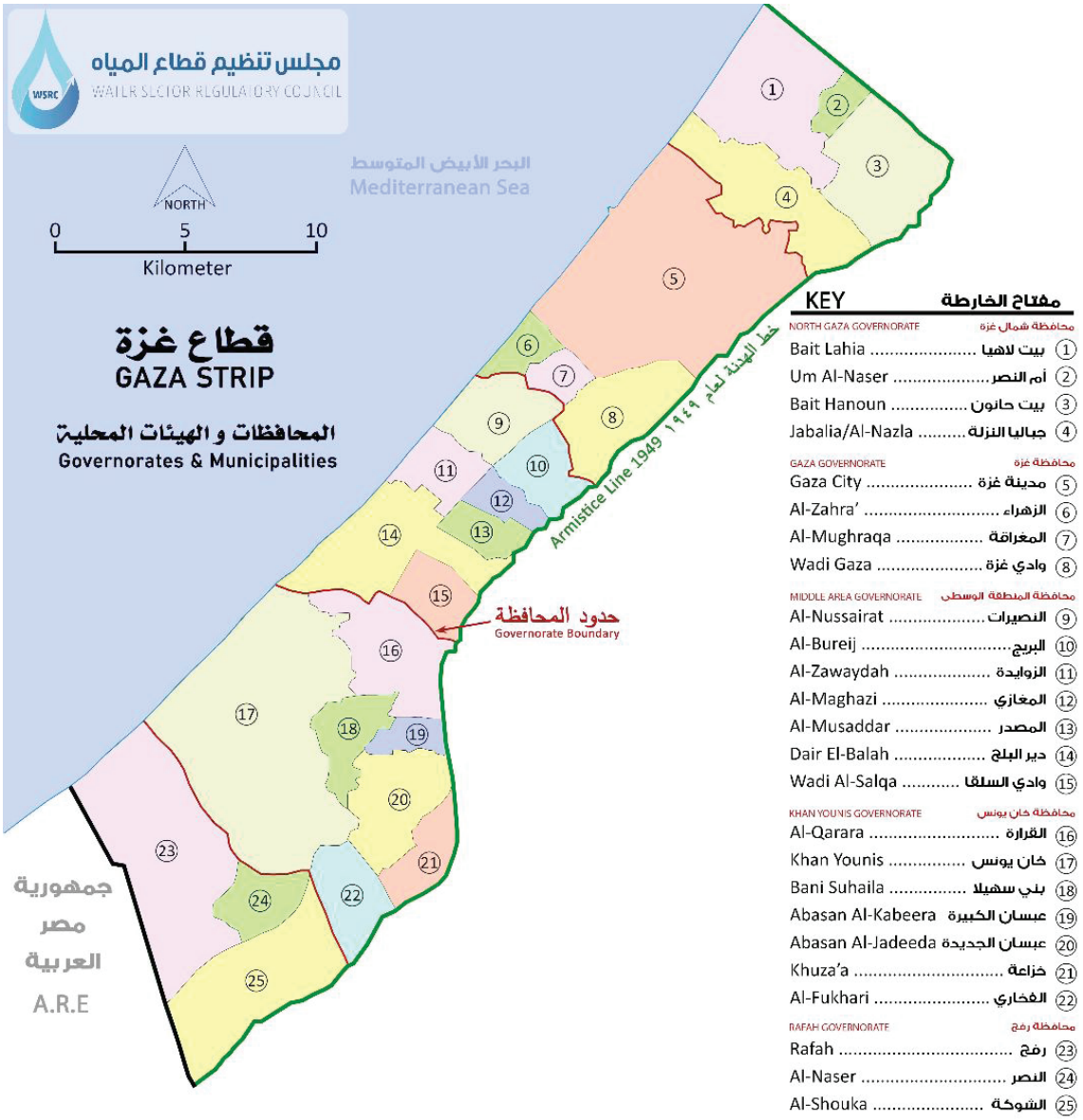


Table 1: Operating information on water and sanitation service providers – West Bank

	Service Provider	No. of employees	No. of Water Connection	
1	Abu Dis Cooperative Society for Water	14	3850	
2	Al 'Auja Municipality	3	1000	
3	Al 'Eizariya Municipality	14	4459	
4	Anabta Municipality	7	2174	
5	Anata Municipality	7	2125	
6	Aqraba Municipality	3	2500	
7	Arraba Municipality	5	2670	
8	As Sawahira Ash Sharqiya Municipality	3	977	
9	Asira Alshamaliya Municipality	7	2037	
10	Attil Municipality	5	2350	
11	Azmut VC	3	800	
12	Bala'a Municipality	2	1785	
13	Bani Naim Municipality	8	3706	
14	Bani Zaid Al Gharbia Municipality	5	2074	
15	Baqa Al Sharqiya Municipality	3	1230	
16	Barta'a Al sharqia Water Association	5	1921	
17	Beit Foureek Municipality	0	0	
18	Beit Lid Municipality	5	1250	
19	Beit Ula Municipality	4	1870	
20	Beit Ummar Municipality	7	2959	
21	Beita Municipality	2	2980	
22	Beituniya Municipality	18	6283	
23	Biddya Municipality	5	3428	
24	Burqeen Municipality	3	1307	
25	Deir al Ghosoon Municipality	6	2550	
26	Dhahiriya Municipality	25	2892	
27	Dura Municipality	13	4276	
28	Halhul Municipality	0	0	
29	Hebron Municipality	49	20526	
30	Housan VC	3	1226	
31	Idna Municipality	5	4055	
32	Illar Municipality	9	1850	
33	Jenin Municipality	60	10443	
34	Jericho Municipality	36	0	
35	Jerusalem Water Undertaking	278	72867	
36	Kafr Ra'I Municipality	5	1481	
37	Kharas Municipality	4	1724	

	No. of Wastewater Connection	Population served by water network	Population served by wastewater network	Water network length (KM)
	-	27000	-	35
	-	5000	-	33
	-	32000	-	54
	1400	9500	7500	53
	-	35000	-	20
	-	10000	-	50
	-	13500	-	30
	-	9000	-	12
	-	11000	-	50
	-	11000	-	55
	400	4000	2500	0
	-	9000	-	0
	-	27000	-	65
	74	12000	400	50
	700	4800	3100	18
	0	5300	0	17
	-	12000	-	0
	180	7000	1000	67
	-	16000	-	42
	-	19200	-	100
	-	13000	-	80
	-	27566	-	65
	130	11542	650	48
	-	7000	-	32
	-	13000	-	65
	-	40000	-	150
	-	41000	-	145
	-	32000	-	0
	17000	222454	185800	580
	0	7500	-	35
	-	28500	-	80
	-	8000	-	60
	0	57214	44100	158
	1200	35000	6000	204
	-	385000	-	1720
	-	9120	-	56
	360	9980	3800	34

	Service Provider	No. of employees	No. of Water Connection	
38	Kufr al labad	2	1022	
39	Mythaloun Joint Service Council	10	4766	
40	Nablus Municipality	285	43101	
41	Nahalin Municipality	4	1751	
42	Northwest Jenin Joint Service Council	37	10900	
43	Northwest Jerusalem Joint Service Council	19	5197	
44	Nuba Municipality	1	1078	
45	Qabalan Municipality	3	1812	
46	Qabatiya Municipality	17	4100	
47	Qaffen Municipality	0	0	
48	Qalqilia Municipality	30	11698	
49	Ras karkar village council	0	0	
50	Saiir Municipality	0	0	
51	Salfit Municipality	9	3224	
52	Samou Municipality	5	2700	
53	Shyoukh Municipality	5	1821	
54	Soureef Municipality	4	3600	
55	Taffouh Municipality	5	1684	
56	Tarqumia Municipality	4	3080	
57	Tubas Joint Service Council	34	9618	
58	Tulkarm Municipality	83	16607	
59	Tuqu' Municipality	4	1575	
60	Ubeidiya Municipality	7	1810	
61	Water Supply and Sewerage Authority "WSSA Bethlehem"	41	13738	
62	Ya'bad Municipality	5	3643	
63	Yatta Municipality	20	4719	
64	Zaatara Municipality	7	1611	
65	Zababdeh Municipality	2	1034	
66	Zaweh Municipality	3	1500	
67	Zeita Municipality	2	1100	

	No. of Wastewater Connection	Population served by water network	Population served by wastewater network	Water network length (KM)
	233	5700	1300	20
	-	24095	-	144
	14544	203498	197396	544
	-	10000	-	28
	-	60000	-	1000
	-	40000	-	148
	500	7134	3000	40
	-	9000	-	35
	-	27000	-	90
	-	0	-	0
	14060	57852	56000	159
	-	2000	-	0
	-	27700	-	0
	1137	14000	8000	75
	-	23000	-	18
	-	13000	-	60
	-	18534	-	95
	0	15000	-	40
	0	18500	-	100
	-	51000	-	350
	0	90000	63000	425
	0	14500	-	94
	0	16500	-	50
	12253	111365	99320	443
	-	18000	-	48
	0	83000	-	185
	0	8400	-	84
	-	5000	-	22
	-	6500	-	17
	700	3500	3000	0

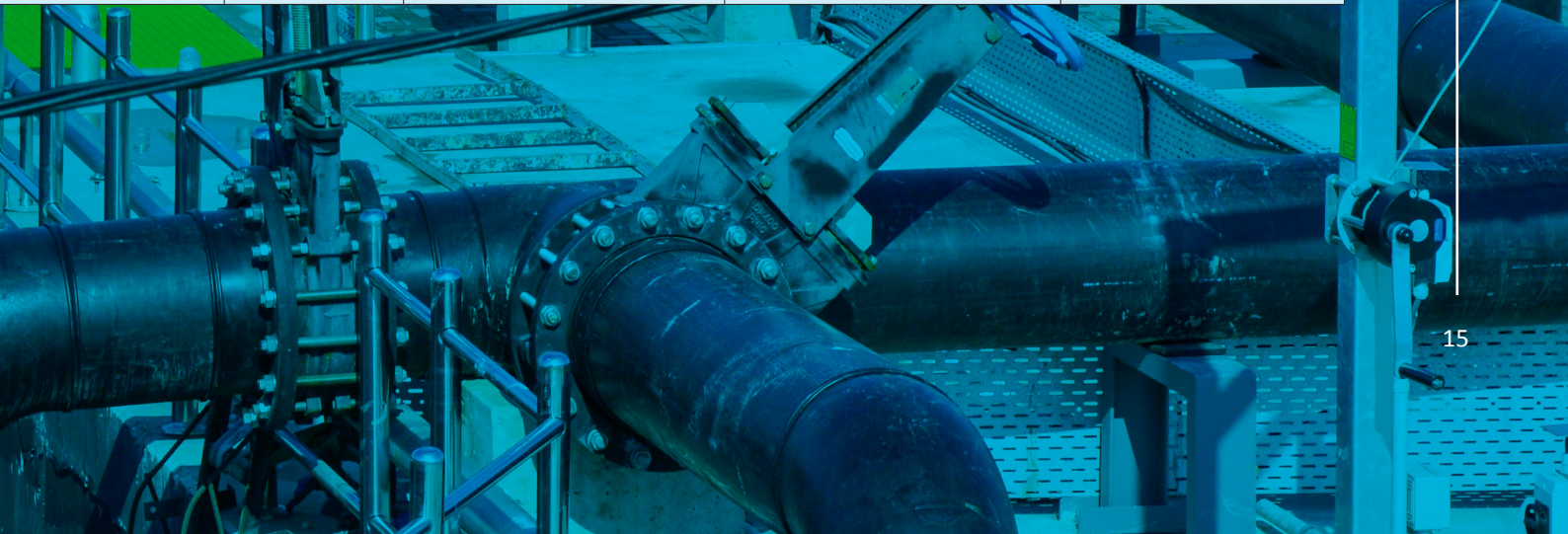


Table 2: Operating information on water and sanitation service providers – Gaza Strip

	Service Provider	No. of employees	No. of Water Connection	
1	Um Ennaser Municipality	5	669	
2	Beit Hanoun Municipality	15	5,712	
3	Beit Lahya Municipality	30	7,300	
4	Jabalia Al Nazleh Municipality	30	17,210	
5	Gaza Municipality	83	44,589	
6	Zahra Municipality	5	1,299	
7	Moghraga Municipality	5	1,384	
8	Wadi Gaza Municipality	6	1031	
9	Nusairat Municipality	14	8,593	
10	Braij Municipality	12	4,026	
11	Maghazi Municipality	11	2,963	
12	Zawaida Municipality	12	2,897	
13	Dair al Balah Municipality	19	7,834	
14	Wadi Salga Municipality	4	670	
15	Musaddar Municipality	2	406	
16	Qarara Municipality	20	2,878	
17	Khan Younis Municipality	58	21,998	
18	Bani Suhaila Municipality	18	5,500	
19	Abasan Kabira Municipality	17	4,037	
20	Abasan Jadida Municipality	5	1,304	
21	Khuzaa Municipality	7	1,935	
22	Fukhari Municipality	9	1,187	
23	CMWU - Rafah	50	20,506	
24	Al Naser Municipality	6	1,684	
25	Shuka Municipality	13	1749	

Table 3: Quantity of water available to water service providers in the West Bank

Service Provider	Local water resources - Wells (m3)	Local water resources - Springs (m3)	Purchased Water (m3)
Abu Dis Cooperative Society for Water	-	-	729,713
Al 'Auja Municipality	-	-	947,311
Al 'Eizariya Municipality	-	-	1,254,582
Anabta Municipality	847,325	-	-
Anata Municipality	-	-	1,116,469
Aqraba Municipality	-	-	277,938

	No. of Wastewater Connection	Population served by water network	Population served by wastewater network	Water network length (KM)
	470	5,076	3,885	10
	4,570	54,262	48,550	175
	8,000	93,321	83,498	180
	18,513	228,350	233,209	350
	68,581	590,789	557,967	800
	1,287	5,500	3,000	29
	1,303	11,364	9,775	50
	872	4,157	3,668	24
	7,952	89,542	83,013	165
	5,500	43,588	39,839	70
	2,420	27,874	25,476	70
	1,850	23,625	22,598	90
	6,755	84,025	73,411	250
	0	6,727	0	23
	229	2,702	2,507	18
	105	25,000	914.64	106
	19,483	250,859	234,846	550
	1,887	43,552	20,205	117
	0	27,262	0	95
	0	9,261	0	38
	0	11,372	0	55
	0	6,492	0	58
	17,855	207,767	192,458	455
	0	9,028	0	55
	693	15992.1	3553.8	75

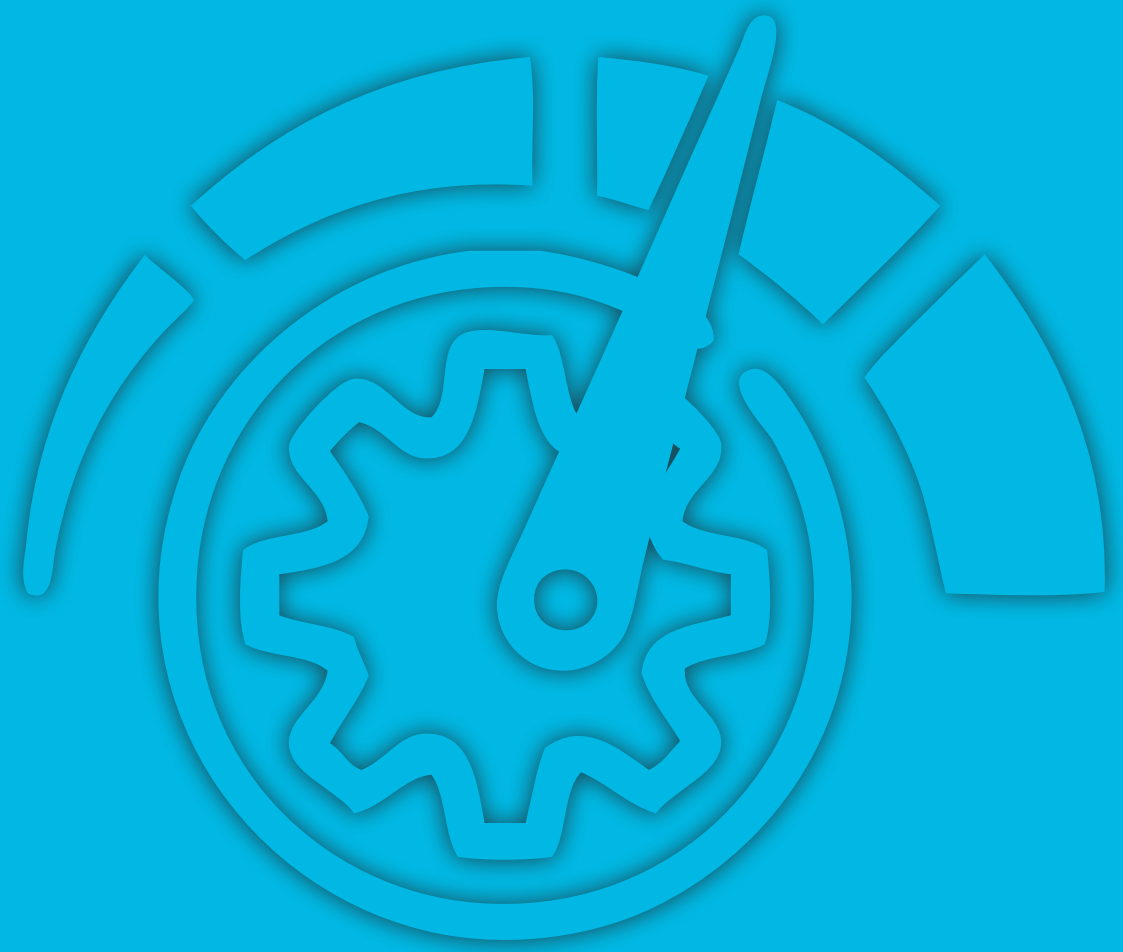
Service Provider	Local water resources - Wells (m3)	Local water resources - Springs (m3)	Purchased Water (m3)
Arraba Municipality	292,000	-	344,714
As Sawahira Ash Sharqiya Municipality	-	-	358,184
Asira Alshamaliya Municipality	-	-	236,025
Attil Municipality	-	-	583,840
Azmut VC	-	-	219,009
Bala'a Municipality	457,968	-	-

Service Provider	Local water resources - Wells (m3)	Local water resources - Springs (m3)	Purchased Water (m3)
Bani Naim Municipality	-	-	630,000
Bani Zaid Al Gharbia Municipality	-	-	353,140
Baqa Al Sharqiya Municipality	-	-	305,640
Barta'a Al sharqia Water Association	-	77,844	252,356
Beit Foureek Municipality	-	-	-
Beit Lid Municipality	-	-	197,380
Beit Ula Municipality	-	-	422,103
Beit Ummar Municipality	-	-	1,011,667
Beita Municipality	-	-	585,831
Beituniya Municipality	-	-	1,136,061
Biddya Municipality	197,555	-	346,984
Burqeen Municipality	-	-	268,654
Deir al Ghosoon Municipality	472,900	-	-
Dhahiriya Municipality	-	-	626,193
Dura Municipality	-	-	660,757
Halhul Municipality	-	-	-
Hebron Municipality	-	-	7,942,588
Housan VC	-	-	281,582
Idna Municipality	-	-	567,315
Illar Municipality	899,880	-	-
Jenin Municipality	1,030,270	-	2,665,024
Jericho Municipality	-	3,497,154	-
Jerusalem Water Undertaking	-	2,730,777	17,103,460
Kafr Ra'I Municipality	-	-	402,653
Kharas Municipality	-	-	484,506
Kufr al labad	-	-	264,580
Mythaloun Joint Service Council	-	-	918,583
Nablus Municipality	7,212,745	3,142,847	1,381,143
Nahalin Municipality	-	-	449,342
Northwest Jenin Joint Service Council	1,685,653	-	500,576

Service Provider	Local water resources - Wells (m3)	Local water resources - Springs (m3)	Purchased Water (m3)
Northwest Jerusalem Joint Service Council	-	-	1,210,596
Nuba Municipality	-	-	291,224
Qabalan Municipality	-	-	245,313
Qabatiya Municipality	-	-	1,244,860
Qaffen Municipality	-	-	-
Qalqilia Municipality	5,100,030	-	-
Ras karkar village council	-	-	-
Saiir Municipality	-	-	974,723
Salfit Municipality	163,375	262,264	339,180
Samou Municipality	-	-	600,000
Shyoukh Municipality	-	-	455,166
Soureef Municipality	-	-	691,018
Taffouh Municipality	-	-	345,942
Tarqumia Municipality	-	-	590,257
Tubas Joint Service Council	-	-	2,040,618
Tulkarm Municipality	8,408,516	-	60,000
Tuqu' Municipality	-	-	520,418
Ubeidiya Municipality	-	-	474,670
Water Supply and Sewerage Authority "WSSA Bethlehem"	-	-	6,976,645
Ya'bad Municipality	593,850	-	19,340
Yatta Municipality	-	-	1,239,550
Zaatara Municipality	-	-	380,553
Zababdeh Municipality	-	-	176,073
Zaweh Municipality	-	-	274,780
Zeita Municipality	1,000,000	-	-

Table 4: Quantity of water available to water service providers in the Gaza Strip

Service Provider	Local water resources - Wells (m3)	Local water resources - Springs (m3)	Purchased Water (m3)
Um Ennaser Municipality	278,700	-	-
Beit Hanoun Municipality	4,238,694	-	-
Beit Lahya Municipality	7,188,030	-	-
Jabalia Al Nazleh Municipality	13,155,769	-	-
Gaza Municipality	26,951,011	-	7,956,900
Zahra Municipality	650,511	-	-
Moghraga Municipality	561,130	-	-
Wadi Gaza Municipality	171,979	-	-
Nusairat Municipality	3,214,461	-	973,738
Braij Municipality	1,695,388	-	518,360
Maghazi Municipality	1,109,165	-	579,482
Zawaida Municipality	1,323,032	-	-
Dair al Balah Municipality	5,141,530	-	-
Wadi Salga Municipality	251,560	-	-
Musaddar Municipality	214,636	-	-
Qarara Municipality	1,351,472	-	-
Khan Younis Municipality	9,882,908	-	-
Bani Suhaila Municipality	858,661	-	1,243,261
Abasan Kabira Municipality	19,500	-	1,604,304
Abasan Jadida Municipality	116,919	54,730	322,814
Khuzaa Municipality	454,528	-	454,529
Fukhari Municipality	326,750	-	-
CMWU - Rafah	9,746,480	-	-
Al Naser Municipality	483,412	-	-
Shuka Municipality	764,258	-	-



Technical indicators

Average daily per capita water consumption for domestic uses

It is true that this is a key indicator for monitoring the performance of service providers, but providing the minimum standard of water to subscribers is off limits to service providers. In general, water sources are still subject to policies and control of the Israeli occupying government. Still, one prerequisite to measure this indicator lies in dividing water consumption into domestic, industrial, tourism, and other uses. Apparently, many service providers continue to place all quantities of consumption under the category of domestic use without separating other consumption quantities. These have, therefore, been excluded from the results of this indicator because per capita consumption is not real. Results will be presented under the subsequent indicator.

Of all 67 and 15 service providers covered by this reports in the West Bank and Gaza Strip respectively, 28 and 15 service providers in both areas do delineate water connections by consumption. It is worth noting that identifying the types of consumption can be undertaken in an expeditious, simple, and uncostly manner by collectors and meter readers during field visits.

The least average daily per capita water consumption for domestic uses in the West Bank and Gaza Strip

West Bank

Dhahiriya Municipality	20
Yatta Municipality	27
Azmut VC	29

Gaza

Shuka Municipality	58
Wadi Salga Municipality	59
Dair al Balah Municipality	64

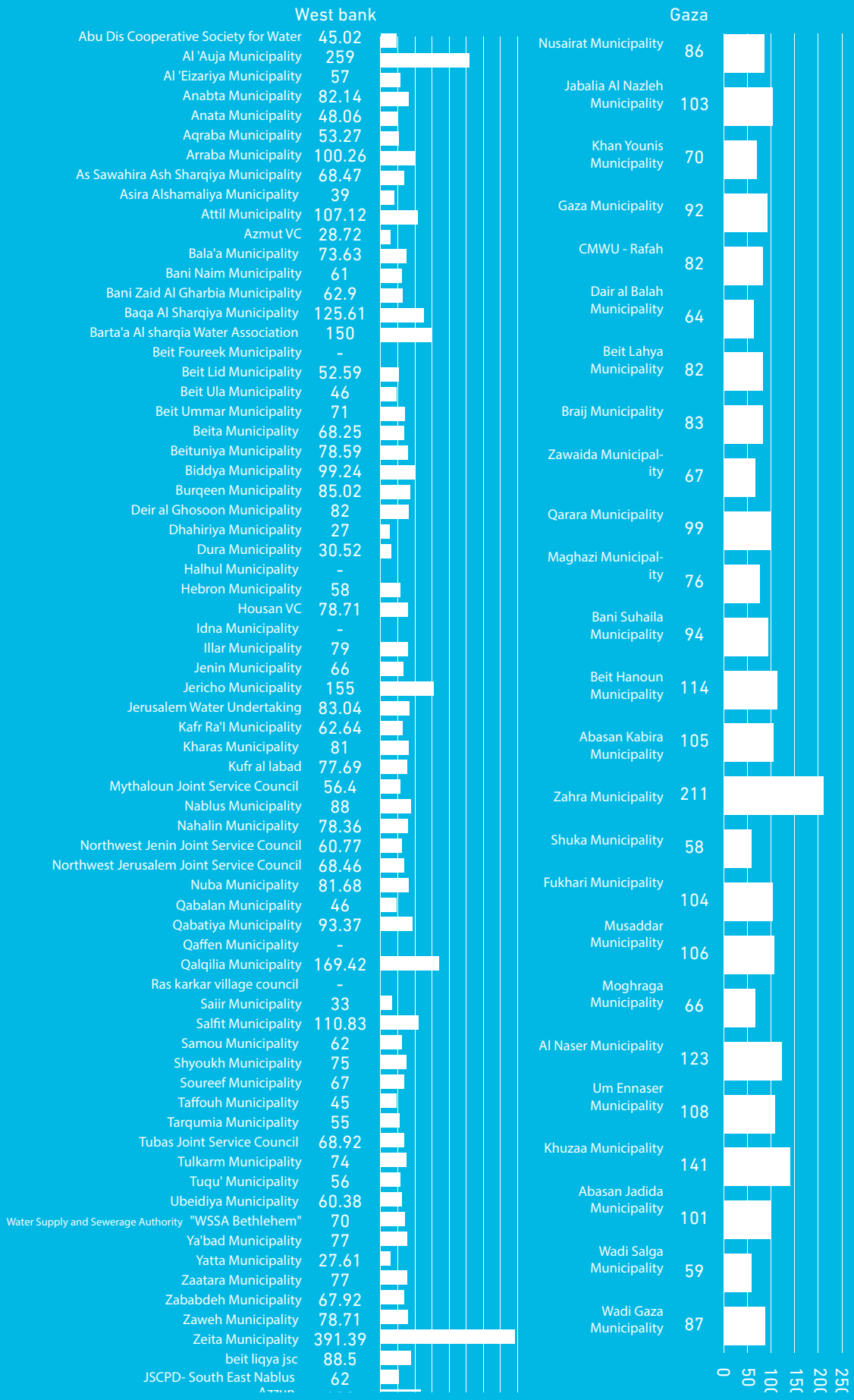
WHO standards recommend 150 litres per capita per day (l/c/d), noting that the absolute minimum is 100 l/c/d worldwide.

In the West Bank, only nine service providers deliver the WHO recommended absolute minimum (100 l/c/d): Al-Auja, Arraba, Attil, Baqa al-Sharqiya, Jericho, Barta'a, Qalqiliya, Salfit, and Zeita. It is noted that very low quantities do not meet the basic needs of individuals, e.g. in Azmut, Al-Dhahiriya, and Yatta.

The quantity of water available in the Gaza Strip seems to be better than in the West Bank. For example, unlike the West Bank, water quantity is not less than 50 l/c/d. However, the quality of water is the greatest obstacle to service providers in the Gaza Strip.

Of note, most reports on water quality in the Gaza Strip have confirmed that most of the water supplied from local sources does not match drinking water standards. This is a matter of importance because citizens need quantities of water of a certain quality in order to fulfil essential needs, particularly in the context of the COVID-19 pandemic.

Average daily per capita water consumption at domestic level



Daily average of water sold to individuals, including all types of consumption

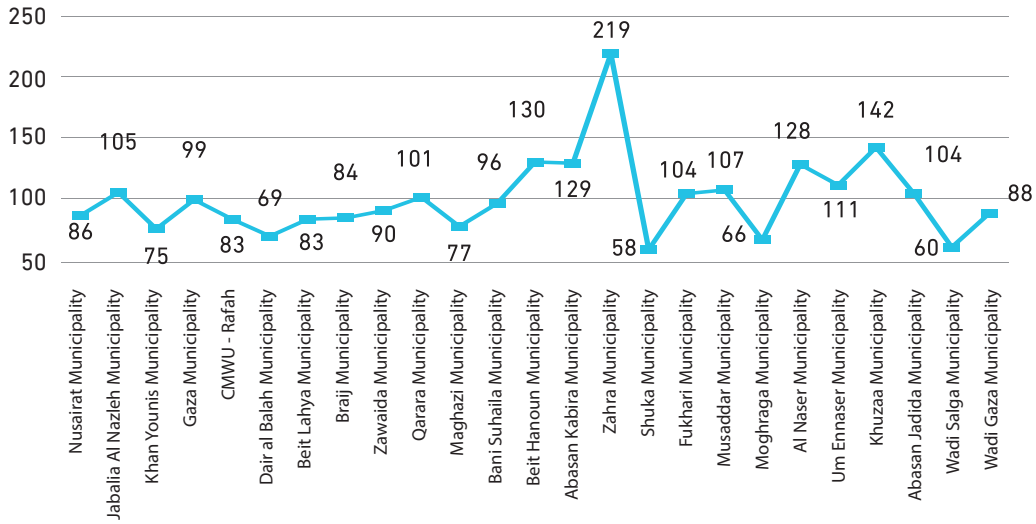
This indicator measures the total per capita water consumption for all domestic, commercial, industrial, tourist, and wholesale uses by the number of individuals. The indicator is calculated for a comparison of service providers if types of consumption are not separated by a service provider.

Several factors have resulted in the lack of a proper classification of water service subscribers by service providers. Of these, tariff is unified across all uses regardless of the type of consumption. This reason will be insignificant when the unified tariff system, recently approved by the Council of Ministers, is applied. Some service providers claim that most water quantities are intended for domestic consumption. The amount consumed by other sectors does not require this delineation.

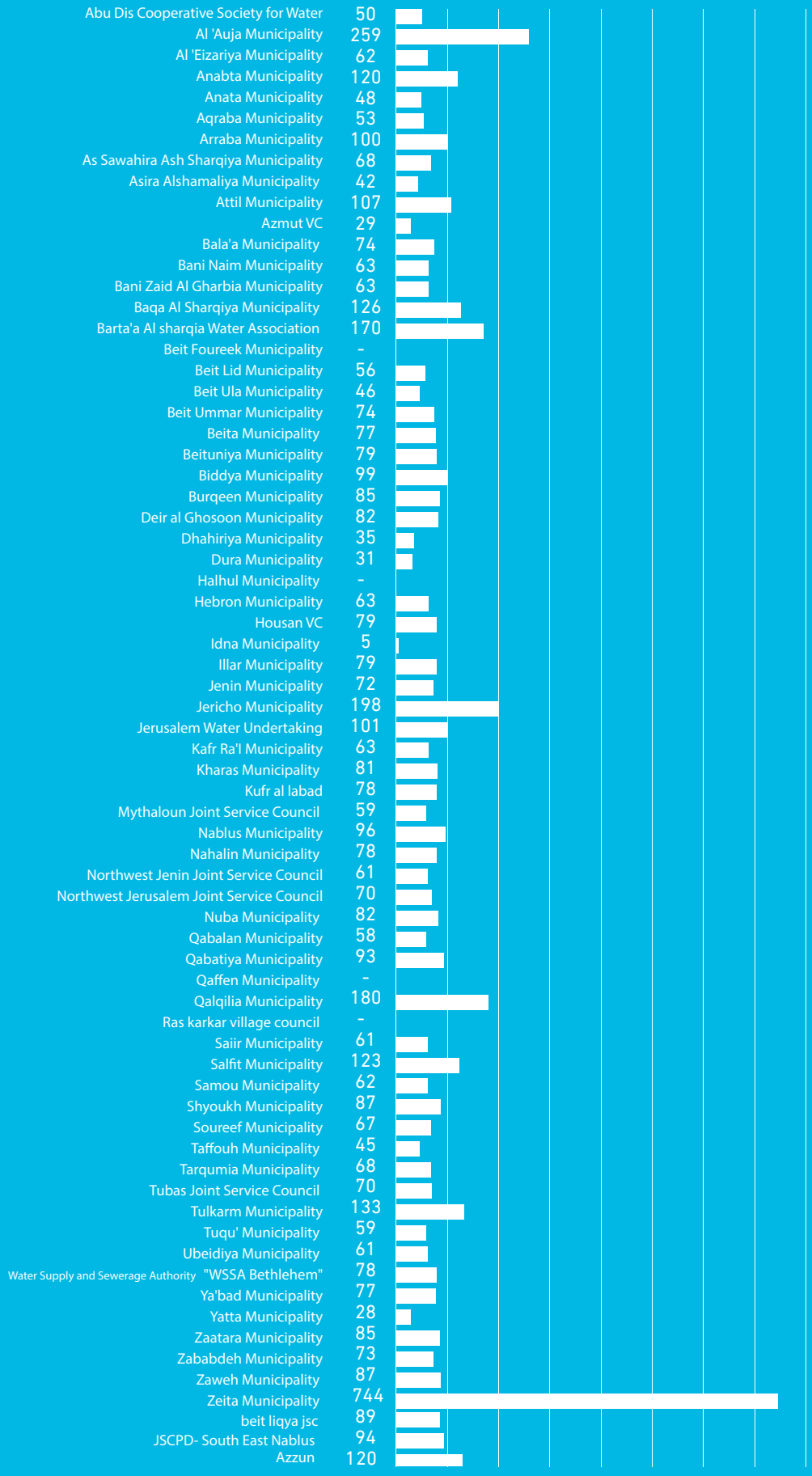
A unified tariff rate will bring an end to this issue. A service provider will be obliged to categorise subscriptions by the type of consumption and put in place a system based on the categories of users. At this point, citizens will value the importance of having a separate water meters per user. Considering the importance of the "per capita domestic consumption rate" indicator, the WSRC recommends that service providers make a greater effort to separate and classify types of consumption. This can only be real when quantities of domestic consumption are put aside from other uses. For instance, significant quantities seem to be available in Illar and Zeita, but some 40 percent of this water is sold in bulk to neighbouring areas. Also, a large portion of this water is used in home farming. Likewise, in Baqa al-Sharqiya, Al-Auja, Hebron, and Qalqiliya, a considerable quantity of sold water is used in commercial, industrial, and agricultural activities. The Gaza Municipality supplies water to dozens of ready-mix concrete factories as well as commercial and tourism establishments. Including these quantities in a single category gives a misleading and unreal percentage of per capita water consumption, in which case it is difficult to compare with WHO standards.

Many service providers cannot increase water availability at source for several reasons, most notably Israel's control over water sources. However, every service provider is required to ensure an optimised use of available water by reducing water loss as much as possible.

Average daily water sold per capita based on total population / Gaza



Average daily water sold per capita based on total population / West Bank



West Bank

Less than 50 liter

Service Providers	Average daily water sold per capita based on total population
Abu Dis Cooperative Society for Water	50
Anata Municipality	48
Asira Alshamaliya Municipality	42
Azmut VC	29
Beit Ula Municipality	46
Dhahiriya Municipality	35
Dura Municipality	31
Taffouh Municipality	45
Yatta Municipality	28

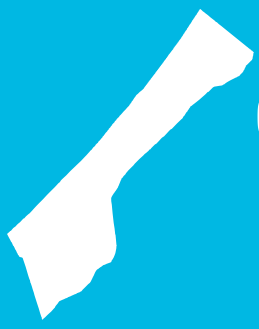
51-100 liter

Service Providers	Average daily water sold per capita based on total population
Hebron Municipality	62
Housan VC	53
Idna Municipality	100
Illar Municipality	68
Jenin Municipality	74
Jericho Municipality	63
Jerusalem Water Undertaking	63
Kafr Ra›I Municipality	56
Kharas Municipality	74
Kufr al labad	77
Mythaloun Joint Service Council	79
Nablus Municipality	99
Nahalin Municipality	85
Northwest Jenin Joint Service Council	82
Hebron Municipality	63
Housan VC	79
Idna Municipality	79

Service Providers	Average daily water sold per capita based on total population
Illar Municipality	72
Jenin Municipality	63
Jericho Municipality	81
Jerusalem Water Undertaking	78
Kafr Ra›I Municipality	59
Kharas Municipality	96
Kufr al labad	78
Mythaloun Joint Service Council	61
Northwest Jerusalem Joint Service Council	70
Nuba Municipality	82
Qabalan Municipality	58
Qabatiya Municipality	93
Saiir Municipality	61
Samou Municipality	62
Shyoukh Municipality	87
Soureef Municipality	67
Tarqumia Municipality	68
Tubas Joint Service Council	70
Tuqu› Municipality	59
Ubeidiya Municipality	61
Water Supply and Sewerage Authority «WSSA Bethlehem»	78
Ya›bad Municipality	77
Zaatara Municipality	85
Zababdeh Municipality	73
Zaweh Municipality	87

Over 100 liter

Service Providers	Average daily water sold per capita based on total population
Al ‹Auja Municipality	259
Anabta Municipality	120
Attil Municipality	107
Baqa Al Sharqiya Municipality	126
Barta›a Al sharqia Water Association	170
Jericho Municipality	198
Jerusalem Water Undertaking	101
Qalqilia Municipality	180
Salfit Municipality	123
Tulkarm Municipality	133
Zeita Municipality	744



Gaza Strip

Less than 50 liter (none)

أكثر من 100 لتر

Service Providers	Average daily water sold per capita based on total population
Nusairat Municipality	86
Khan Younis Municipality	75
Gaza Municipality	99
CMWU - Rafah	83
Dair al Balah Municipality	69
Beit Lahya Municipality	83
Braij Municipality	84
Zawaida Municipality	90
Maghazi Municipality	77
Bani Suhaila Municipality	96
Shuka Municipality	58
Moghraga Municipality	66
Wadi Salga Municipality	60
Wadi Gaza Municipality	88

Over 100 liter

Service Providers	Average daily water sold per capita based on total population
Jabalia Al Nazleh Municipality	105
Qarara Municipality	101
Beit Hanoun Municipality	130
Abasan Kabira Municipality	129
Zahra Municipality	219
Fukhari Municipality	104
Musaddar Municipality	107
Al Naser Municipality	128
Um Ennaser Municipality	111
Khuzaa Municipality	142
Abasan Jadida Municipality	104

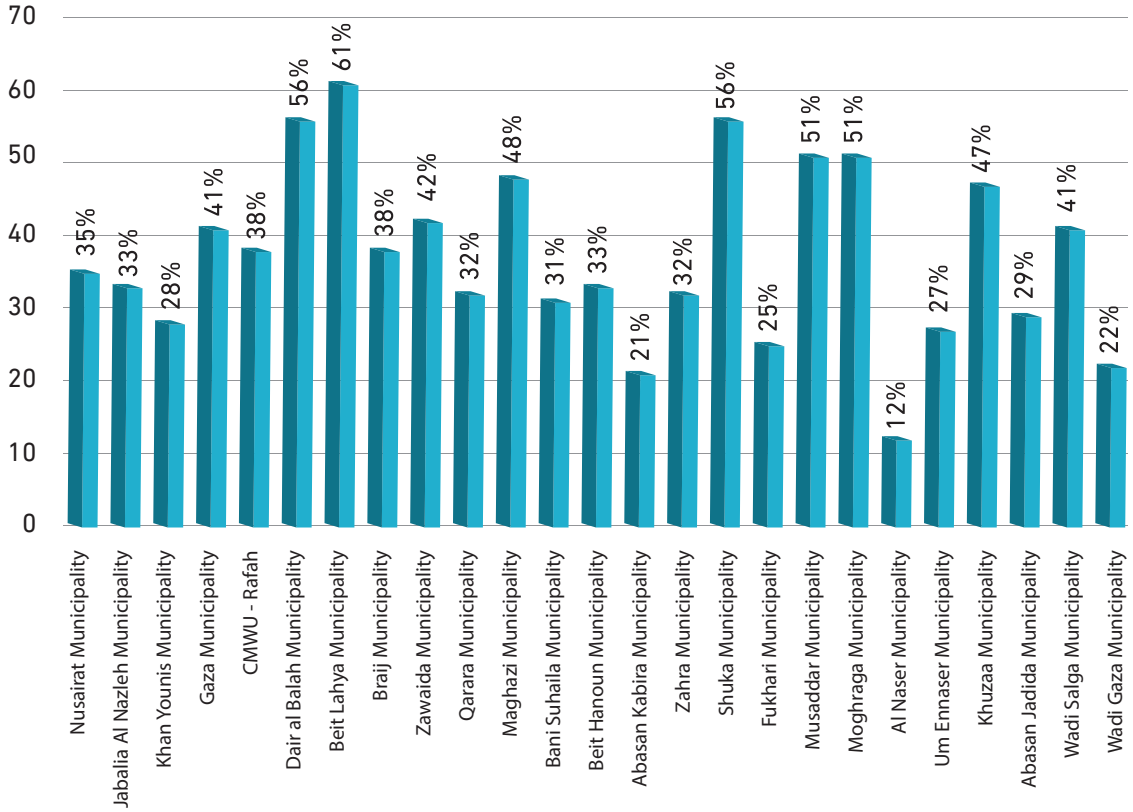
Percentage of Non-revenue water

This indicator shows the difference between the water quantity supplied by services providers and pumped into the distribution grid on the one hand, and quantity of billed water on the other. The difference accounts for the losses incurred by service providers while delivering water service. The chart on page 36 shows the components of unaccounted water. These can be real losses, such as network leakages or overflowing distribution reservoirs. Other losses are caused by water theft through illegal connections, inaccurate meter measurement, etc.

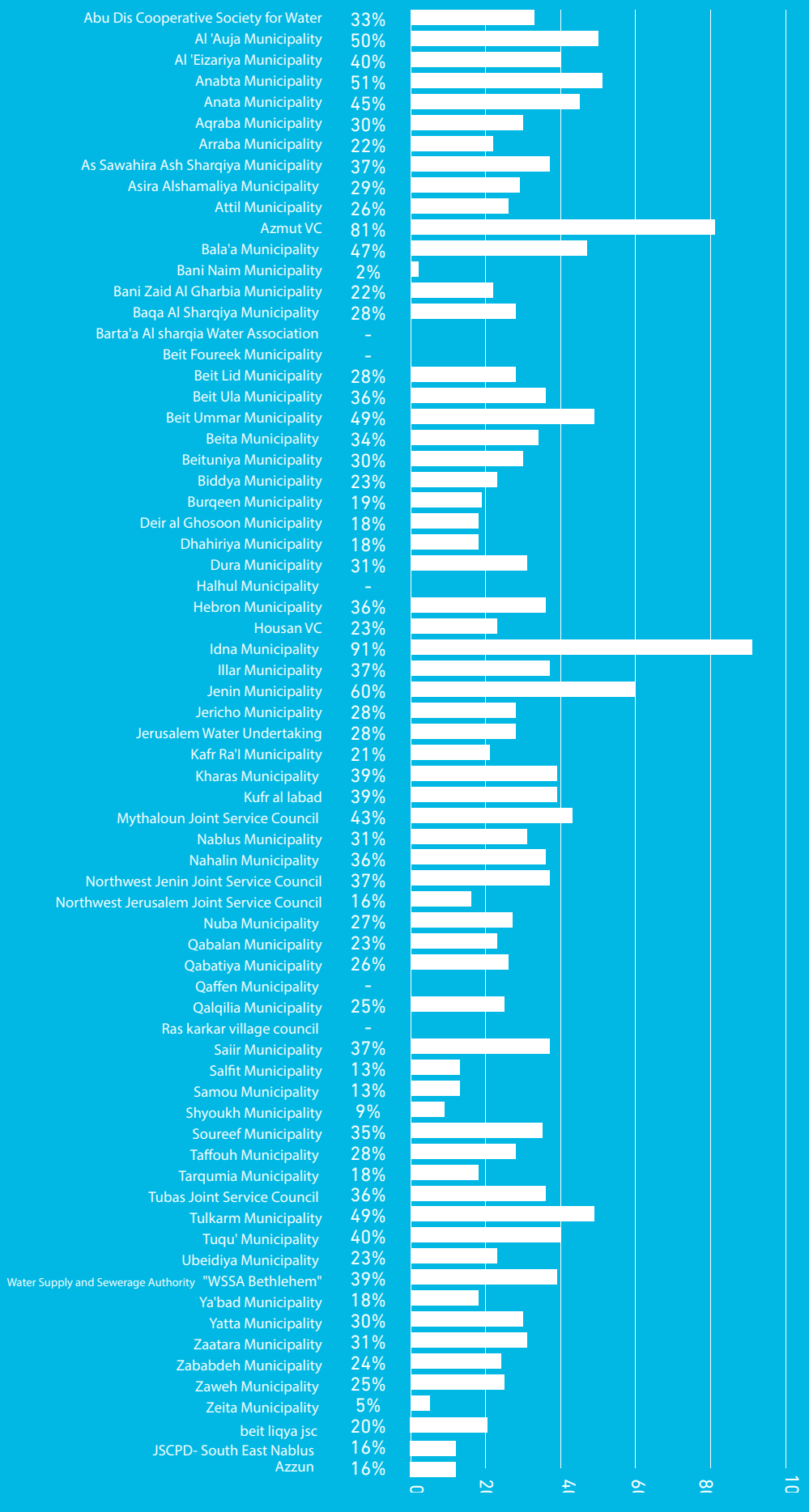
The Palestinian National Authority (PNA) is making serious efforts to reduce the percentage of unaccounted water by means of projects funded internally by the public budget or directly by international agencies that support the water sector. Before networks or meters are wholly or partially changed, the WSRC urges service providers to identify the real causes of increasing amounts of unaccounted water. In the West Bank, Jenin recorded the highest percentage of unaccounted water (60 percent), followed by Al-Auja and Anabta (50 and 51 percent respectively). The reasons behind this percentage vary depending on each service provider. For example, network loss and leakage is the main driver of the high percentage in Jenin.

In the Gaza Strip, the higher percentage of unaccounted water was seen in Beit Lahiya (61 percent), followed by Deir al-Balah and Al-Shoka (56 percent each).

Non-Revenue Water by volume (%) / Gaza



Non-Revenue Water by volume (%) / West Bank



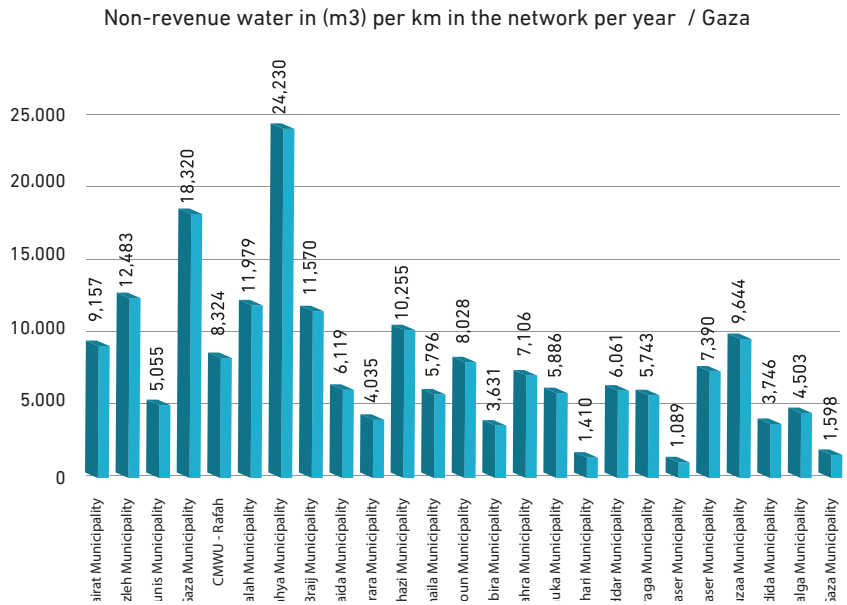
Due to the high percentage of unaccounted water, service providers cannot fulfil their obligations towards the general population. Regardless of its classification within the water balance, unaccounted water reflects a setback in performance. At the same time, a strategic planning profile of any community can only be undertaken by assessing the quantity of water available to each sector. Surely, water loss negatively affects and restricts the applicability of strategic planning. It should be emphasised that the PWA is responsible for setting nationwide utilisation ratios across various sectors.

Some service providers demonstrate low figures of unaccounted water indicators. Noting that data were revised, some figures are less than 15 percent. The reason lies in the stringent measures taken to reduce water losses and install of new water networks. Some service providers enumerate all water supply connections/points. Bills, including any fractions or leakages, are issued and charged to the person who causes the damage. Otherwise, these are afforded by the relevant municipality. On the other hand, the quantity of water produced and sold by a service provider might be poor.

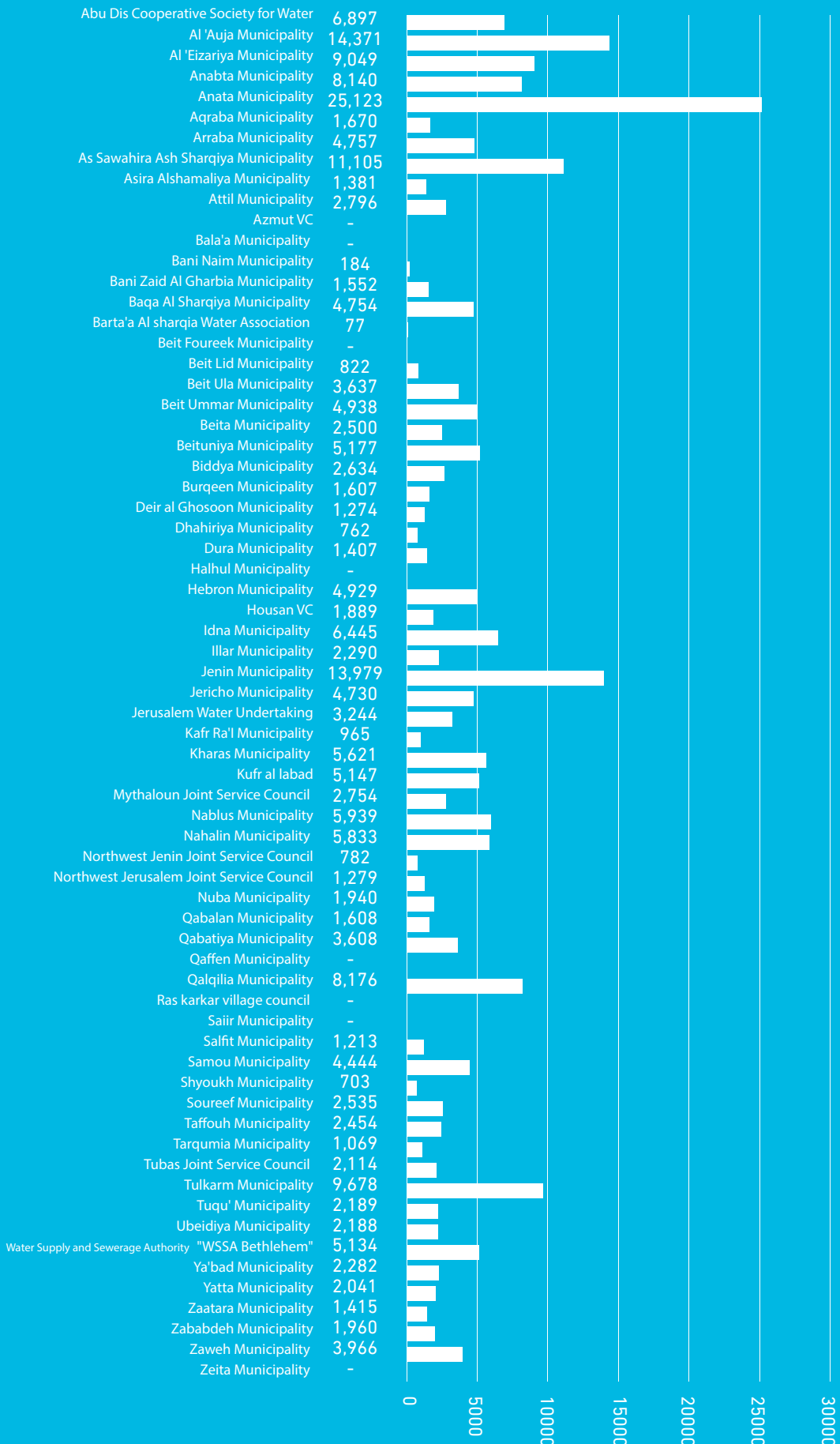
NRW per kilometre of network a year

This indicator offers the possibility of comparing service providers of different sizes. After the length of a network is determined and the quantity of unaccounted water are compared per kilometre. The indicator reflects the efficiency of networks and transmission lines. Results of the indicator also help service providers plan investments and rehabilitate or replace networks.

To ensure a sound and clear analysis of a service provider's situation, indicators of unaccounted water need to be read altogether. The two charts below show the quantity of unaccounted water per km of network a year. This indicator calculates the quantity of unaccounted water per km of network, resulting from water leakage and illegal connections.



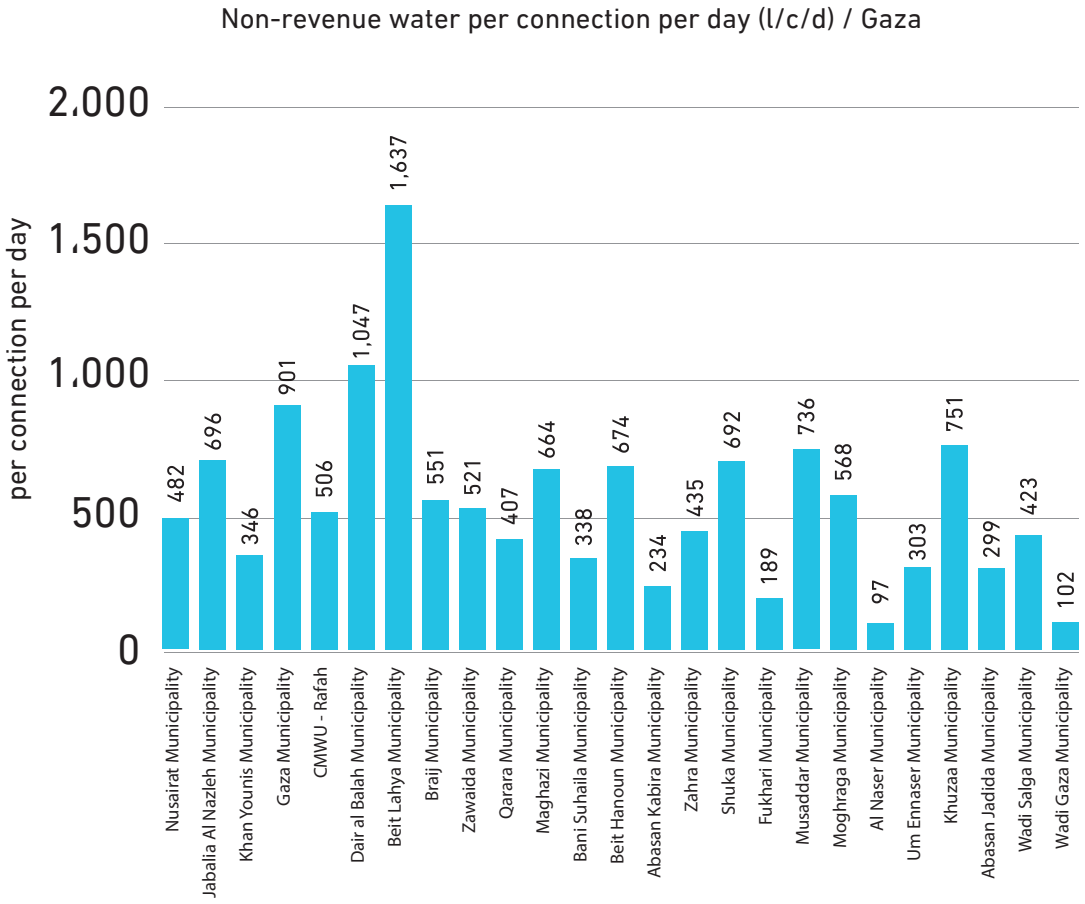
Non-revenue water in (m3) per km in the network per year / West Bank



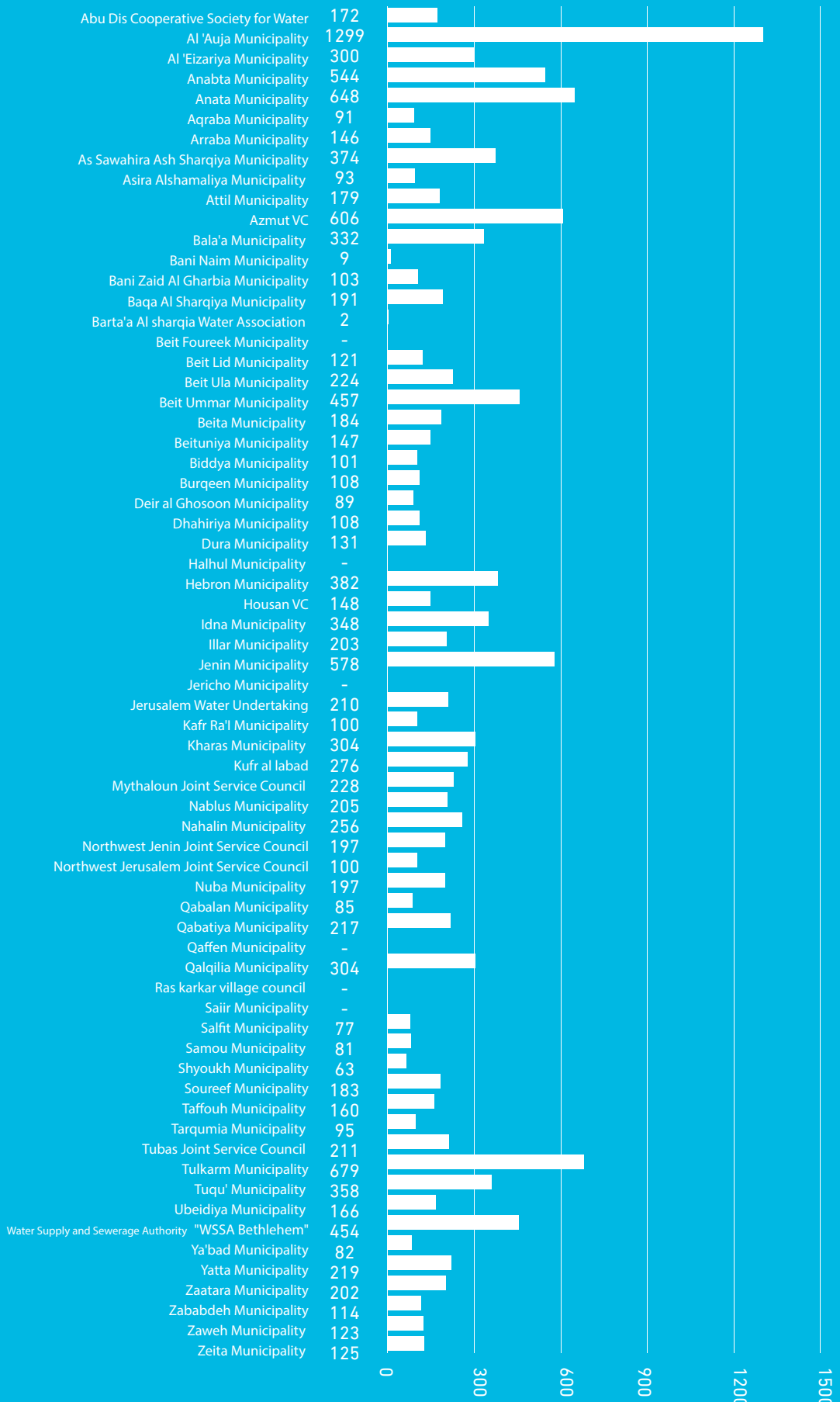
NRW per subscription a day

This indicator provides a detailed account of the quantity of unaccounted water charged to each active subscription to a service provider's network. Therefore, this indicator:

- Uses another method to estimate extra costs incurred by each legal subscription, as well as the cost of actual consumption recorded on meters.
- Measures extra quantities of water that can be available to the population if the amount of unaccounted water is reduced.
- Helps decision makers at various local government units to determine the real need for new water sources compared to available ones.
- Helps the WSRC to monitor the levels of service provided to the population and set targets to improve the performance of service providers with a view to attaining water availability standards in line with local and international laws and norms.
- When relevant outputs are used by service providers and other stakeholders, assists in any public awareness raising campaigns to reduce the amount of unaccounted water.



Non-revenue water per connection per day (l/c/d) / West Bank



Financial indicators

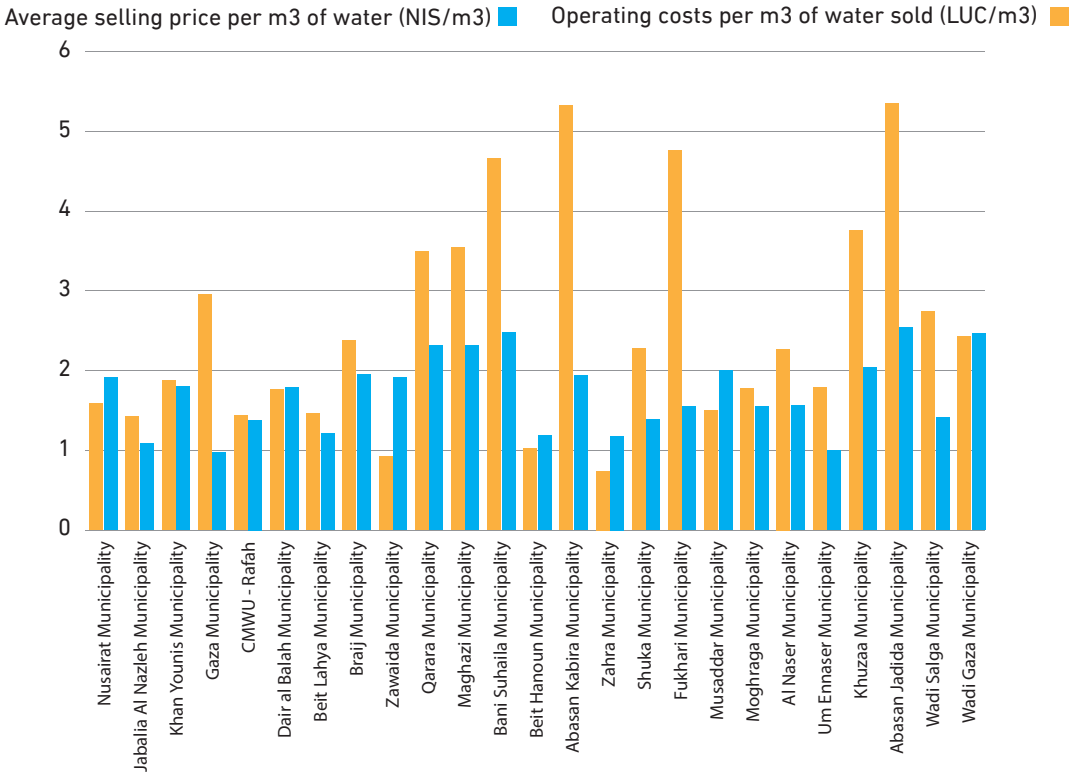
Average selling price of a cubic metre (CM) of water and operating costs per CM of water sold

Financial sustainability of service provision relies on many indicators, including operating cost, selling price, loss, etc. However, this indicator is particularly important because it serves as the major determinant of income by some service providers. It also includes a reference that shows how much a service provider is aware of the real costs and compliant with governance rules and principles.

Calculation of the selling price does not take account of the direct and indirect financial support provided by the Palestinian government. This calculation can, therefore, be incomplete and in need of a comprehensive review compared to operating costs (production, distribution, and management) per CM of water sold.

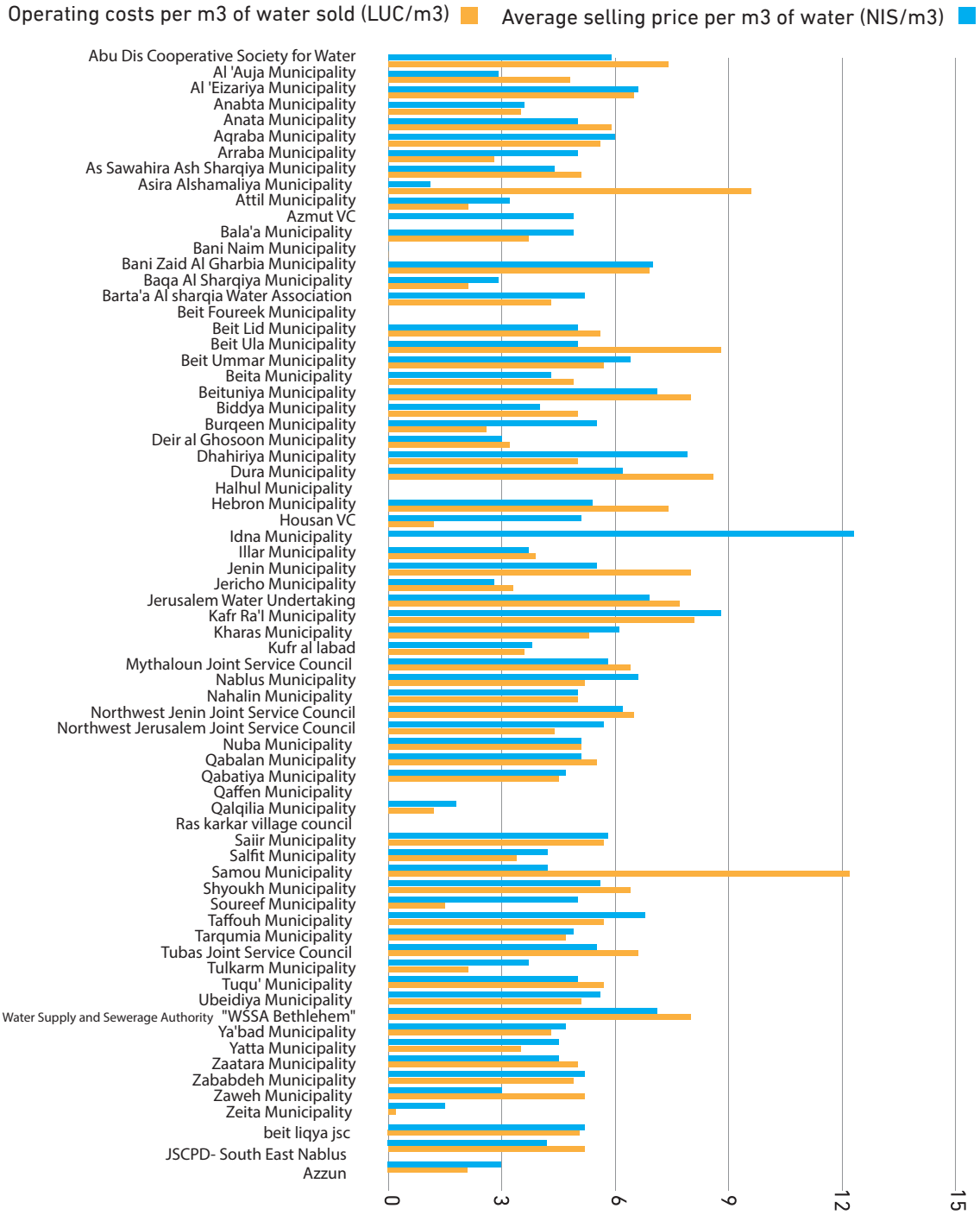
Some might question price equitability within the same homeland in view of significant variations in average selling price per CM of water from one service provider to another as a consequence of disparities in operating costs. Still, calculation of the water tariff has been standardised in accordance with the Regulation on Water Tariff No. 1 of 2013. All service providers should comply with this tariff rate until the new Tariff Regulation is in effect.

As noted in previous reports, attention must be given to the fact that the "average selling price of CM of water" does not indicate the tariff rate set by a service provider. It is a general indicator of the average selling price per CM of water to be compared to the operating costs of a service provider. This indicator is calculated by means of total water sales billed in NIS relative to total domestic, commercial, tourism, industrial, bulk, and tank water sales by CM.



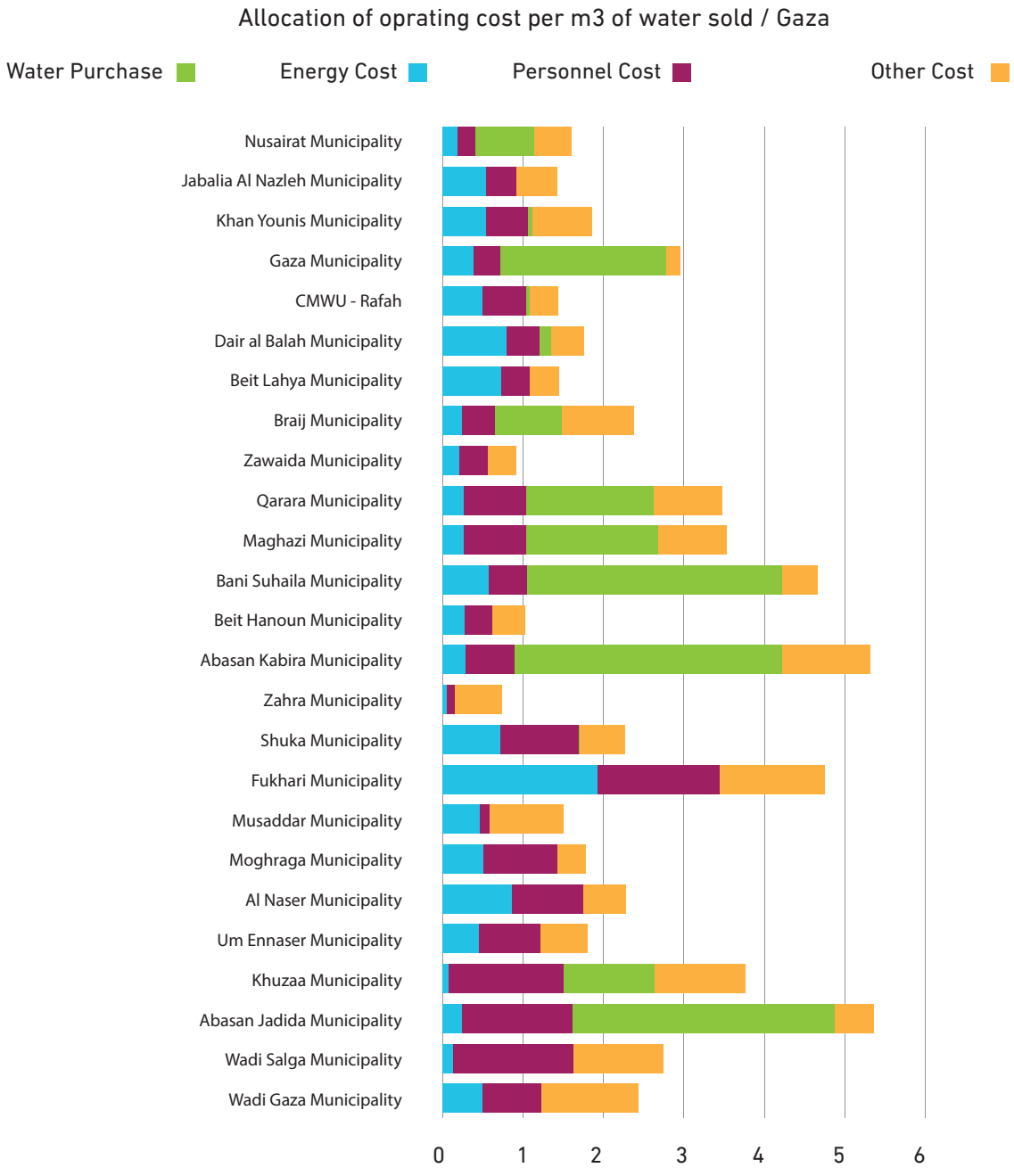
As shown later by the efficiency indicator, there is a large negative variance between the average selling price and operating costs per CM of water. The variance reflects a service provider's inability to cover its operating costs. This is one of the main reasons for declining operational performance of many service providers. In this case, a service provider needs to review its operating costs in order to fulfil two objectives:

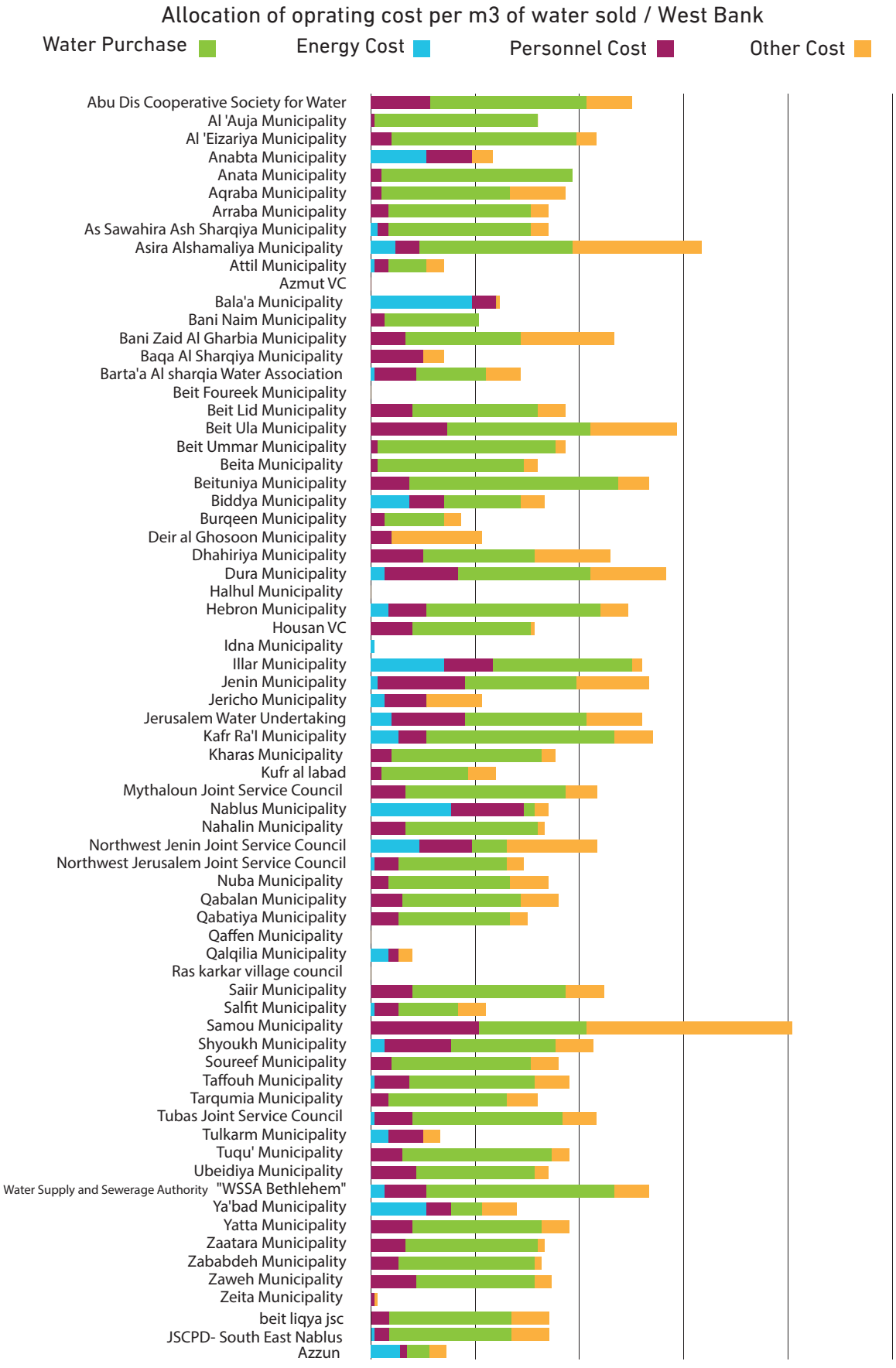
- Make sure that there are no unjustified extra costs; and
- Revise the applicable tariff in line with the operating cost so that the service provider can guarantee that they do not incur losses and that they are able to cover their operating costs in the first stage as well as all costs at later stages. This will ensure a sustainable and enhanced quality of service delivery.



The chart below shows a detailed account of operating costs per service provider. These are provided in detail in Annexes 3 and 4 for each service provider, including:

- Staff cost per CM of water sold.
- Purchased water cost per CM of water sold.
- Energy cost per CM of water sold.
- Other operating costs per CM of water sold.




Allocation of oprating cost per m3 of water sold / West Bank
Water Purchase
Energy Cost
Personnel Cost
Other Cost
Abu Dis Cooperative Society for Water
Al 'Auja Municipality
Al 'Eizariya Municipality
Anabta Municipality
Anata Municipality
Aqraba Municipality
Arraba Municipality
As Sawahira Ash Sharqiya Municipality
Asira Alshamaliya Municipality
Attil Municipality
Azmut VC
Bala'a Municipality
Bani Naim Municipality
Bani Zaid Al Gharbia Municipality
Baqa Al Sharqiya Municipality
Barta'a Al sharqia Water Association
Beit Foureek Municipality
Beit Lid Municipality
Beit Ula Municipality
Beit Ummar Municipality
Beita Municipality
Beituniya Municipality
Biddya Municipality
Burqeen Municipality
Deir al Ghosoon Municipality
Dhahiriya Municipality
Dura Municipality
Halhul Municipality
Hebron Municipality
Housan VC
Idna Municipality
Illar Municipality
Jenin Municipality
Jericho Municipality
Jerusalem Water Undertaking
Kafr Ra'I Municipality
Kharas Municipality
Kufr al labad
Mythaloun Joint Service Council
Nablus Municipality
Nahalin Municipality
Northwest Jenin Joint Service Council
Northwest Jerusalem Joint Service Council
Nuba Municipality
Qabalan Municipality
Qabatiya Municipality
Qaffen Municipality
Qalqilia Municipality
Ras karkar village council
Saiir Municipality
Salfit Municipality
Samou Municipality
Shyoukh Municipality
Soureef Municipality
Taffouh Municipality
Tarqumia Municipality
Tubas Joint Service Council
Tulkarm Municipality
Tuqu' Municipality
Ubeidiya Municipality
Water Supply and Sewerage Authority "WSSA Bethlehem"
Ya'bad Municipality
Yatta Municipality
Zaatara Municipality
Zababdeh Municipality
Zaweh Municipality
Zeita Municipality
beit liqya jsc
JSCPD- South East Nablus
Azzun

Energy expenses vary according to the operations carried out by service providers. They are the highest in Nablus, representing 40 percent of total operating costs relative to the number of wells operated by the Nablus Municipality as well as existing pumping stations, which pump water to different altitudes depending on the topography of serviced areas. By contrast, energy expenses are lower, and virtually unaccounted for, by service providers who rely on purchased water as a sole source of drinking water.

It should be noted that high energy expenses may be driven by energy loss. Therefore, a review and audit should be initiated to verify energy loss and efficiency of used pumps.

Of note, the Palestinian government encourages a shift toward alternative energy sources. This transformation has been embraced by some owners of wells, particularly in northern West Bank. Having reviewed the outcomes of the shift to alternative energy and taking account of economic and environmental impacts, the WSRC believes that it is incumbent on service providers to consider this issue with a great deal of attention and take it seriously. This is especially the case as donors run projects and show interest in this approach.

Compared to service providers in the West Bank, energy accounts for a large portion of water service operating expenses in the Gaza Strip. Energy cost is high particularly when diesel power generators are used. For example, in Deir al-Balah, energy costs more than 50 percent of the total cost of a cubic metre of water.

Worthy of note is that purchased water does not only include water purchased from the West Bank Water Department (WBWD), but also covers water bought from private wells. Hence, the indicator of purchased water cost does not refer to the selling price at the WBWD (NIS 2.6 per CM).

This indicator is influenced by other factors, such as the quantity of unaccounted water. For instance, if the water loss is high, the cost of purchased water will be higher in spite of the fact that the purchase price from the WBWD is unchanged. However, the service provider adds higher operating and administrative expenses than those associated with the water sold.

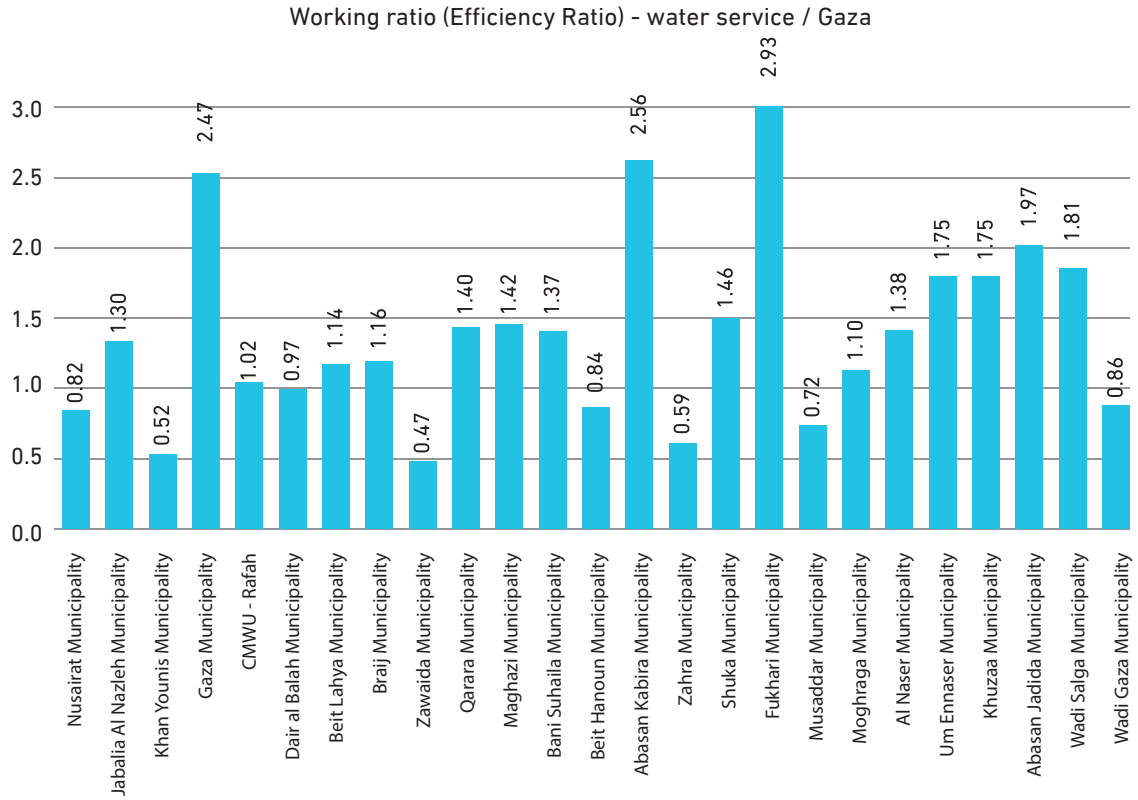
Water price is subsidised by the Palestinian government, which affords a portion of bulk purchase costs. Many consumers are not aware of this fact. While service providers purchase water at NIS 2.6 per cubic metre through the WBWD, the latter buys water at NIS 3.2 from the Israeli water company (Mekorot). The Department also incurs additional operating costs. z

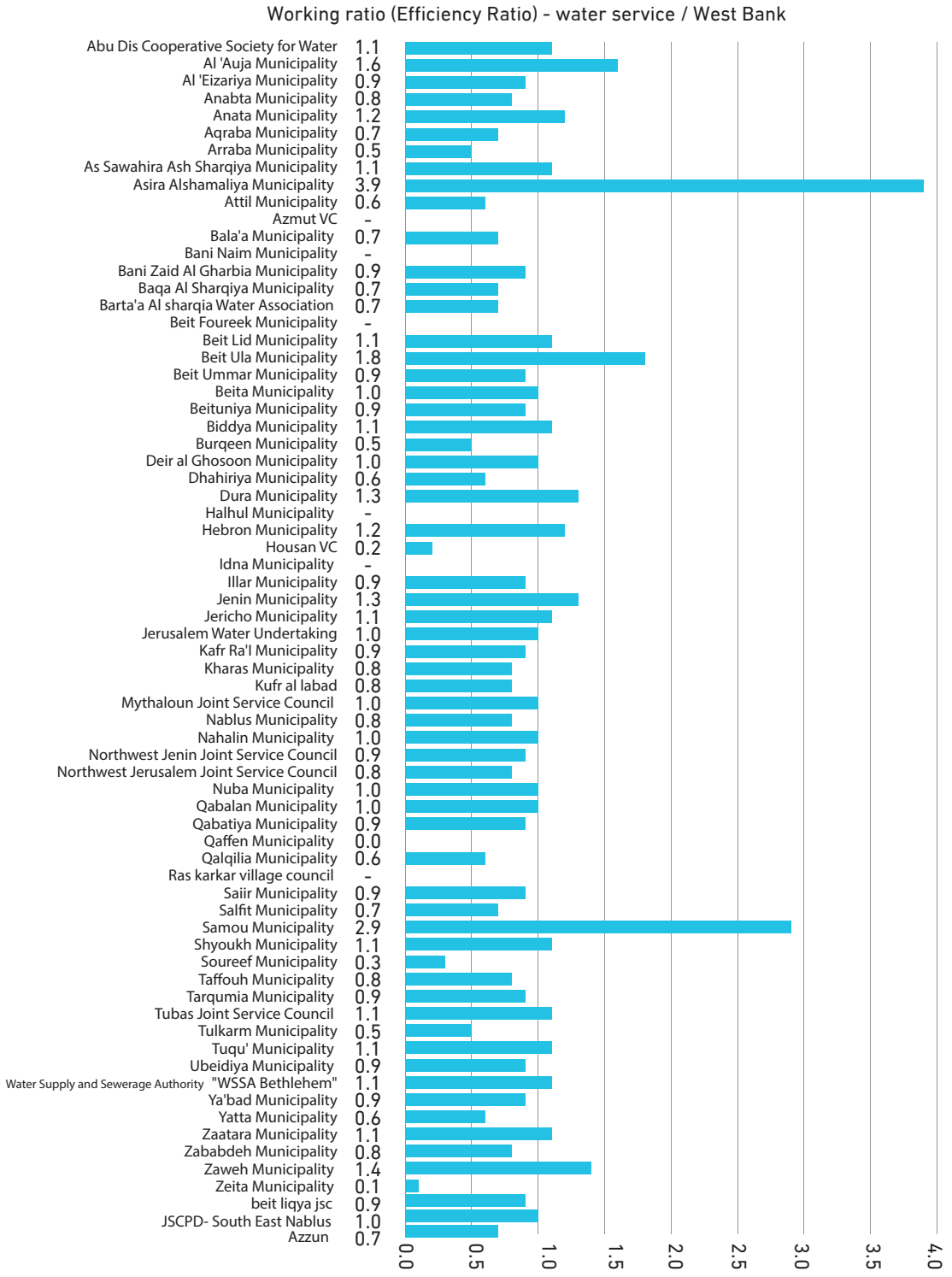
The Working ratio – Water service

Workload is calculated by dividing total operating, maintenance, and administrative expenses (excluding consumption) by total billed operating revenues. If the workload is greater than 1, total operating and administrative costs are higher than billed operating revenues. Hence, there is a financial deficit in the operating cycle. By contrast, if the workload is less than 1, billed operating revenues are higher than the operating cost and administrative expenses. This means that the service provider is generating a surplus in the operating cycle, which can cover all or part of the consumption expenses and capital costs. If billing statements are valid and reliable, the workload provides an indicator as to whether the tariff level is sufficient to cover operating and maintenance expenses or not.

Workload is a key indicator to measure performance. It reflects the efficiency of the tariff system, mechanism for calculating the tariff rate, operational efficiency, expenses, wastage, sustainability, unsustainability, and other important indicators in relation to service providers.

In the West Bank, the highest value of this indicator was recorded in Asira al-Shamaliya and Beit Ula. This is attributed to the increasing amounts of unaccounted water and inefficiency of applicable tariff. As noted under the indicator of unaccounted water, these quantities incur hefty losses on service providers. In the Gaza Strip, it is noted that the majority of service providers are affected by operating losses, with the highest losses seen in Gaza city, Abasan al-Kabira, and Al-Fukhari.





A mistake made by service providers gives erroneous results of this indicator. Namely, service providers fail to provide a proper estimation of the common costs charged by other sections (particularly at municipalities). Water sections and departments operate within a municipality as a whole. Municipality sections provide costs and services to water departments and sections, such as salaries of the mayor and engineering staff (at municipalities where water service falls .(within the ambit of engineering sections

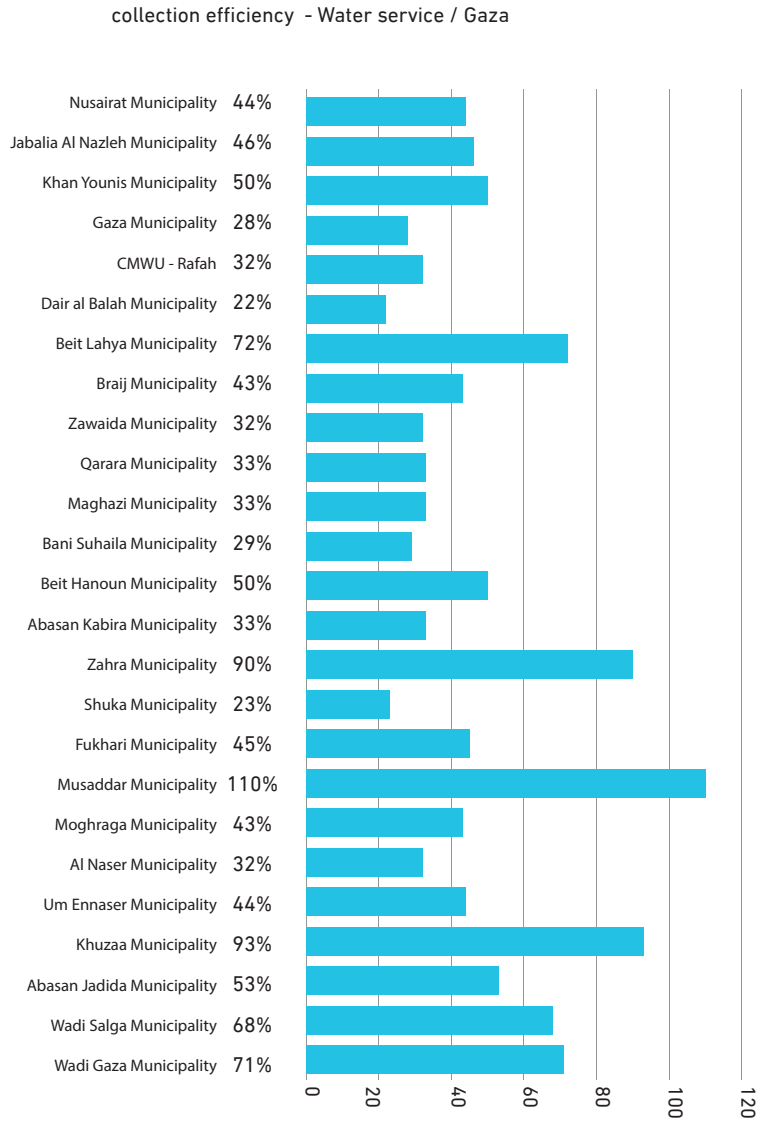
Efficiency of collection – Water service

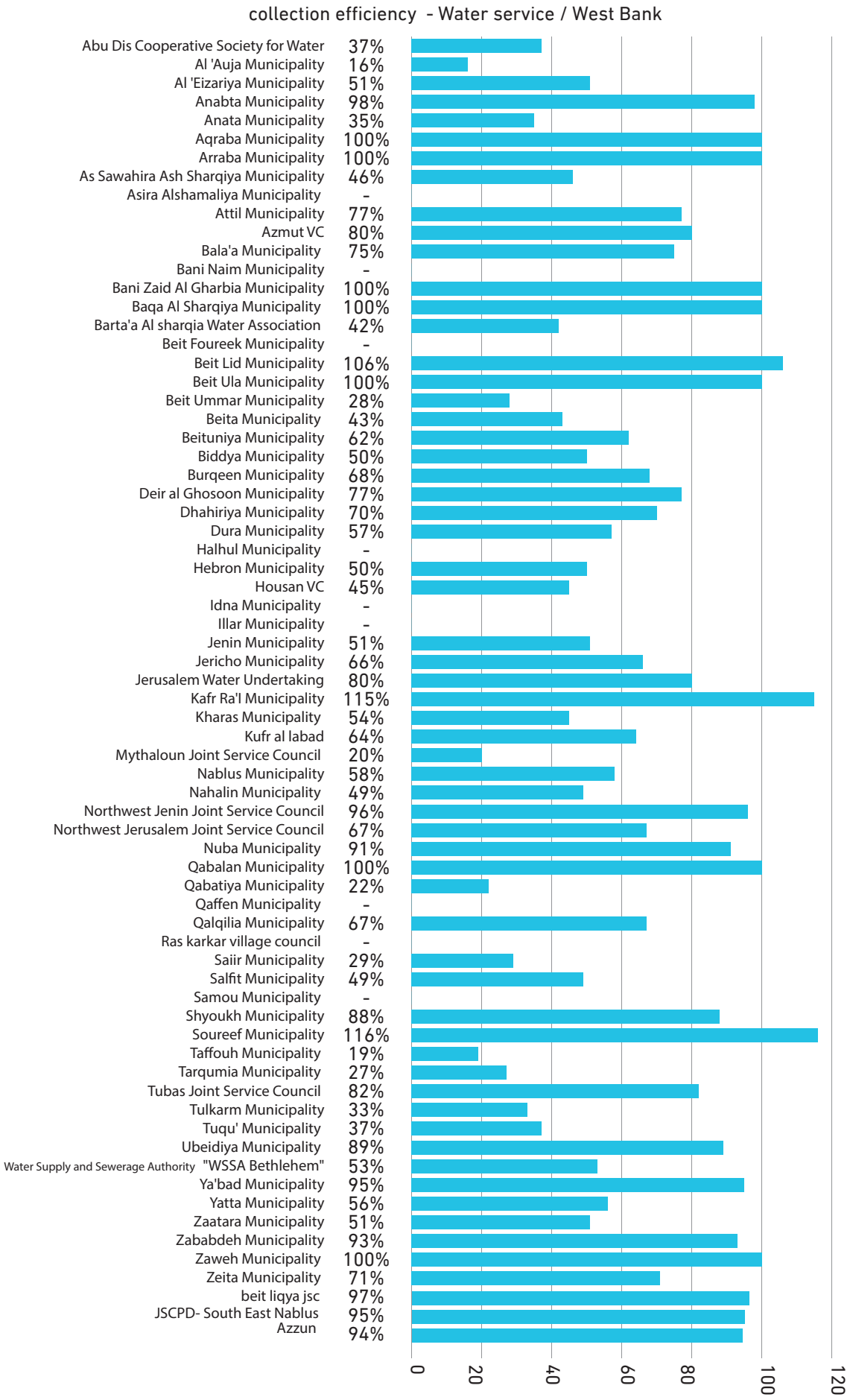
Some water and wastewater service providers might attribute the decline in collection rates to the COVID-19 pandemic and its impact on the overall economic situation. However accurate this is for some service providers, it cannot be taken for granted. Certain service providers had not made an effort to increase collection rates even prior to the pandemic.

Accessed data show that collection rates continue to be generally low, particularly in the Gaza Strip. In addition to the consumers' willingness to pay for the service, these rates reflect the level of competency of the service provider's staff in performing assigned tasks. The West Bank recorded very low collection rates, reaching down to 16, 10, and 20 percent in Al-Auja, Taffuh, and Meithalun Service Council respectively.

The WSRC believes that the Ministry of Local Government and MoF play a pivotal role in urging and encouraging service providers to exert a greater effort in this respect. This indicator should also be adopted by the Municipal Development and Lending Fund (MDLF), MoF, PWA, and donors when determining the amount of support to be granted to any service provider in the future.

In the Gaza Strip, Deir al-Balah, Al-Shoka, and Gaza city recorded as low collection rates as 22, 23, and 28 percent, respectively, of the amount of the monthly bill.




collection efficiency - Water service / West Bank
Abu Dis Cooperative Society for Water 37%
Al 'Auja Municipality 16%
Al 'Eizariya Municipality 51%
Anabta Municipality 98%
Anata Municipality 35%
Aqraba Municipality 100%
Arraba Municipality 100%
As Sawahira Ash Sharqiya Municipality 46%
Asira Alshamaliya Municipality -
Attil Municipality 77%
Azmut VC 80%
Bala'a Municipality 75%
Bani Naim Municipality -
Bani Zaid Al Gharbia Municipality 100%
Baqa Al Sharqiya Municipality 100%
Barta'a Al sharqia Water Association 42%
Beit Foureek Municipality -
Beit Lid Municipality 106%
Beit Ula Municipality 100%
Beit Ummar Municipality 28%
Beita Municipality 43%
Beituniya Municipality 62%
Biddya Municipality 50%
Burqeen Municipality 68%
Deir al Ghosoon Municipality 77%
Dhahiriya Municipality 70%
Dura Municipality 57%
Halhul Municipality -
Hebron Municipality 50%
Housan VC 45%
Idna Municipality -
Illar Municipality -
Jenin Municipality 51%
Jericho Municipality 66%
Jerusalem Water Undertaking 80%
Kafr Ra'I Municipality 115%
Kharas Municipality 54%
Kufr al labad 64%
Mythaloun Joint Service Council 20%
Nablus Municipality 58%
Nahalin Municipality 49%
Northwest Jenin Joint Service Council 96%
Northwest Jerusalem Joint Service Council 67%
Nuba Municipality 91%
Qabalan Municipality 100%
Qabatiya Municipality 22%
Qaffen Municipality -
Qalqilia Municipality 67%
Ras karkar village council -
Saiir Municipality 29%
Salfit Municipality 49%
Samou Municipality -
Shyoukh Municipality 88%
Soureef Municipality 116%
Taffouh Municipality 19%
Tarqumia Municipality 27%
Tubas Joint Service Council 82%
Tulkarm Municipality 33%
Tuqu' Municipality 37%
Ubeidiya Municipality 89%
Water Supply and Sewerage Authority "WSSA Bethlehem" 53%
Ya'bad Municipality 95%
Yatta Municipality 56%
Zaatara Municipality 51%
Zababdeh Municipality 93%
Zaweh Municipality 100%
Zeita Municipality 71%
beit liqya jsc 97%
JSCPD- South East Nablus 95%
Azzun 94%
0
20
40
60
80
100
120

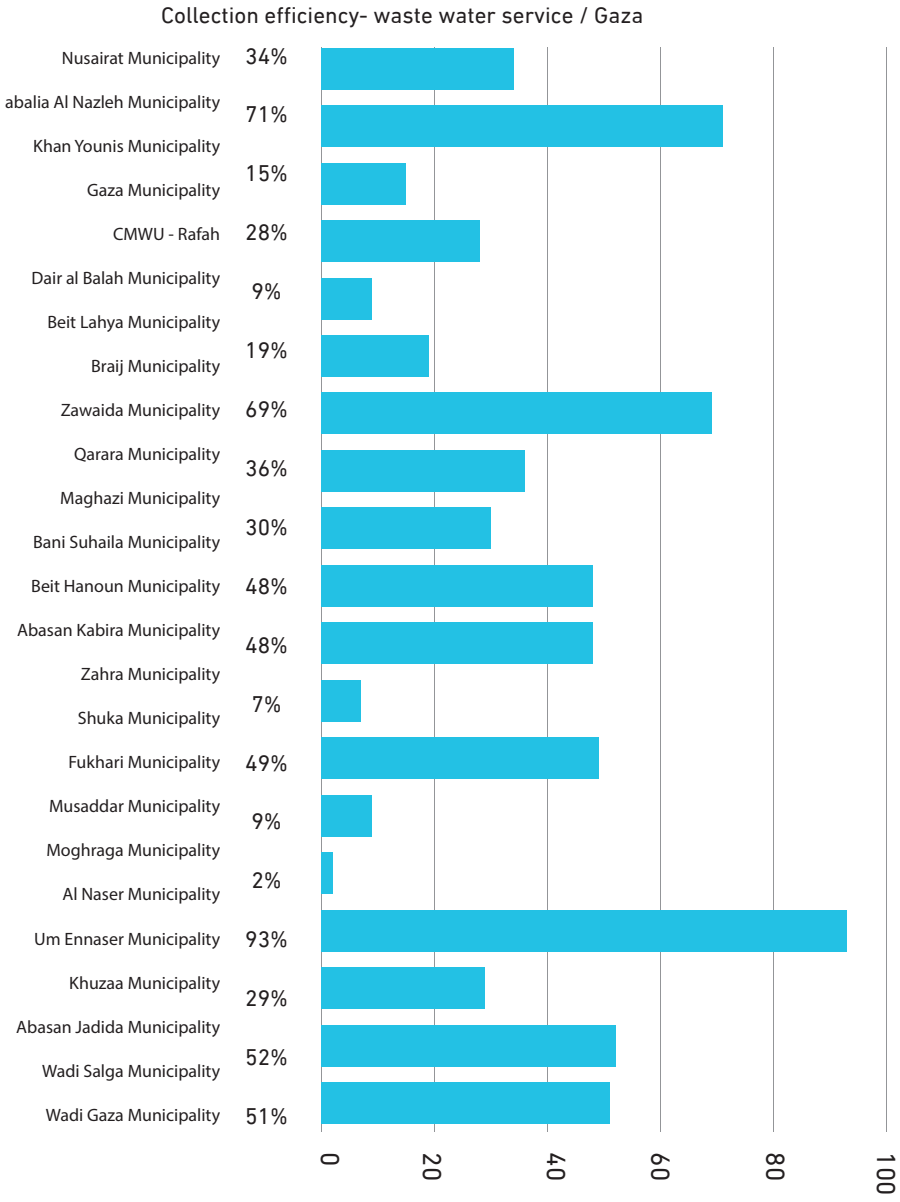
This indicator measures the collection rate of bills issued in the current year as well as of unpaid balances. The best collection rate should be close to 100 percent, where all bills of the current year are fully collected and outstanding balances of previous years are zero-sum.

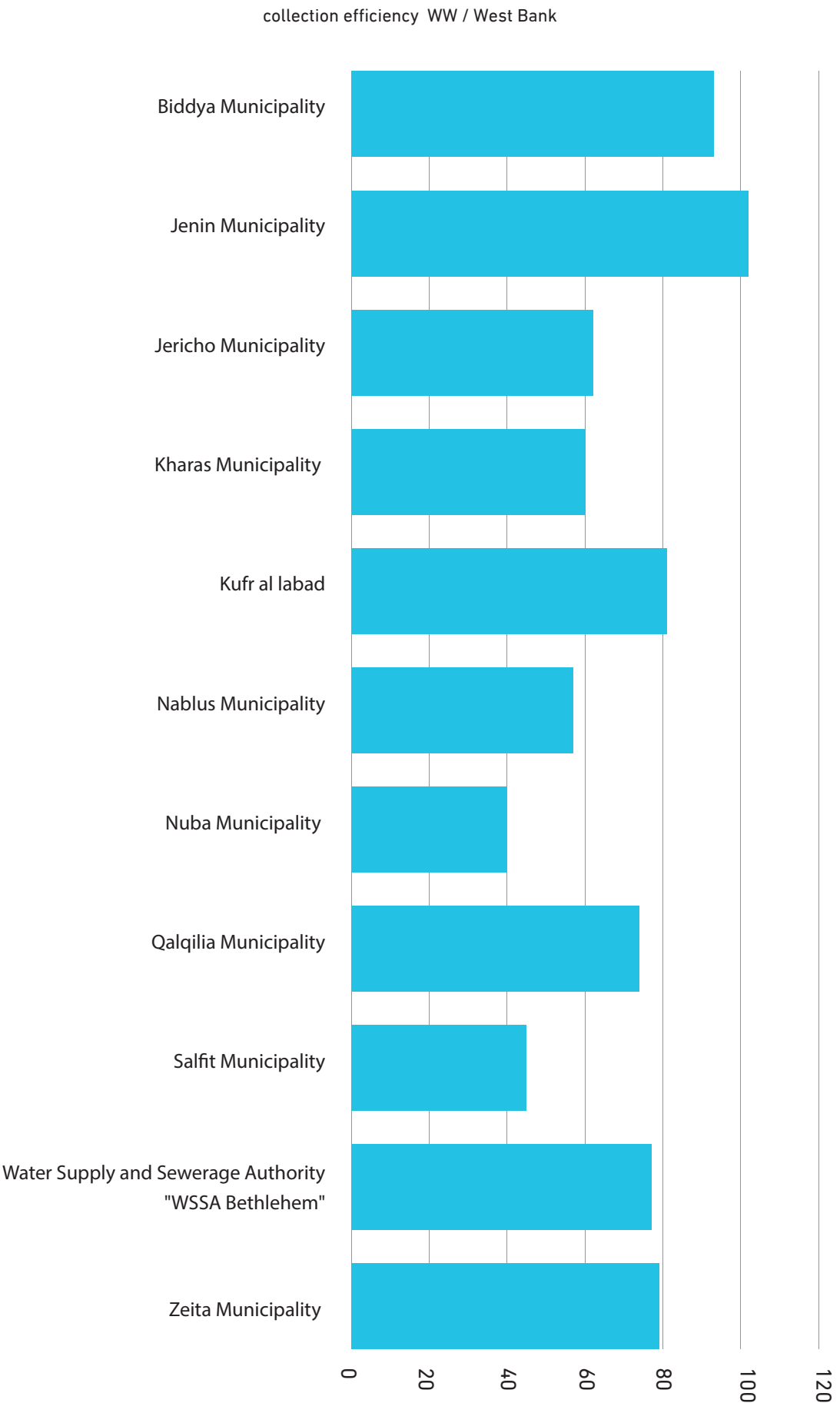
Some service providers demonstrate rates higher than 100 percent because they collect a portion of overdue debts plus current bills. So far, however, service providers lack a mechanism to separate current and past year collections. Collection is registered on an accumulative basis.

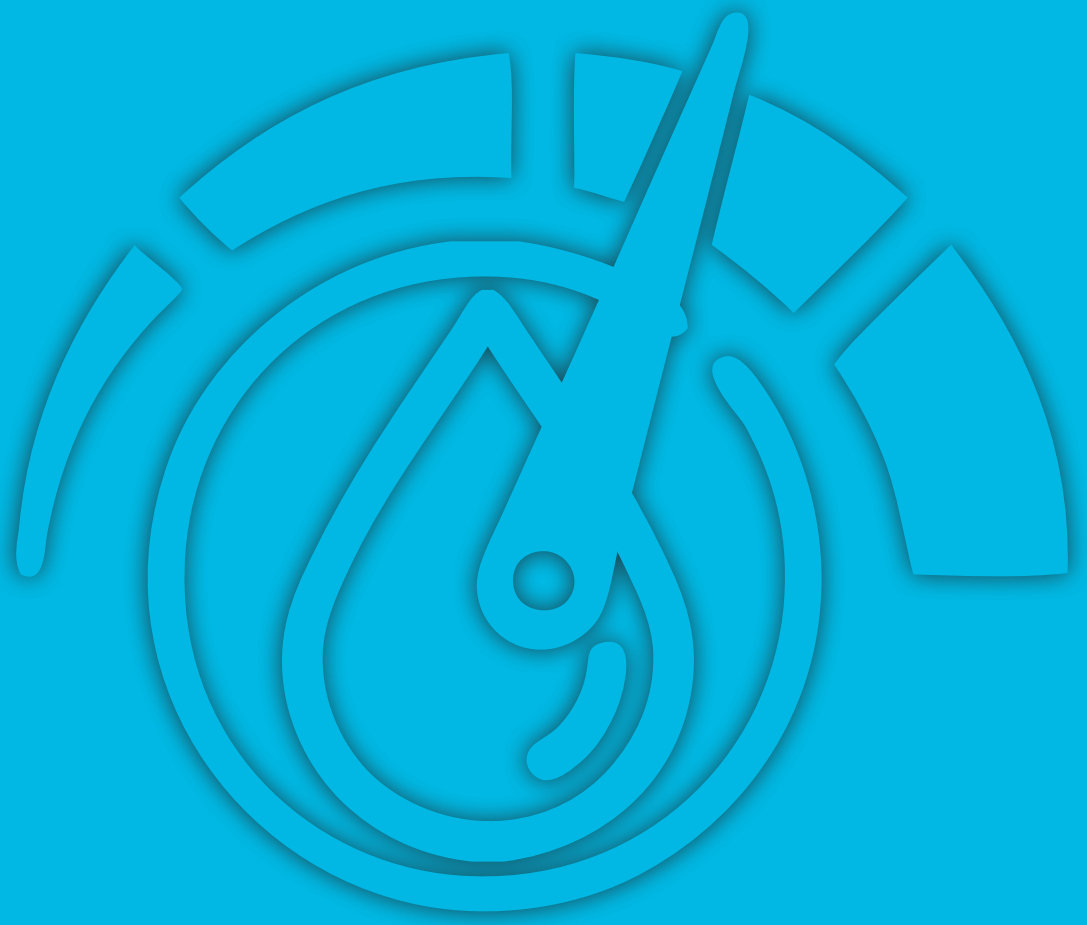
Efficiency of collection – Wastwater service

This indicator is still a source of concern for the WSRC because some service providers have already initiated the construction of wastewater treatment stations. However, the Council expects that these cannot be sustainable unless a mechanism is provided to increase the collection of sanitation bills.

In both the West Bank and the Gaza Strip, most sanitation service providers do not issue separate sanitation bills. Water consumption prices and sanitation fees are stated on the same bill. Service providers collect the fees against the total amount of the bill, which also includes items other than water and sanitation.




collection efficiency WW / West Bank
Biddya Municipality
Jenin Municipality
Jericho Municipality
Kharas Municipality
Kufr al labad
Nablus Municipality
Nuba Municipality
Qalqilia Municipality
Salfit Municipality
Water Supply and Sewerage Authority "WSSA Bethlehem"
Zeita Municipality
0
20
40
60
80
100
120



Indicators of water quality

In 2020, through a joint committee of the PWA and MoH, the WSRC closely followed up on some significant indicators of water quality, particularly free chlorine in water samples.

In general, contrary to national or international specifications, service providers, MoH, and PWA do not take adequate samples. Still, the WSRC follows up on and monitors indicators of water quality, using laboratory test results made available by service providers as well as data provided by the MoH. Of note, the PWA laboratory also provides some results of water sources.

The WSRC reviewed the MoH data, assessed some results, came up with some recommendations, particularly increased sampling, and reported findings to service providers and citizens. As mentioned above, the MoH regularly takes and tests water samples from different areas. In line with a specific sampling programme, these samples cover water sources, transmission lines, networks, and particular points, including houses and institutions. It should be noted that although they are not a party to this programme, service providers are informed of the test results in case immediate follow up is needed; e.g. a certain contamination is in place. Otherwise, service providers do not have access to the testing programme, sites, number or results of samples, or types of tests. Access is only provided when service providers submit an application to receive this information.

Indicators of quality assessment used by the WSRC include:

- Percentage of water samples (taken from the network, including main pipelines), containing free chlorine residual in the network and main pipelines.
- Percentage of water samples (taken from the source) free of total coliform bacteria contamination.
- Percentage of water samples (taken from the source), free of faecal coliform bacteria contamination.
- Percentage of water samples (taken from the network, including main pipelines), free of total coliform bacteria contamination.
- Percentage of water samples (taken from the network, including main pipelines), free of faecal coliform bacteria contamination.
- Microbial tests made.
- Percentage of water samples (taken from the source), free of nitrate contamination.

The WHO remains the main authoritative reference for determining the number of samples taken from the network on a monthly basis or showing how to assess whether results are in conformity with WHO standards.

Generally speaking, it is noted that the majority of groundwater sources, particularly wells, exhibit acceptable standards. This is not the case of springs and rainwater harvesting wells, however. The MoH has monitored many contamination cases in parts of distribution networks and tanks. Of note, these tanks belonged to citizens' homes or public facilities. More seriously, a major portion of these were installed at restaurants, schools, kindergartens, and bakeries.

A closer look at the results the WSRC obtained from the MoH shows that, at the level of the Northern Governorates, 95 percent of water samples were free of faecal bacteria in tandem with national standards. On the other hand, 89 percent .of water samples were free of total bacteria. This is not a good result, though

In terms of the level of free chlorine, just 75 percent of water samples fulfilled .Palestinian specifications

In the particulars, in the Northern Governorates, Tulkarem, Jenin, Qalqiliya, Jericho, and South Hebron witnessed levels of faecal or total bacteria beyond the maximum limit admissible by Palestinian specifications.

Jerusalem registered the lowest level of free chlorine, followed by South Hebron, Tulkarem, Qalqiliya, and Jenin.

In a nutshell, as emphasised by the PWA and WSRC, plans need to be finalised to protect water sources and accelerate wastewater collection, particularly in areas that recharge groundwater or areas more sensitive to water.

General remarks and recommendations on quality indicators

Apart from the overall weakness in sampling to test the content of free chlorine in networks, a large number of service providers across the West Bank governorates do not generally add chlorine to drinking water. Alternatively, added amounts are not compatible with local and international specifications.

Owing to the concerns raised by the PNA and donors as well as the delicate issue of drinking water quality, governorates across the Gaza Strip are fully committed to adding chlorine to water networks. However, parts of the network are contaminated. As a result, pollutants enter the grid through network faults or illegal connections.

Communications between service providers and MoH continue to be short. It is necessary that service providers keep copies of the results of tests conducted by the MoH or any other body. There is also a need to agree on a programme of tests.

Several service providers do not comply with the number of tests to be carried out in line with the WHO recommendations and Palestinian specifications. Immediate intervention is required to address and assess capacities available to service providers.

Nitrite contamination continues to pose a general problem across the Gaza Strip and heavily agricultural areas in other governorates, particularly in northern Palestine. Besides incompatibility with international specifications, this is an indication of a deteriorated water quality at source and in the network.

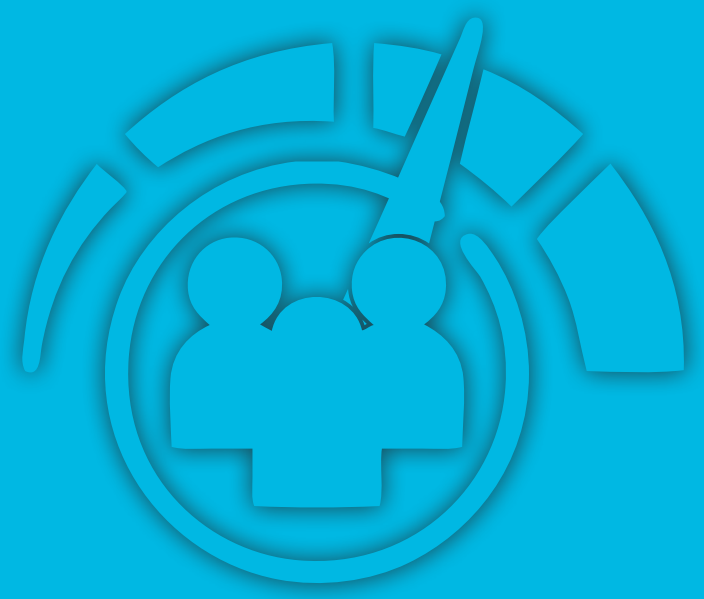
In agreement with the PWA, current water facilities will have the power to use agricultural wells or springs, or connect transmission lines to the main network. To this avail, water quality needs to be checked, ensuring that chlorine can be added under control to any water supplied by an additional source on the network.

The WSRC calls on service providers to check public reservoirs and urges citizens to pay attention to the cleanliness of private tanks and rainwater harvesting wells.

Attention must be paid to the quality of water in the places where it collected and stored (e.g. wells and tanks) at public facilities.

The vast majority of service providers, including the Coastal Municipalities Water Utility (CMWU), PWA, and MoH, do not take samples from distribution networks in order to test the "percentage of water samples free of total bacteria contamination" and "percentage of water samples free of faecal bacteria contamination".

Municipal and CMWU officials feel assured as long as the chlorination and sanitisation system is operated and managed both effectively and regularly and test results of residual chlorine are positive and within acceptable rates. Hence, the incidence of biological contamination in water distribution networks is slim.



Customer satisfaction indicators

Water and sanitation services are associated primarily with subscribers (consumers), quality and continuity of service provision, and level of subscriber satisfaction. However, all service providers in the Gaza Strip, including the CMWU in Rafah, do not keep accurate and reliable records, including data and classification of subscriber complaints and inquiries. These do not show the procedures implemented in each case or the time spent to address and respond to complaints and inquiries filed by subscribers.

Surprisingly, most municipalities across the Gaza Strip have received funds from the MDLF and other donors. Subscriber complaints and service centres were also established, equipped, and rehabilitated. However, mediocre efforts have been made to upgrade and modify document cycles and bureaucratic procedures that would facilitate subscriber transactions. All that has resulted in new and beautiful installations and offices. Still, subscribers need to visit and move from one staff office to another in order to complete transactions, lodge complaints, and submit inquiries.

Although subscriber service and complaints centres are established in many municipalities, it was noted that similar complaints and inquiries are received by several sections within the same municipality.

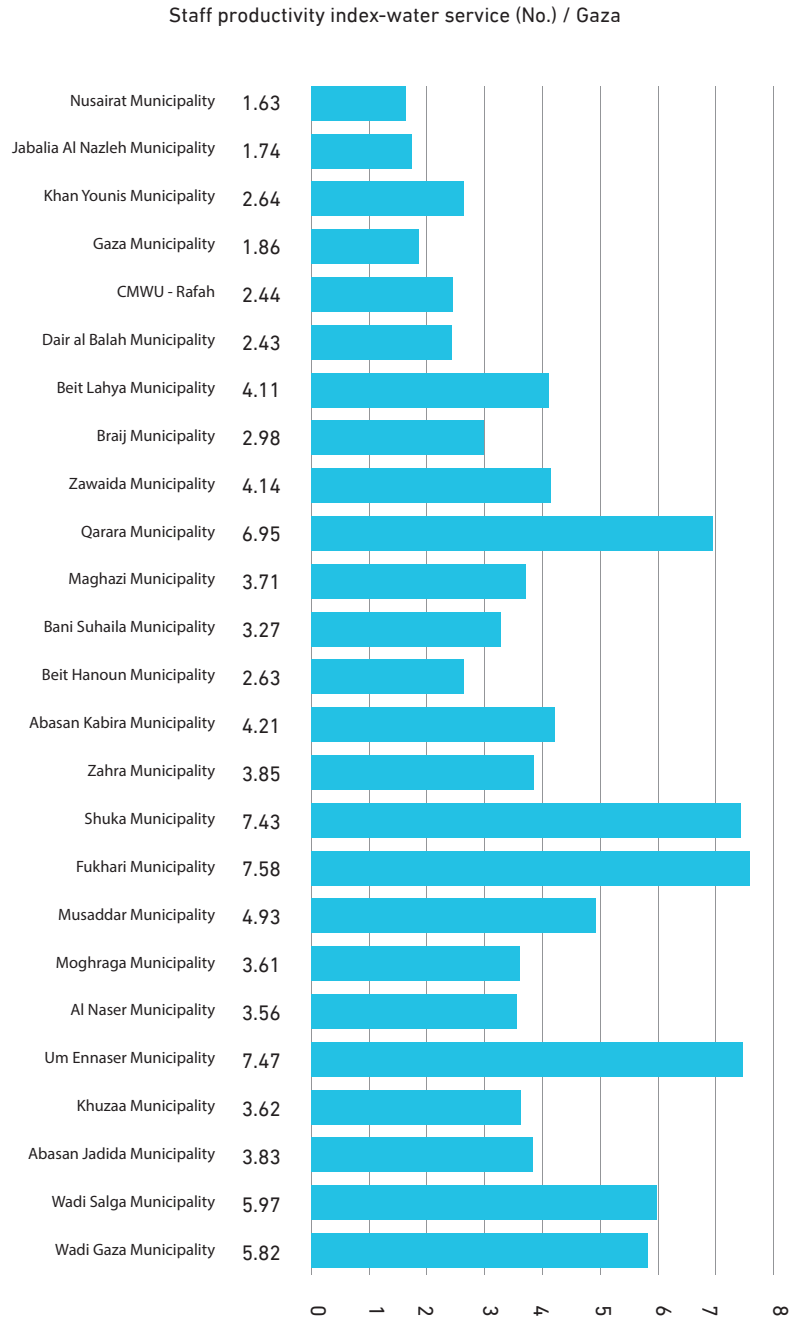
Responsible bodies and service sector regulators at municipalities do not ensure accountability for subscriber satisfaction indicators. They do not scrutinise the presence and adequacy of records for complaints and inquiries submitted by subscribers and citizens at large. As a result, service providers have been inattentive to providing a detailed documentation of subscriber complaints, complaint handling processes, and time needed to respond to and process these complaints.

Other indicators

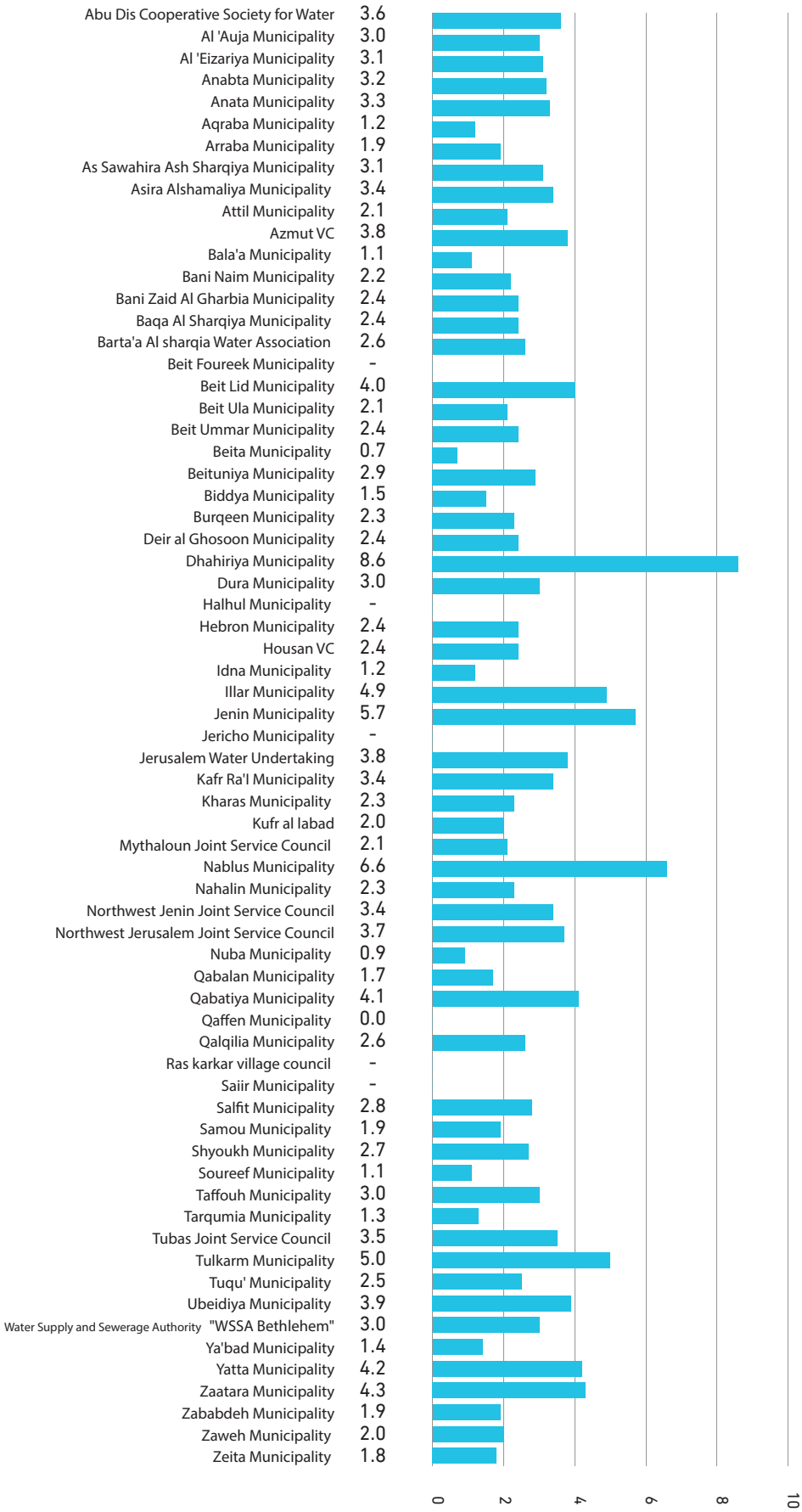
Employee productivity coefficient

This indicator is usually used to measure the efficiency of human resources management and effectiveness of task performance. The value of the indicator is calculated by dividing the number of fulltime employees by the number of service subscriptions, multiplied by 1,000. This indicator does not apply to service providers with less than 1,000 subscriptions. Calculation is based on the number of employees per 1,000 subscriptions.

Like others, this indicator does not accommodate an absolute comparison of service providers. Staffing needs vary according to the different operations carried out by a service provider. For example, the number of persons employed by a service provider, who runs its own wells and pumping stations, differs from another who only purchases and distributes water.



Staff productivity index-water service (No.) / West Bank

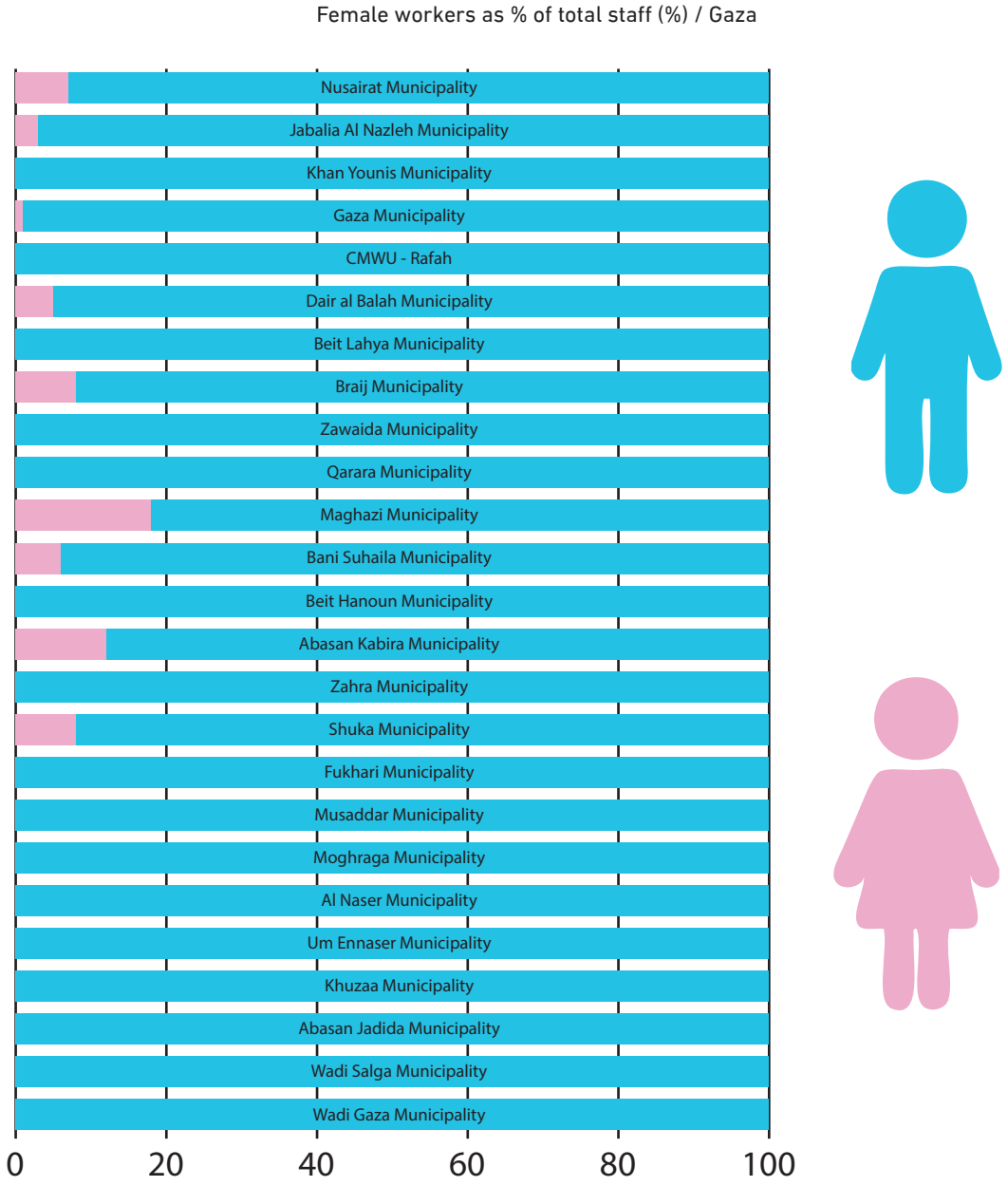


Staff participation by gender – Water service

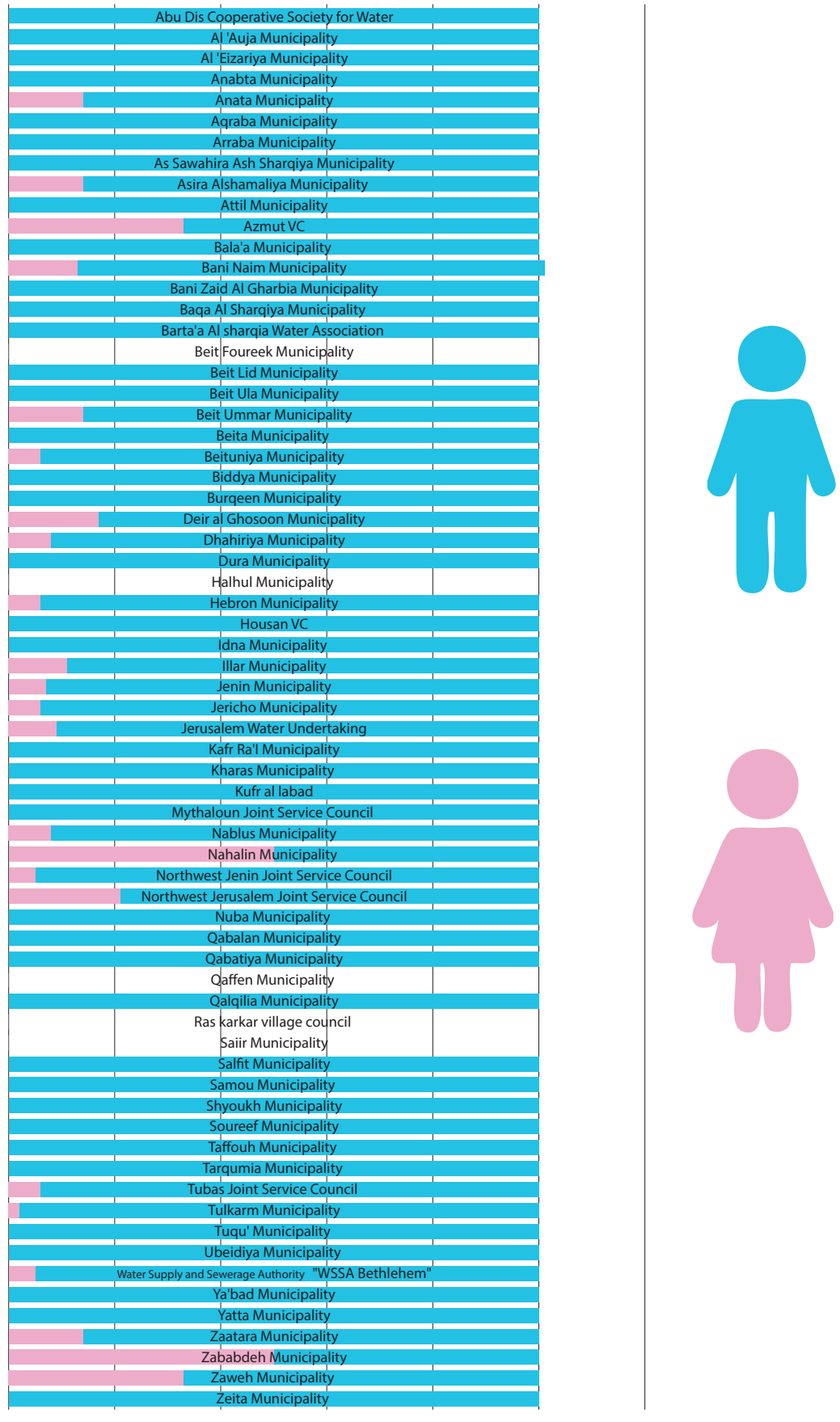
(Female staff as a percentage of all staff)

Female representation in the water and sanitation service sector continues to be very low in both the West Bank and the Gaza Strip.

The reason behind low female participation in the water service sector is that the majority of fulltime water and sanitation staff include collectors, maintenance workers, guards and operators of wells. These are predominantly male areas of work. At municipalities, females are mostly employed as receptionists, secretaries, or financial officers. However, these are not counted because this indicator only takes account of 100 percent fulltime water and sanitation staff.



Female workers as % of total staff (%) / West Bank



General recommendations

This report comes up with a number of specific recommendations in relation to particular operational aspects. Below is a summary of these recommendations and procedures, which we believe can contribute to sustainable operations of service providers, enhance performance, ensure consumer satisfaction, and achieve national water policies and strategies.

Whereas the WSRC approved the regulation on the establishment of joint water undertakings and licences, the fact that service providers are transformed into joint water undertakings is a key foundation for sustainability and improved service quality. Investment in services will, therefore, be more viable economically, socially, and environmentally.

Whereas the financial performance of service providers does not bode well for sustainability or full capacity for performance enhancement, the Unified Tariff Regulation approved by the Council of Ministers provides a main leverage to improve a number of indicators. The fact that service providers fail to increase the efficiency of collection must be visible to agencies that offer grants, assistance, and projects, regardless of the donor.

A delineation of the types of consumption and categorisation of subscriptions continue to be a matter of grave concern for the PWA and WSRC. Accordingly, expedited action needs to be taken to implement this principle in tandem with the Law by Decree on Water No. 14 of 2014 as well as PWA policies and strategies. This should further maintain sustainable operations of service providers.

The quantities of water loss / unaccounted water continued to be high and incommensurate with the Palestinian water situation given water scarcity, Israel's control, and high cost of transmission to citizens. Therefore, meaningful procedures and decisions are needed, as a first stage, to deal with service providers with more than 40 percent of unaccounted water. This percentage will be reduced on a gradual basis in the future.

To assess water quality, the number of tests conducted by various bodies are not compatible with Palestinian standards and specifications. Hence, this issue needs to be subject of a comprehensive review. A detailed protocol on the number and quality of tests will be developed in line with Palestinian specifications.

Although a significant number of women enrol in water-related university programmes, women's contribution to water service provision is still below the desired minimum level, which we wish to attain in Palestine. Before practical solutions are devised, expedited action is needed to conduct more studies on reasons for the reluctance of women to engage in this sector.

The WSRC does not publish indicators on complaints. As provided for by the Law by Decree on Water, the Council will therefore propose a regulation on complaints. The WSRC hopes that all service providers begin to record and document the complaints they receive.

There is an immediate need to assess the extent to which service providers are aware of the principles of service delivery governance. Even though compliance is required by all service providers without exception, advice and training will be provided to those wishing to promote their commitment in this area.

Plans for the protection of water sources are still incomplete by many service providers. This is evident by the test results the WSRC has obtained from the MoH.

Many service providers lack operational control plans. Thus, the WSRC will address this issue in coordination with the PWA. It is noted that the WSRC has recently compiled a training manual for operational control.