



**WSRC**

مجلس تنظيم قطاع المياه  
WATER SECTOR REGULATORY COUNCIL

PALESTINE | فلسطين

# Performance Monitoring Report for Water and Wastewater service providers in Palestine - 2023



August 2024



**Prime Minister**  
**H.E. Dr. Mohammed Mustafa**



**President of the State of Palestine  
Mahmoud Abbas**



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## A Message from the Chairman

More than a decade has passed since the Council began its work, consistent improvement and development in performance have remained our hallmark. Coordination with partners continues to evolve and improve, as does the reliability of data issued by the Council.

This report is being issued during a time of ongoing aggression affecting Gaza and several areas in the West Bank, which has prevented the Council from obtaining complete annual data for Gaza. Although the Council was able to gather data for the first six months of the year in Gaza. However, publishing it now might be misleading, as all aspects of water and wastewater services have changed significantly since October 7, 2023. However, the Council has documented certain observations about the state of services in Gaza, which will be presented in this report. It is important to note that these reflect conditions only on the date of documentation and may have changed immediately afterward.



Despite the notable improvement in the council's performance, its financial sustainability remains heavily dependent on the economic reality in Palestine. This is because, as stipulated by Water Law No. (14) of 2014, the council's funding relies on service fees paid by service providers, which are, in turn, influenced by their financial performance and the overall economic conditions in the country.

As the Council reviews its current strategic plan, the main challenge lies in ensuring the sustainability of water and wastewater services in Palestine, creating opportunities to support marginalized groups, and reducing undue costs for consumers. Therefore, sustainability is of utmost importance.

To achieve this, advancing the concept of establishing regional water utilities and implementing all aspects of the Water Sector Reform Program will be essential. While the future holds promise, the task ahead is substantial, and the challenges are many. Nevertheless, I want to emphasize that each new day brings us the opportunity to work together, explore new possibilities, and improve upon past achievements.

In this regard, the Board of Directors would like to extend its sincere gratitude and appreciation to the Government of the Netherlands, which has steadfastly supported the Council by providing technical and financial assistance, enabling the Council to reach where it stands today.

**Mohammad Aouni Abu Ramadan**  
Chairman of the Board

## A Message from the CEO

We are just a few years away from 2030, the target year for achieving Sustainable Development Goal (SDG No.6), which aims to ensure access to safe drinking water, adequate wastewater, and equitable hygiene for all. However, statistics and data collected by the Council thus far indicate that Palestine is still behind in meeting this goal. Despite increasing efforts, activities, and projects aimed at accelerating progress, and the implementation of many components of the Water Sector Reform Program, significant obstacles remain in expanding access to services among them the occupation and its control over land and water resources.

The Council, alongside the Palestinian Water Authority, works continuously to collect, verify, and publish data, benchmark service providers' performance, conduct meetings to evaluate progress or regression, offer guidance, set annual goals, and review tariffs. However, achieving SDG 6 remains under relentless pressure that will not ease until the occupation ends.

Currently, over fifty water service providers are still unable to supply more than fifty liters per capita per day, and more than 60% of the population is without access to wastewater networks. Additionally, less than 35% of collected wastewater is treated, meaning that the majority of residents in the West Bank lack access to wastewater services that meet World Health Organization standards and Sustainable Development Goals.

Since October 7, 2023, service providers have experienced a significant decline in financial performance, with consumer payment compliance dropping in response to the financial and economic situation in the country. This decline is especially pronounced due to the halt in Palestinian labor opportunities in Israel and the inability of the Palestinian Authority to fully pay its employees' salaries.

Despite these challenges, many service providers have achieved notable progress in several areas, including efforts to reduce water losses, expand networks, improve financial performance after tariff adjustments, and address customer complaints. Additionally, there has been a focus on enhancing opportunities for women and youth to participate in the water and wastewater services sector.

Although this year's report does not include performance indicators for the Gaza Strip for 2023, it does present technical, financial, and operational data for service providers in the West Bank. As in previous years, the Council was able to target 284 service providers, though some smaller providers continue to struggle with submitting their data on time.



**Mohammad Saeed Al-Humaidi**  
CEO





## Introduction

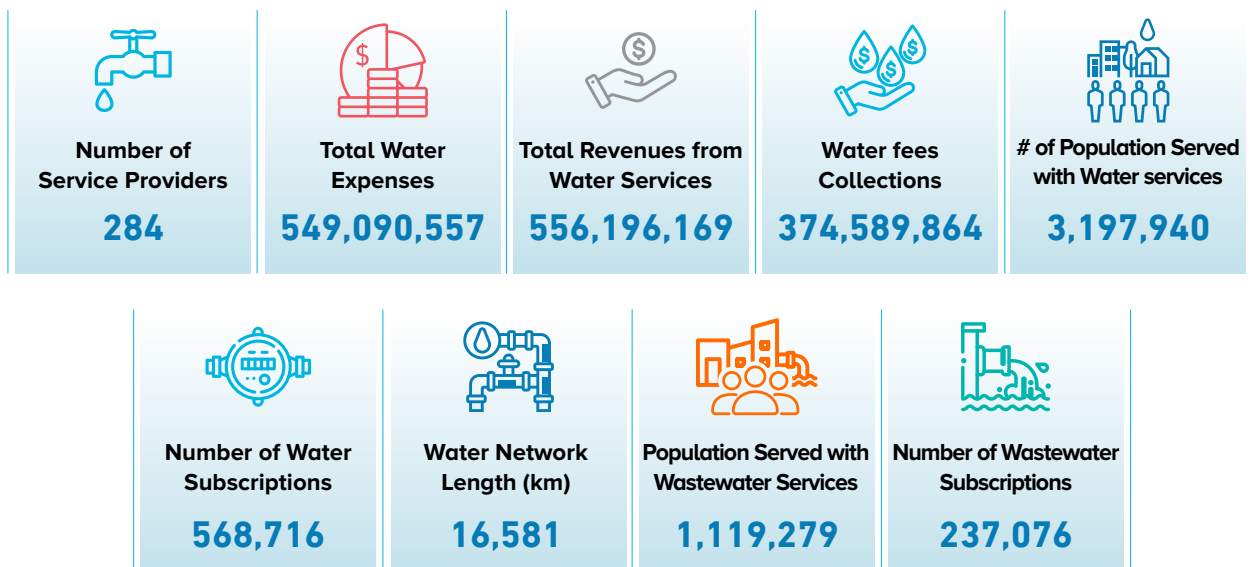
The Annual Performance Indicators Report aims to analyze and assess the efficiency and effectiveness of service delivery to citizens through globally recognized key performance indicators. This report highlights the extent to which service providers have benefited from projects provided to them and how these projects have contributed to improving the quality and standards of services nationwide. It also examines efforts made to advance the Water Sector Reform Plan in Palestine, with the overarching goal of providing high-quality services at affordable prices that consumers can manage and sustain.

In this report, the Water Sector Regulatory Council targeted all 284 water and wastewater service providers in the West Bank, comprising water utilities, water authorities, joint service councils, water associations, municipalities, and village councils, who provide services continuously throughout the year in accordance with international standards. Most service providers submit the required data and supporting documents to the Council; however, some providers did not submit data in a manner that allowed the Council to calculate their performance indicators.

In Gaza, due to the ongoing conflict, the Council was unable to collect detailed data from the 25 service providers working in Gaza strip. However, quarterly data for the first half of 2023 was obtained from service providers in Gaza.

Based on immediate findings, over 98% of the population in the West Bank is served by water services, while approximately 35% of the population receives wastewater services, indicating that the vast majority of Palestinians are covered by at least one of these essential services.

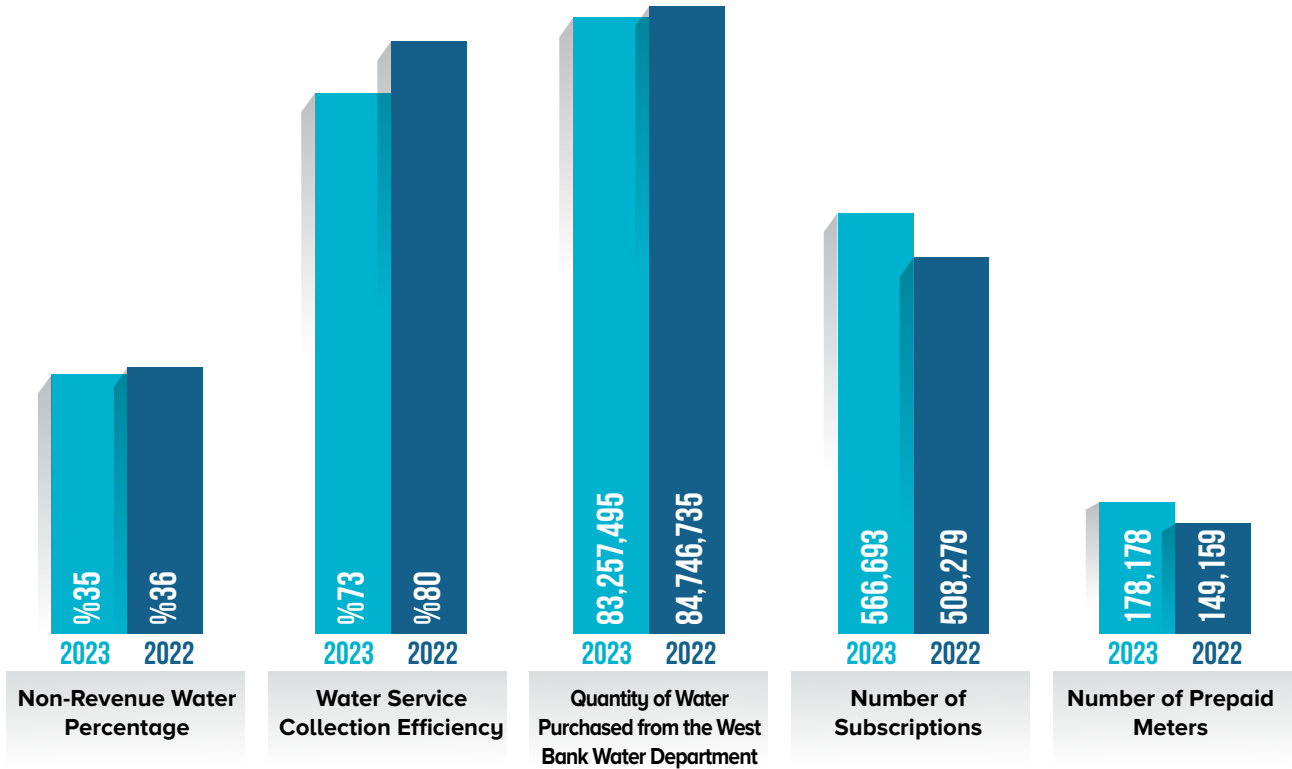
### Below are some key facts about water and wastewater service delivery in the West Bank:



It is important to note that this report is not an audit report, like an auditor's report. Rather, the Council analyzes performance indicators based on data provided by service providers.

In evaluating the performance indicator values, the Council compares them against benchmark standards agreed upon with the Palestinian Standards Institution and the Palestinian Water Authority, as well as related International standards, offering explanations for any anomalous values that may appear for certain indicators among some service providers.

**Key Performance Changes between 2022 and 2023 in the West Bank**



The data shows minor differences between 2022 and 2023. A slight decrease was observed in the percentage of non-revenue water across the West Bank. This reduction is attributed to the increased focus by service providers, donors, and the government on reducing this rate through ongoing projects.

However, the revenue collection efficiency indicator saw a significant decrease compared to the previous year. This decline is due to the worsening economic situation of citizens, stemming from the war on Gaza, the partial payment of salaries to governmental employees, and the halt of a large number of workers within the Green Line since October 7, 2023.

It should be noted that the quantity of water purchased from the West Bank Water Department represents figures provided by service providers, which were cross-checked with records from the WBWD. We would like to point out that some providers, such as the municipalities of Idhna, Al-Samou', and Rural Dura, did not provided the council with the quantities they received from the department.

Additionally, there has been an increase in the installation of prepaid meters by service providers compared to previous years. Some providers are opting to install these meters to address the issue of low collection rates from consumers.

**In Summary**

After analytically reviewing the 2023 performance indicator data and comparing it with previous years, it is evident that there has been some improvement in the overall performance of service providers. The Council's desired objective within the Water Sector Reform Plan is gradually being realized year after year. This progress can be attributed to several factors, including the Council's diligent efforts, which have strengthened its presence due to donors' trust in its intended role, as outlined in Law No. 14 of 2014. Additionally, service providers in the West Bank have cooperated by submitting their data to the Council, recognizing the Council's crucial role in enhancing and improving performance.

## Performance Monitoring Situation in the Gaza Strip

Until October 7<sup>th</sup>, 2023, the water and wastewater services in the Gaza Strip had seen continuous improvements over the years, as evidenced by monitoring, data, and performance analysis results provided by the council. This was aimed at ensuring service quality and efficiency in line with consumer interests. Service providers in the Gaza Strip have consistently achieved the desired results from performance monitoring and improvement efforts, despite many challenges, including the ongoing blockade imposed by Israeli occupation forces, repeated attacks, and limited human and material resources. Nevertheless, service providers have managed to increase water service coverage to about 90% of the population and sewage service coverage to 80%, serving 33 urban areas, including 8 refugee camps.

Upon reviewing the outcomes of previous performance reports published by the council, a noticeable decrease in non-revenue water, a reduction in operational and maintenance costs, and an increase in daily per capita water allocation were observed. This progress has been achieved despite the challenging economic conditions faced by citizens and the financial difficulties of service providers. These results reflect the collaborative efforts between the Water Sector Regulatory Council and service providers in Gaza as part of the water sector reform plan.

Due to the Israeli war on the Gaza Strip in October 2023, this year's report presents a different perspective despite the achievements made in the past years. Therefore, the report provides an overview of the status of performance monitoring for water and wastewater service providers in Gaza as a result of the Israeli war. It is important to note that this report does not serve as an account of the destruction inflicted upon service providers and infrastructure, but rather as a summary of some aspects of the devastating impact of the war on the monitoring of performance and the tasks assigned to the council.



## 1. Cessation of Performance Monitoring and Data Collection

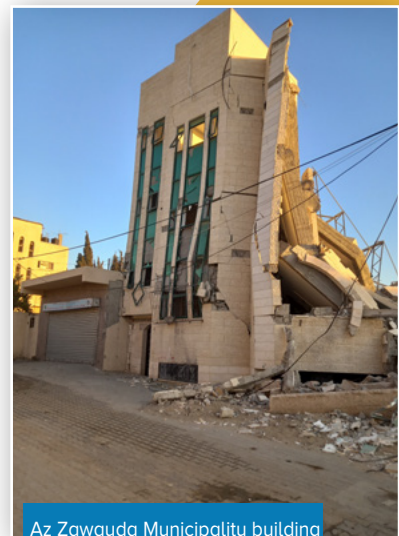
Due to the nature of the council's work, it relies on post-performance monitoring of water and wastewater service providers, involving the collection and analysis of data after the intended operational period to avoid issues such as overlapping billing and collection periods, which can affect data accuracy. As a result, the council was unable to fully collect data for the reporting year. This was due to most service providers ceasing operations due to war conditions, mass displacement of staff, or being targeted, as well as the destruction of facilities and offices. This situation made it difficult to communicate with service providers and led to the loss of data.



Bureij Municipality building



Maghazi Municipality building



Az Zawayda Municipality building

## 2 . Destruction of Water and Wastewater Infrastructure

Over the past years, service providers have worked to develop infrastructure, including water sources, sewage networks, pumping stations, and treatment plants, based on performance indicators released annually by the council. This has resulted in reduced water losses, lower operational costs, and improved service quality.

The council, in collaboration with service providers, has monitored and assessed the destruction of water and wastewater infrastructure since the start of the war, but accurately quantifying and evaluating the damage has been challenging due to the daily destruction and mass displacement within cities and towns. This situation increased pressure on the water and wastewater networks, with service providers unable to meet the demand.

The Israeli occupation has pursued a policy of systematic destruction of municipal infrastructure to collapse the service system, deepen the crisis, and break the resilience of residents and displaced people.

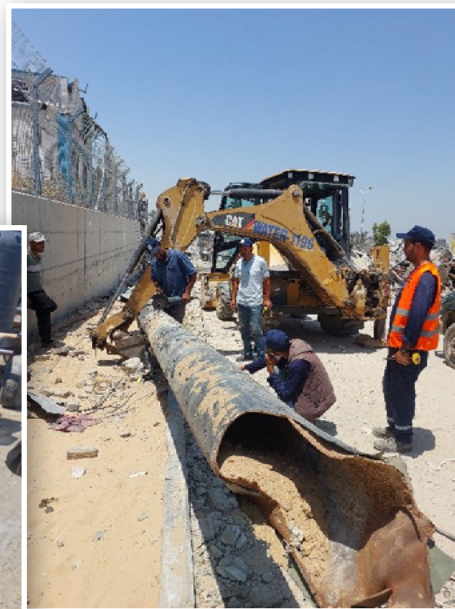
**The council's team managed to document much of the destruction of services caused by the war, including:**

- Complete shutdown of all wastewater treatment plants and partial destruction of several, including those in Khan Yunis, Gaza City, Sheikh Ajleen, North Gaza, and Rafah.
- Destruction of sewage pumps, causing a halt in their operation in all municipalities.
- Destruction of many water wells and reservoirs, with some ceasing to function due to a lack of fuel.
- Extensive damage to main water distribution networks and sewage networks.
- Destruction of water purchase connections from the Israeli Mekorot company.
- Destruction of several desalination plants that supply water to service providers.
- Destruction of electric generators for wells, reservoirs, and sewage pumps.

Monitoring operations conducted by the council have shown significant damage to water and wastewater infrastructure, leading to a reduction in daily per capita water supply to unprecedented levels, with about 3 liters per person per day. In some areas, services have been completely interrupted.



The extensive damage to infrastructure caused by repeated shelling, coupled with the lack of essential maintenance and operational equipment, as well as the overcrowding of displaced individuals in small, inadequate areas, has led to the random accumulation of wastewater pools in streets and alleys, often near refugee tents. This situation has resulted in the spread of diseases, insects, and rodents. Furthermore, the widespread use of untreated wastewater absorption pits that fail to meet basic environmental safety standards poses a significant threat of contaminating the coastal aquifer, particularly in coastal areas.



### 3. Cessation of Administrative Operations by Service Providers

The Israeli war led many service providers in the Gaza Strip to cease operations since the war began. Some, such as Gaza Municipality, Khan Yunis, Jabalia, Coastal Municipalities Water Utility, and Deir al-Balah, continued to operate on an emergency basis to provide minimal services under exceptional conditions and high risks, aiming to meet the needs of residents and displaced people, without focusing on documenting operational and administrative processes related to service provision.

Due to the exceptional nature of the war in Gaza, the administrative system of service providers collapsed, halting billing, collection, inspection, and many transactions related to water and wastewater services. Additionally, service facilities and personnel providing services were continuously targeted. It is important to note that the Director of the Water and Environment Department at Gaza Municipality and several of his colleagues were martyred while working to provide water services.

The suspension of administrative and operational processes has left service providers unable to fulfill their obligations, including paying staff salaries, purchasing fuel for operating water sources and vehicles used in service delivery, and conducting necessary maintenance for destroyed infrastructure. Increased operational and maintenance costs resulted from the closure of border crossings and the shortage of spare parts.

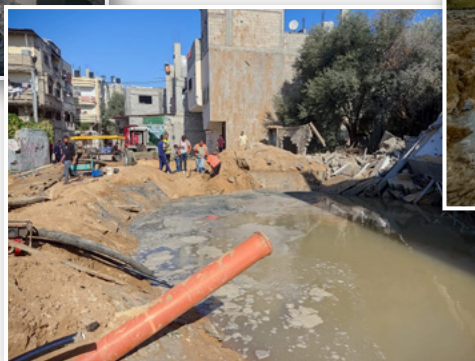
## 4. Deterioration of Water Quality

In recent years, the Water Sector Regulatory Council has intensified its water quality monitoring efforts, collecting data using a method distinct from other performance indicators due to the unique monitoring mechanism used by relevant national authorities. However, with the suspension of water quality monitoring due to the war and the inability of health institutions to perform their role, the population has been provided with unsafe, non-potable water for drinking or human consumption. The Palestinian Ministry of Health, responsible for monitoring water quality, has also been unable to carry out regular testing to ensure water safety.

Reports from the World Health Organization prior to the war indicated that 97% of the water supplied for human consumption in the Gaza Strip was chemically contaminated due to high salinity and nitrate levels. This problem has worsened during the war, with increased microbiological contamination, posing a serious risk to public health.

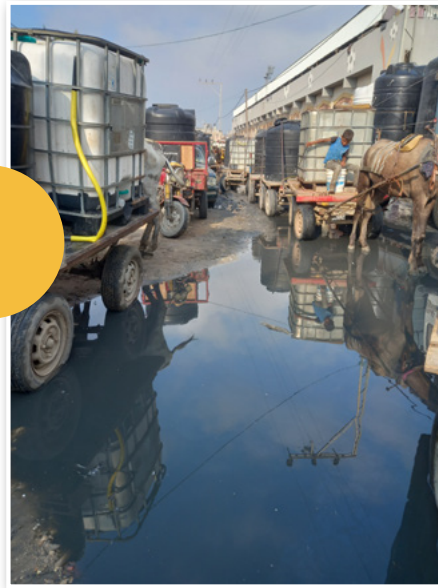
Recently, the Palestinian Ministry of Health conducted water testing in the central and southern Gaza Strip, revealing microbiological contamination in about 50% of the drinking water supplied. The reasons for this include:

- **The lack of health monitoring at desalination plants** and water distributors, resulting in the distribution of uninfected and non-compliant water.
- **The insufficient availability of monitoring equipment** and devices for water quality control among health institutions and service providers in Gaza.
- **Unsafe water collection and distribution conditions**, where most water is transported in unapproved tanks on animal-drawn carts, traveling through streets and alleys contaminated with wastewater, creating a medium for further contamination.
- **Lack of cleanliness in citizens' water storage containers** due to low public awareness about the importance of maintaining cleanliness and proper storage conditions.



## 5. Significant Decline in Available Clean Water for Palestinians

Several areas in the Gaza Strip, especially in the southern regions, have experienced unprecedented overcrowding, creating a severe humanitarian crisis. One of its manifestations is the lack of water for drinking or hygiene, due to the destruction of water systems or the limited availability of desalination plants or bottled water. The daily water availability per person has been reduced to 3–5 liters, which is just over a third of the minimum recommended in emergency situations.







# **Mandates and Responsibilities of the Council**



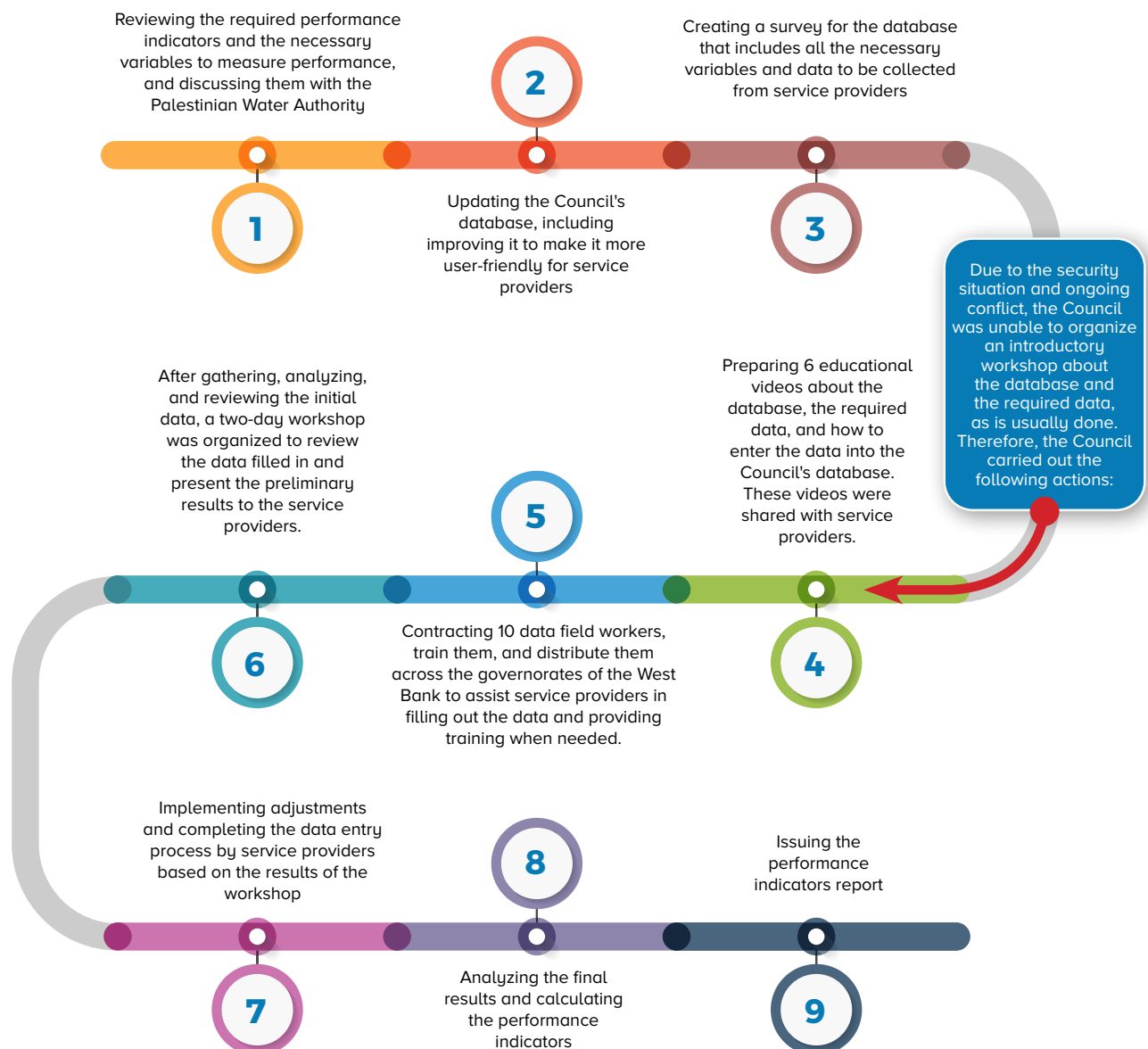
## Council's Objective

Based on Law No. 14 of 2014 regarding water, the Water Sector Regulatory Council was established in 2014 as part of ongoing water sector reforms in Palestine. It represents one of the key pillars with independent financial and administrative status within the water sector, alongside the Palestinian Water Authority, in order to create a balance between the needs and rights of consumers on one hand, and the obligations and interests of service providers on the other.

The council's main goal is to monitor all operational activities of water and wastewater service providers, including transportation, distribution, consumption, treatment, and wastewater management. This ensures the quality of services provided by service providers and makes them available to consumers at reasonable prices.

## How the 2023 Performance Monitoring Report Was Prepared

Each year, the council targets all water service providers in Palestine to collect and analyze the necessary data, and then prepare indicators to assess service delivery performance. This report was prepared according to the following methodology:

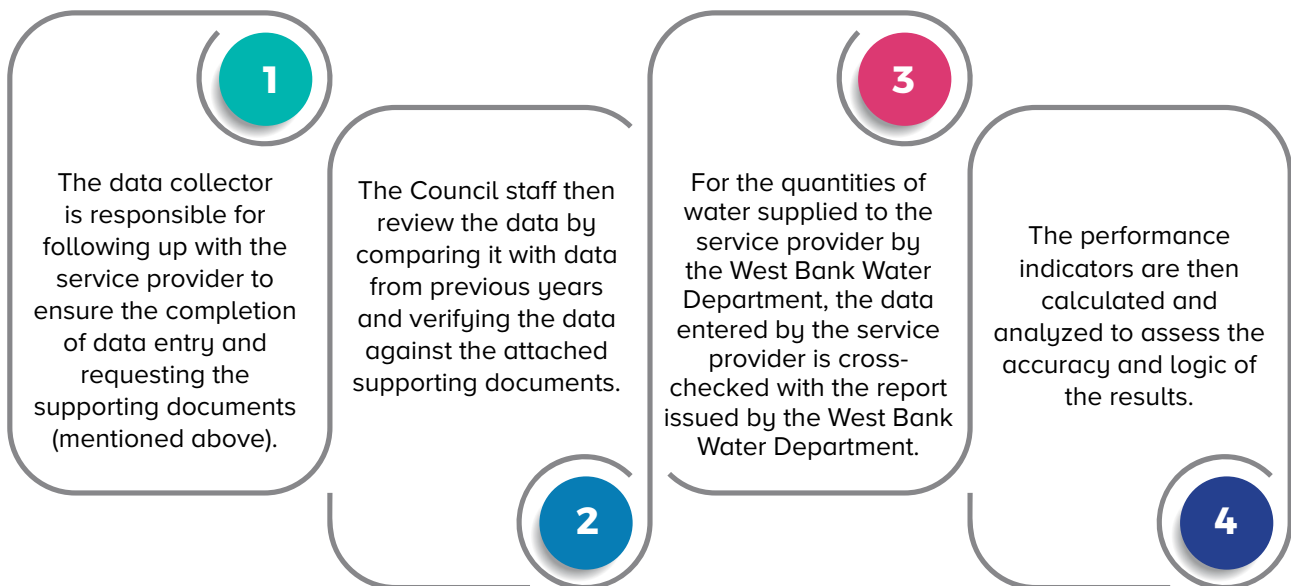


## The Water Sector Regulatory Council Database

It's an electronic system that allows for the collection of data related to water and wastewater services remotely (online). This is done through the creation of individual accounts for qualified service providers to enter and verify data. The system is characterized by its flexibility, as it allows the creation of different accounts for service providers with specific permissions for each type of account. The system also helps the service providers by providing immediate access to their performance indicators, allowing them to compare results with previous years or with those of other service providers. Furthermore, the system facilitates the collection of data from service providers for the Water Sector Regulatory Council and assists in the review and verification of the data entered by the service providers. Additionally, the system helps calculate indicators for all service providers and generates graphical charts related to these indicators, along with producing dynamic, specialized reports.

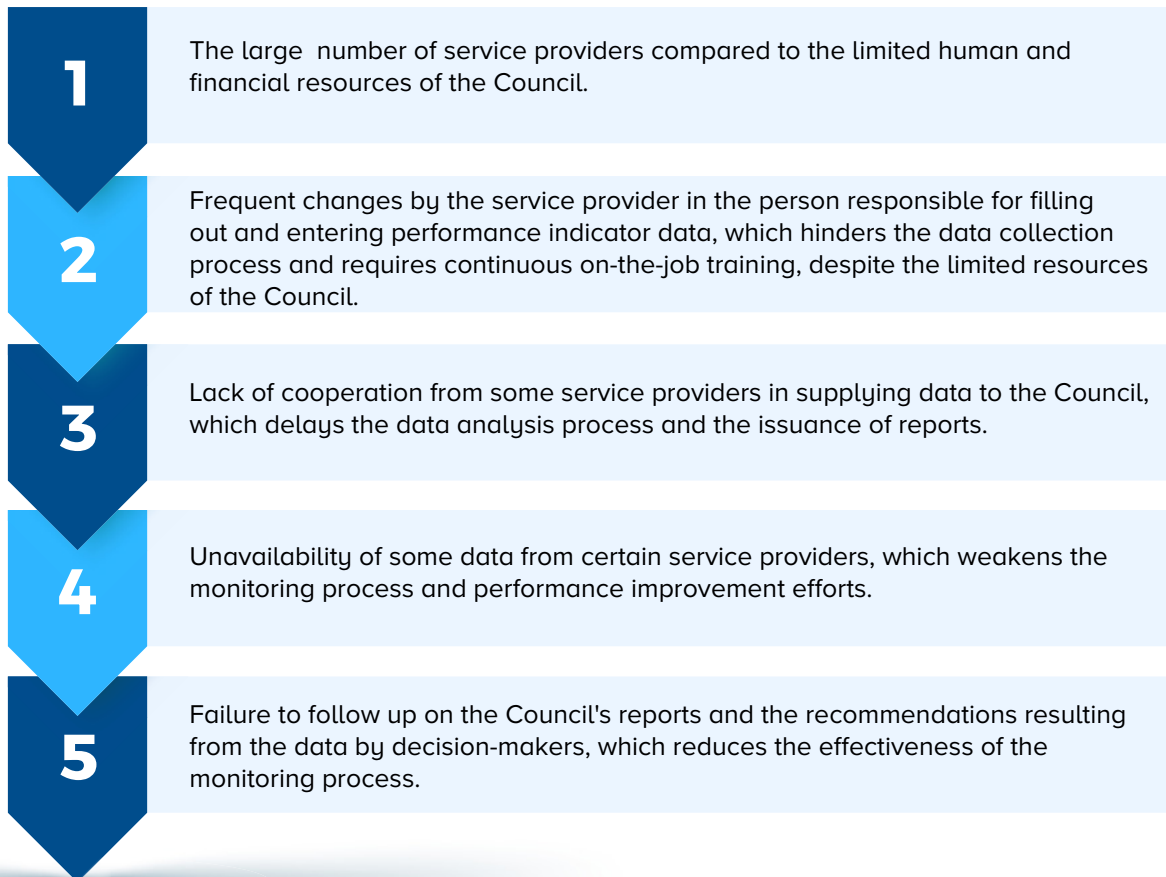
## Mechanism for Reviewing Data Submitted by Service Providers

The Water Sector Regulatory Council annually requests detailed information from water and wastewater service providers, accompanied by supporting documents that help in reviewing the data. These supporting documents include a statement of produced or purchased water quantities and water sold, a financial report from the service provider, or a statement showing revenues and expenses. The Council also requests a water sales statement from the West Bank Water Department for service providers that purchase water from the department. The Council then carries out the following:



## Challenges Facing the Work of the Council:

The Council faces numerous challenges that hinder its ability to effectively perform its regulatory role in reforming the water sector, thus weakening its role and activity. Some of these challenges include:



## Monitoring Operational Activities of Water and Wastewater Service Providers

Monitoring operational activities is one of the responsibilities of the Water Sector Regulatory Council, based on Clause 7 of Article 24 of the Water Law No. 14 of 2014. Monitoring the operational activities of water service providers is one of the Council's main objectives, including the production and distribution of water for uses prescribed by law, in addition to overseeing the management of the wastewater sector, such as the collection, treatment, and/or reuse of wastewater. This is done to improve the water and wastewater sector, provide services that ensure consumer satisfaction, and achieve the goals and aspirations of the national strategy, in line with the policies set by the Palestinian Water Authority.

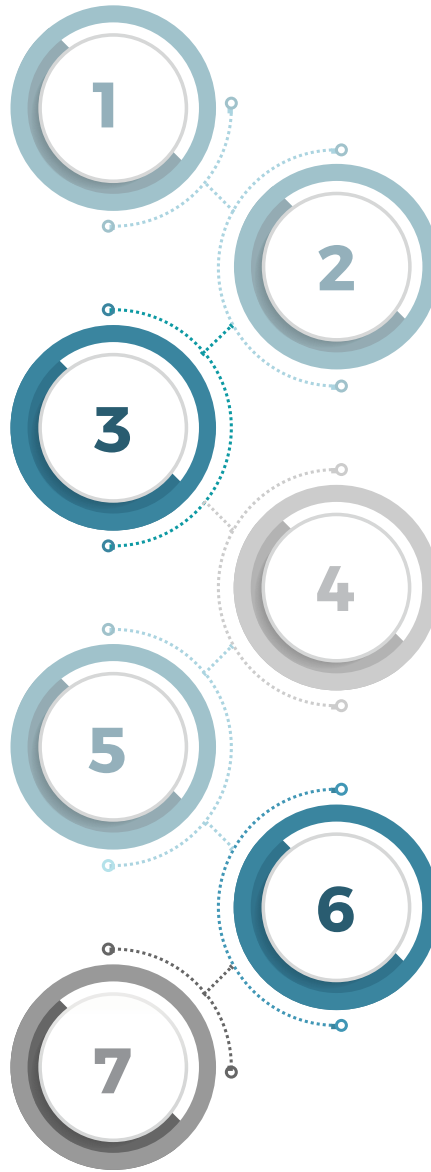
**The goal of operational activities is represented in the following:**

Improving the ability of service providers in self-operation and internal monitoring according to the best local and international practices and standards that would enhance their performance.

Ensuring the necessary measures are in place to guarantee water quality and protect water resources from pollution and depletion.

Taking adequate measures to prepare for emergency situations.

Raising the level of understanding and awareness of the importance of monitoring operational activities in improving performance, reducing costs, and providing services in the best possible way.



Ensuring the accuracy of the data collected.

Ensuring the existence of regular maintenance plans for water networks and addressing faults regardless of the size of the service provider.

Identifying the strengths and weaknesses of service providers to aid in the formulation of effective development plans.

In the past years, the Water Sector Regulatory Council has worked on preparing a guide for monitoring and operations to train a number of service providers on it. The Council also began the first phase of monitoring operational activities with 15 service providers, linking the monitoring program with their operational processes. A review was conducted as the second phase of monitoring to ensure that the service providers' practices comply with the requirements outlined in the operational guide that was completed.

Currently, the Council is preparing monitoring and operational forms to be applied through field visits to service providers. These forms include all sections related to water and wastewater services, with the aim of sending recommendations to improve operational performance among service providers, reaching the desired objectives.



# Water and Wastewater Service Providers in Palestine





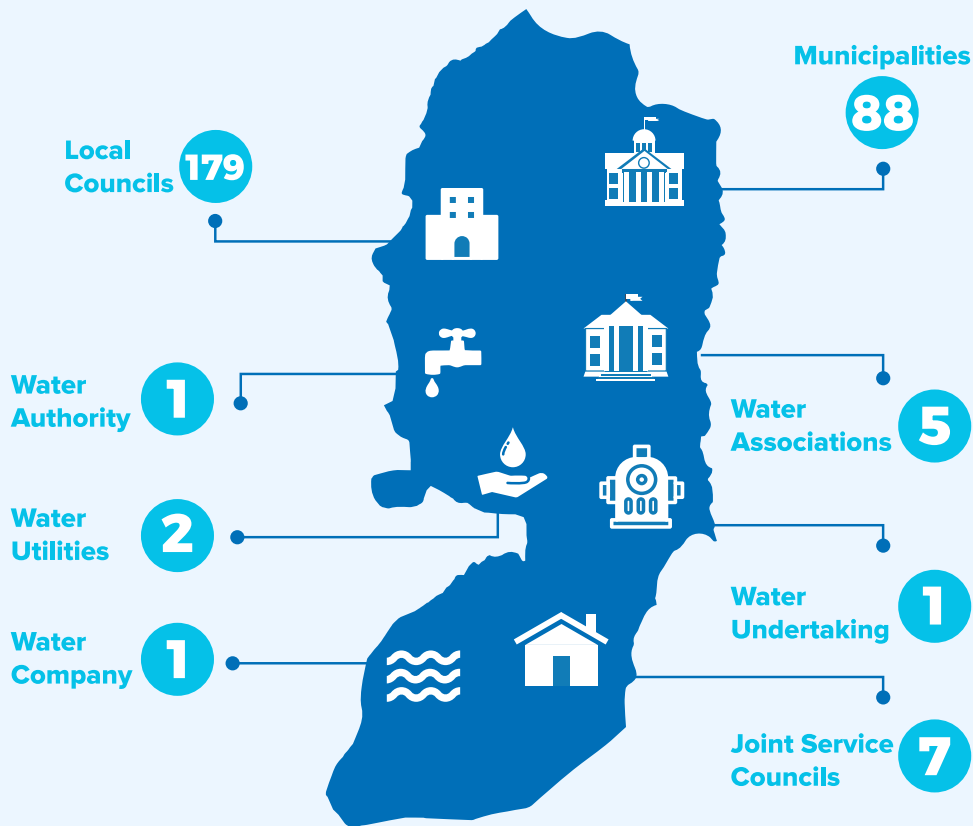
The Water Law No. 14 of 2014 defines "service providers" as the National Water Company, regional water utilities, including local authorities, joint councils, and associations that provide water or wastewater services. This year, the Water Sector Regulatory Council was able to target 284 service providers in the West Bank. Of these, 42 provide both water and wastewater services, while the remaining providers offer only water services. Detailed data was collected from 255 service providers, while 29 service providers did not submit complete data that would enable the measurement of performance indicators.

### Distribution of Service Providers According to Organizational Structure

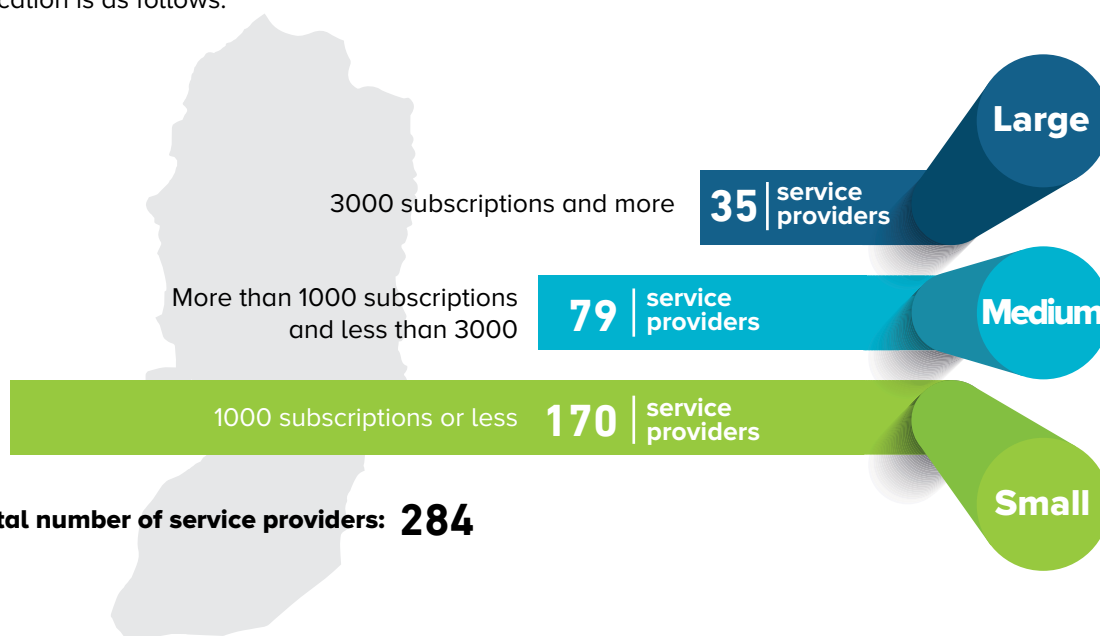
*Data based on the latest statistics as of the end of 2023*

#### West Bank

- Number of governorates **11**
- Service Providers **284**



For the purposes of this report, service providers in the West Bank have been classified based on the number of subscriptions into three categories: Large, Medium, and Small. This classification is due to the significant variations in the population served, the size of the service provider, and the geographic area they cover. The classification is as follows:



Therefore, due to the large number of service providers in the West Bank, the report will review the performance indicator data for large and medium-sized service providers, while the key indicators for small-sized service providers will be attached in the appendices.

Meanwhile, 29 service providers in the West Bank did not provide the necessary information, either partially or entirely, that would allow the council to calculate the performance indicators.

As Samu' Municipality	Jalbun VC	Ar Rihya VC
Rural Dura JSC	Al A'ttara VC	Beit A'mra VC
Rural Yatta JSC	Az Zubeidat VC	Fasayil VC
Idhna Municipality	Al Jiftlik VC	Al Assa'ssa VC
Kurdala VC	Furush Beit Dajan VC	Shuyukh al arab VC
Al Kufeir VC	A'rab al Jahalin VC	A'bud VC
Deir Abu Da'if VC	Ash Sheikh Sa'd VC	Budrus VC
Beit Qad (Al Janubi) VC	Allaban Algharbiu VC	An Nabi Samwil VC
Beit Qad (Al Shamali) VC	Masha VC	Al Jib Municipality
A'rabbuna VC	Ad Deir VC	

\* It is worth noting that some of the service providers mentioned above do not have information or records due to the absence of a network or water meters.



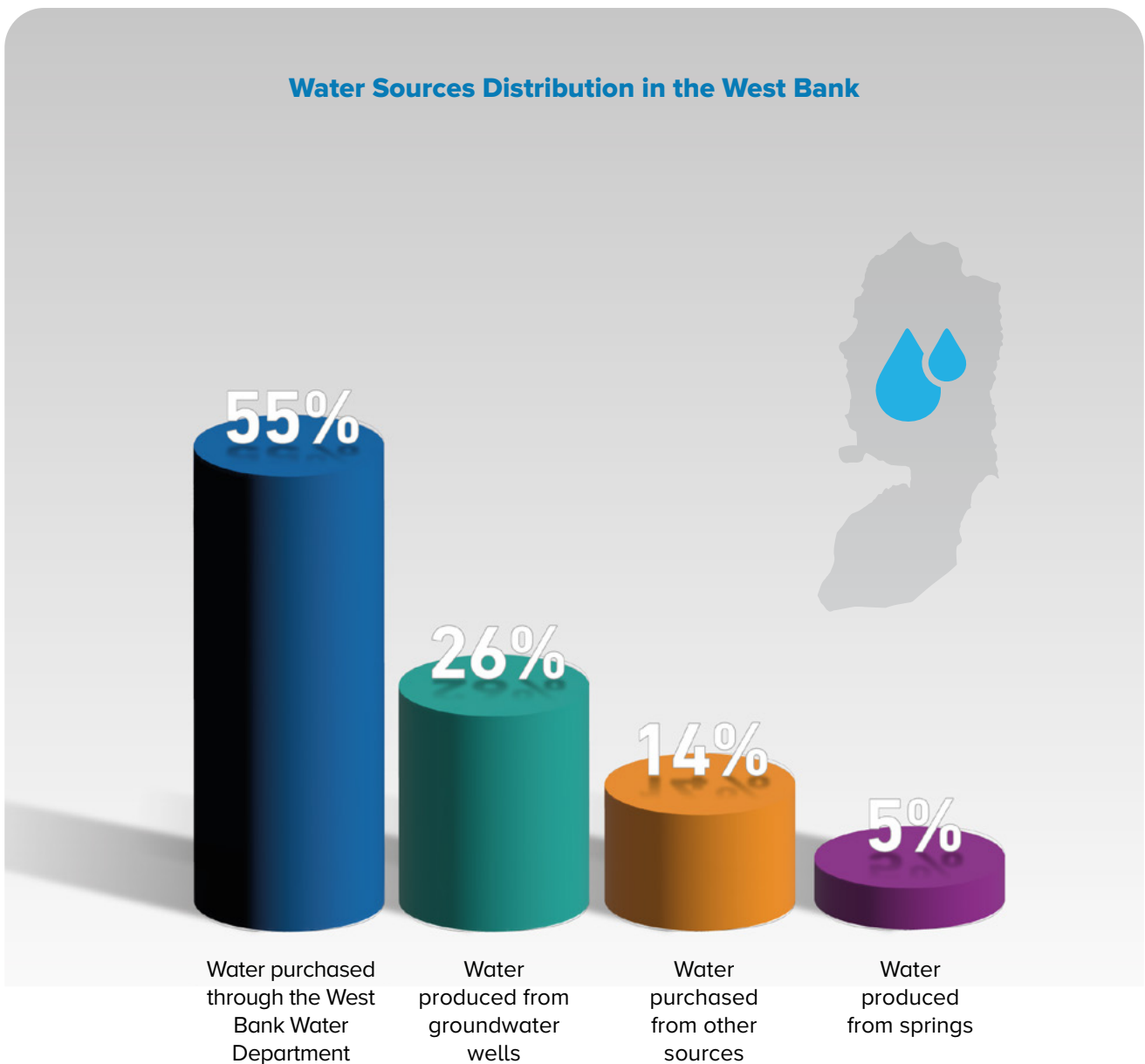
# Operational Data of Water and Wastewater Service Providers



## 1. Water Sources

Considering the available water resources for service providers, there is a clear variation in the water source between providers in the West Bank. A large number of service providers in the West Bank heavily rely on water purchased from the Israeli side. At the same time, service providers have faced difficulties since 1967 in drilling groundwater wells due to the occupation policies in place since that time, which are focused on controlling water sources. This situation impacts several indicators, most notably the cost-per-cup indicator.

The diagram below illustrates the distribution of water sources in the West Bank:



# PERFORMANCE MONITORING REPORT

for Water and Wastewater service providers in Palestine 2023



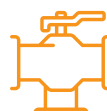
Service provider



Local water sources - wells



Local water sources - springs



Quantity of water purchased from the WBWD (m<sup>3</sup>)




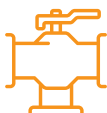
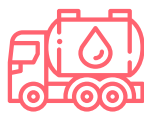



Quantity of water purchased from private wells (m<sup>3</sup>)







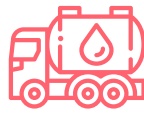

The amount of water purchased from other sources (m<sup>3</sup>)

Large Service Providers					
Jerusalem Water Undertaking	3,312,391	-	14,647,991	-	3,717,740
Water Supply and Sewerage Authority "WSSA" Bethlehem	801,000	-	6,181,733	-	-
Hebron Municipality	-	-	9,423,417	-	-
Nablus Municipality	7,469,629	1,896,911	170,181	3,244,660	-
Tulkarm Municipality	8,765,792	-	-	167,944	-
Yatta Municipality	-	-	1,777,160	-	-
Qalqiliya Municipality	5,274,874	-	-	-	-
Jenin Municipality	1,015,313	-	1,250,683	1,011,927	-
Halhul Municipality	-	-	1,409,649	-	-
Surif Municipality	-	-	773,768	-	-
Tarqumiya Municipality	-	-	462,693	-	-
Beit Ummar Municipality	-	-	1,117,225	-	-
Adh Dhahiriya Municipality	-	-	939,440	-	-
Dura Municipality	-	-	1,126,630	-	-
Bani Na'im Municipality	-	-	749,190	-	-
Sal'ir Municipality	-	-	1,029,264	-	-
Beituniya Municipality	-	-	-	-	1,168,454
Jericho Municipality	159,393	3,846,776	135,796	386,554	-
Salfit Municipality	110,729	145,502	707,680	-	-
Biddya Municipality	490,475	-	468,179	-	-
Al 'Eizariya Municipality	-	-	1,544,544	-	-
Qabatiya Municipality	-	-	514,960	1,138,385	-
Ya'bad Municipality	883,554	-	800	-	-
West Jenin Water Utility	2,804,527	-	74,794	-	-
Tubas Water Utility	-	-	2,204,340	324,523	-
Northwest Jerusalem Joint Service Council	-	-	1,378,999	-	-
South East Nablus JSC	-	-	1,430,659	-	-
Meithalun JSC	-	-	254,126	956,729	-
Abu Dis Cooperative Society for Water	-	-	703,021	-	-
Arraba Municipality	-	-	313,629	144,711	-
Beita Municipality	309,947	-	378,544	8,859	-
Beit Liqya , Kharbatha Al Misbah JSC	-	-	826,964	-	-

 Service provider	 Local water sources - wells	 Local water sources - springs	 Quantity of water purchased from the WBWD (m <sup>3</sup> )	 Quantity of water purchased from private wells (m <sup>3</sup> )	 The amount of water purchased from other sources (m <sup>3</sup> )
<b>Midsize service provider</b>					
Taffuh Municipality	-	-	<b>336,000</b>	<b>108,000</b>	-
Nuba Municipality	<b>11,000</b>	-	<b>275,389</b>	-	-
Beit Ula Municipality	-	-	<b>537,262</b>	-	-
Kharas Municipality	-	-	<b>590,380</b>	-	-
Tuqu' Municipality	-	-	<b>445,857</b>	-	-
Nahhalin Municipality	-	-	<b>384,334</b>	-	-
Ubeidiya Municipality	-	-	<b>667,783</b>	-	-
Karmil Municipality	-	-	<b>238,504</b>	-	-
Ash Shuyukh Municipality	-	-	<b>461,208</b>	-	<b>6,729</b>
Za'tara Municipality	-	-	<b>537,620</b>	-	-
Husan VC	-	-	<b>352,689</b>	-	-
Bani Zaid Al Gharbia Municipality	-	-	<b>445,691</b>	-	-
Anabta Municipality	<b>858,133</b>	-	-	-	-
Beit Lid Municipality	-	-	<b>208,442</b>	-	-
Kafr Al Labad Municipality	-	-	-	<b>313,365</b>	-
Barta'a ash Sharqiya Water Association	-	<b>68,321</b>	<b>312,643</b>	-	-
A'nata Municipality	-	-	<b>1,071,825</b>	-	-
Deir al Ghusun Municipality	<b>865,000</b>	-	-	-	-
A'ttil Municipality	-	-	-	<b>695,407</b>	-
Qaffin Municipality	<b>568,640</b>	-	-	<b>42,490</b>	-
A'zzun Municipality	<b>566,445</b>	-	-	<b>220,890</b>	-
Qabalan Municipality	-	-	<b>373,770</b>	-	-
Kafr Ra'i Municipality	-	-	<b>42,041</b>	-	<b>447,353</b>
As Sawahira Ash Sharqiya Municipality	-	-	<b>542,488</b>	-	-
'Illar Municipality	<b>577,880</b>	-	-	<b>198,420</b>	<b>209,509</b>
Birajin Municipality	<b>118,760</b>	-	-	<b>207,447</b>	-
Az Zababida Municipality	-	-	<b>73,273</b>	<b>128,230</b>	-
Aqraba Municipality	-	-	-	-	<b>346,641</b>
Beit Furik Municipality	-	-	-	<b>582,246</b>	-
A'sira ash Shamaliya Municipality	-	-	-	<b>309,478</b>	-
Bal'a Municipality	<b>564,375</b>	-	-	-	-
Az Zawiya Municipality (Salfit)	-	-	<b>325,700</b>	-	-
Baqa Ash Sharqiya Municipality	-	-	-	<b>329,650</b>	-
Zeita Municipality	<b>687,859</b>	-	-	-	-
Burqa VC	-	<b>37,783</b>	<b>173,347</b>	-	-
Huwwara Municipality	-	-	<b>553,905</b>	-	-
'Urif VC	-	-	<b>94,280</b>	-	-
Tell VC	-	-	<b>187,620</b>	-	-
Salim VC	-	-	<b>206,813</b>	-	-

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for Water and Wastewater service providers in Palestine 2023

 Service provider	 Local water sources - wells	 Local water sources - springs	 Quantity of water purchased from the WBWD (m <sup>3</sup> )	 Quantity of water purchased from private wells (m <sup>3</sup> )	 The amount of water purchased from other sources (m <sup>3</sup> )
Jamma'in Municipality	-	-	338,461	-	-
El Fara'a Camp Services Subcommittee	600,000	-	-	-	-
Faqqu'a VC	-	-	174,501	15,371	-
A'jja Municipality	-	-	199,151	38,000	-
Jaba' Municipality	338,495	-	92,954	-	-
Sanur VC	-	-	159,441	-	-
Silat adh Dhahr Municipality	165,652	-	191,760	-	-
Ni'lin Municipality	-	-	352,799	-	-
An Nuwei'ma W Ad Duguk al Fauqa Municipality	-	500,000	-	-	-
Aqbat Jaber Camp People's Services Committee	-	-	861,697	-	-
Deir Ballut Municipality	-	-	230,039	-	-
Qarawat Bani Hassan Municipality	-	-	280,990	-	-
Kafr ad Dik Municipality	-	-	242,746	-	-
Kifl Haris Municipality	-	-	86,070	-	-
Bruqin Municipality	-	-	203,998	-	-
Harris VC	-	-	212,764	-	-
Sarta VC	-	-	169,036	-	-
Beit 'Ur at Tahta Municipality	-	-	183,990	-	-
Qibya VC	-	-	324,555	-	-
Kafr Thulth Municipality	398,760	-	-	99,620	-
Jayyus Municipality	280,920	-	-	-	-
Seida Municipality	-	-	-	146,595	-
Far'un VC	-	-	-	258,364	-
Beit Iba VC	-	-	336,869	43,906	-
Rujeib VC	-	-	355,080	-	-
Sarra Municipality	-	-	188,818	-	-
Az Za'ayyem Municipality	-	-	381,407	-	-
Qatra Water Resources	-	-	124,240	-	-
Habla Municipality	815,760	-	-	-	-
Battir Municipality	-	-	295,747	-	-
Beit A'wwa Municipality	-	-	151,260	-	-
Jannatah Municipality	-	-	480,000	-	-
Ash Shawawra VC	-	-	288,385	-	-
Beit Fajjar Municipality	-	-	652,184	-	-
Beit Kahil	-	-	350,480	-	-
Dar Salah Municipality	-	-	295,720	-	-
Wadi Rahhal VC	-	-	87,479	-	-
Shuqba VC	-	-	602,167	-	-
Deir Samit Municipality	-	-	180,000	-	-



## 2. Water Network Coverage for the Population

The results reflect the efforts made by service providers to supply water to as many citizens as possible. Data from service providers in the West Bank show that 98% of the population is served with water, distributed across more than 500 residential communities, including cities, villages, and refugee camps. It is worth noting that some communities, such as Deir Abu Da'if and Jalbun, lack water networks.

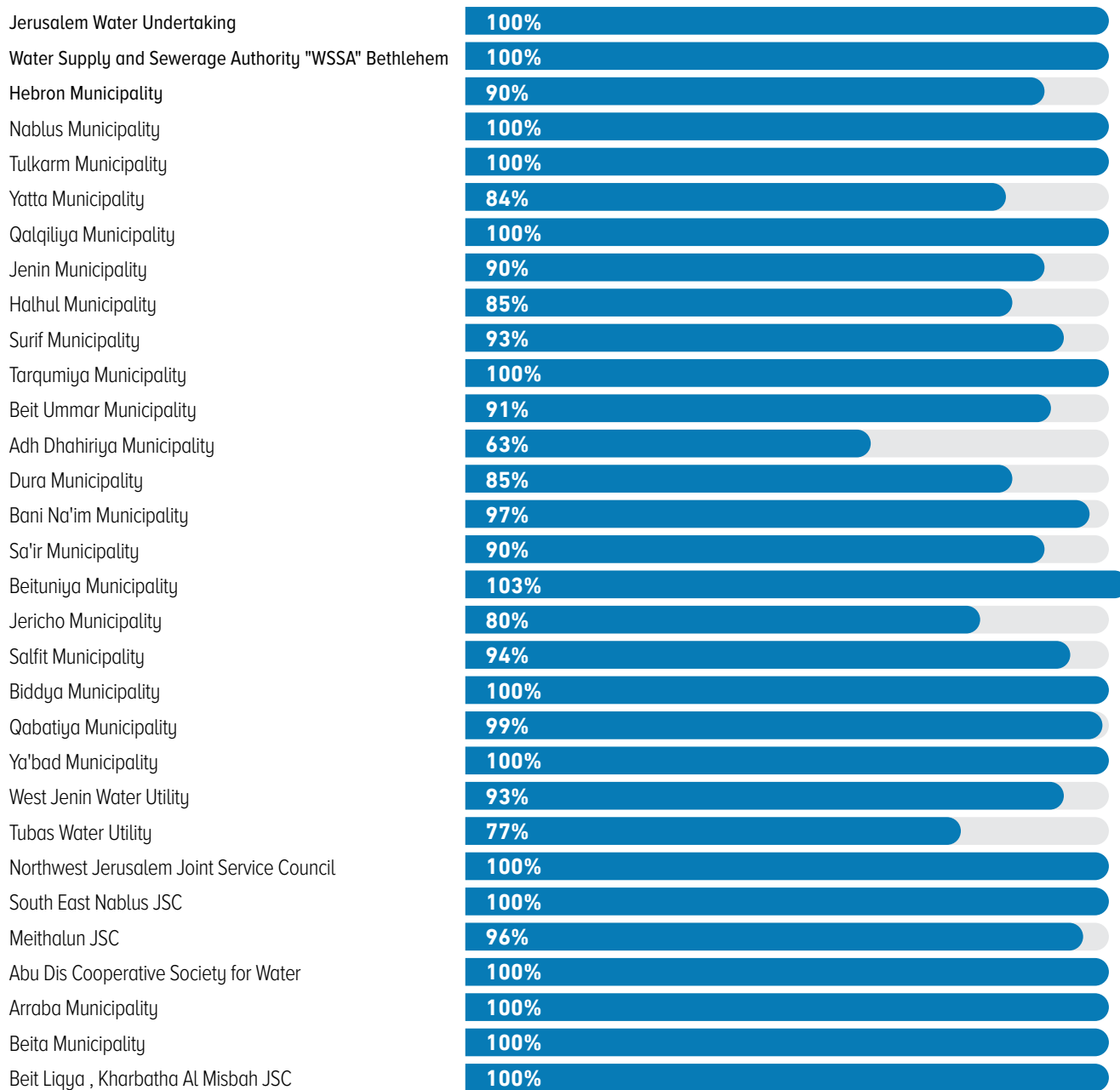
The considerable disparity in coverage rates among service providers is due to the following factors:

- Obstacles imposed by the occupation, preventing service providers from delivering services to certain areas in the West Bank, especially in Area C.
- Limited availability of resources and the service provider's restricted capacity to deliver water.
- The presence of residential areas on the outskirts of cities and towns, which are difficult to reach with water supplies.
- A reliance by many residents, particularly in rural areas, on water sourced from agricultural wells.



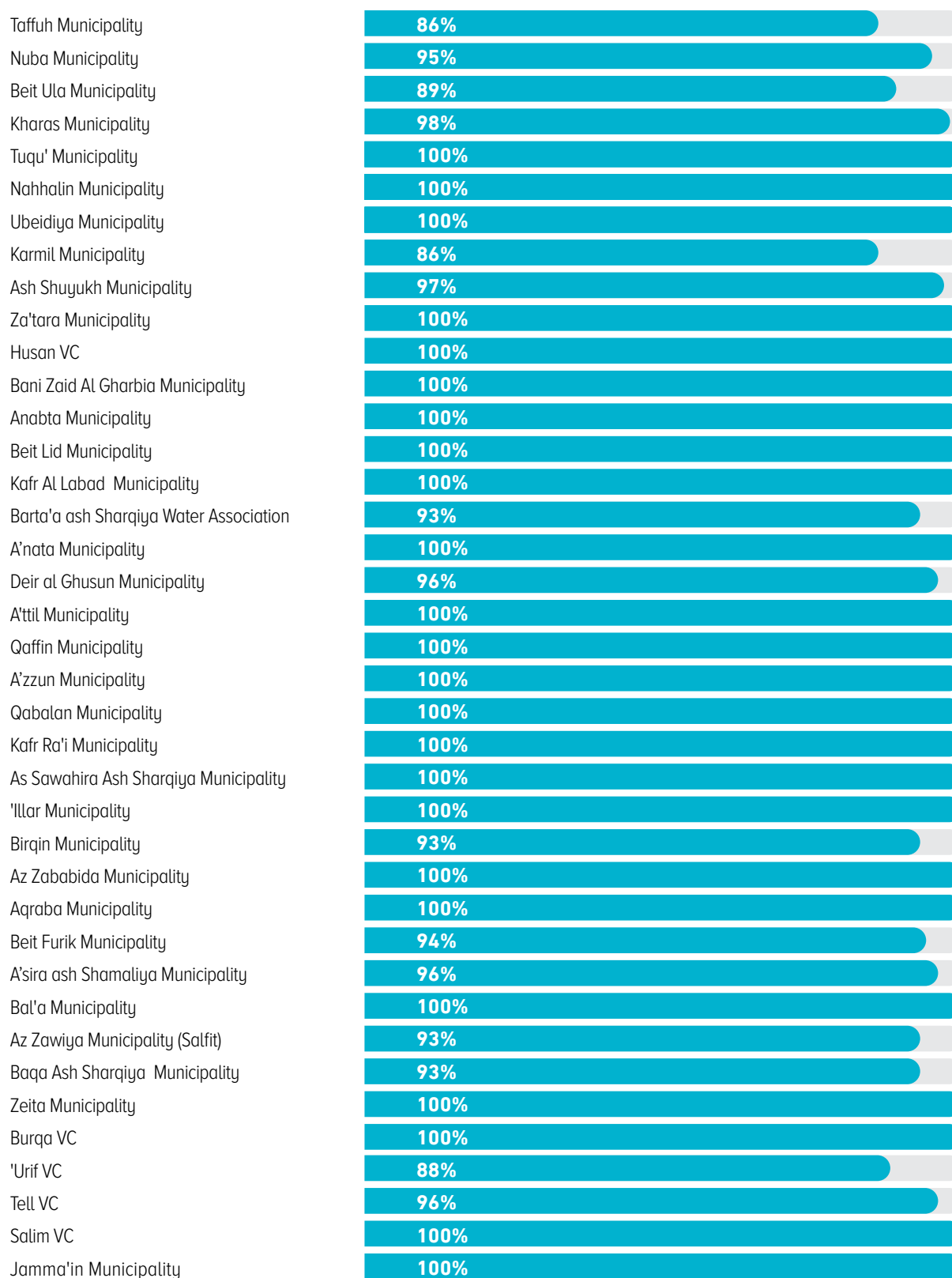
## Water Service Coverage (%)

### Large service provider



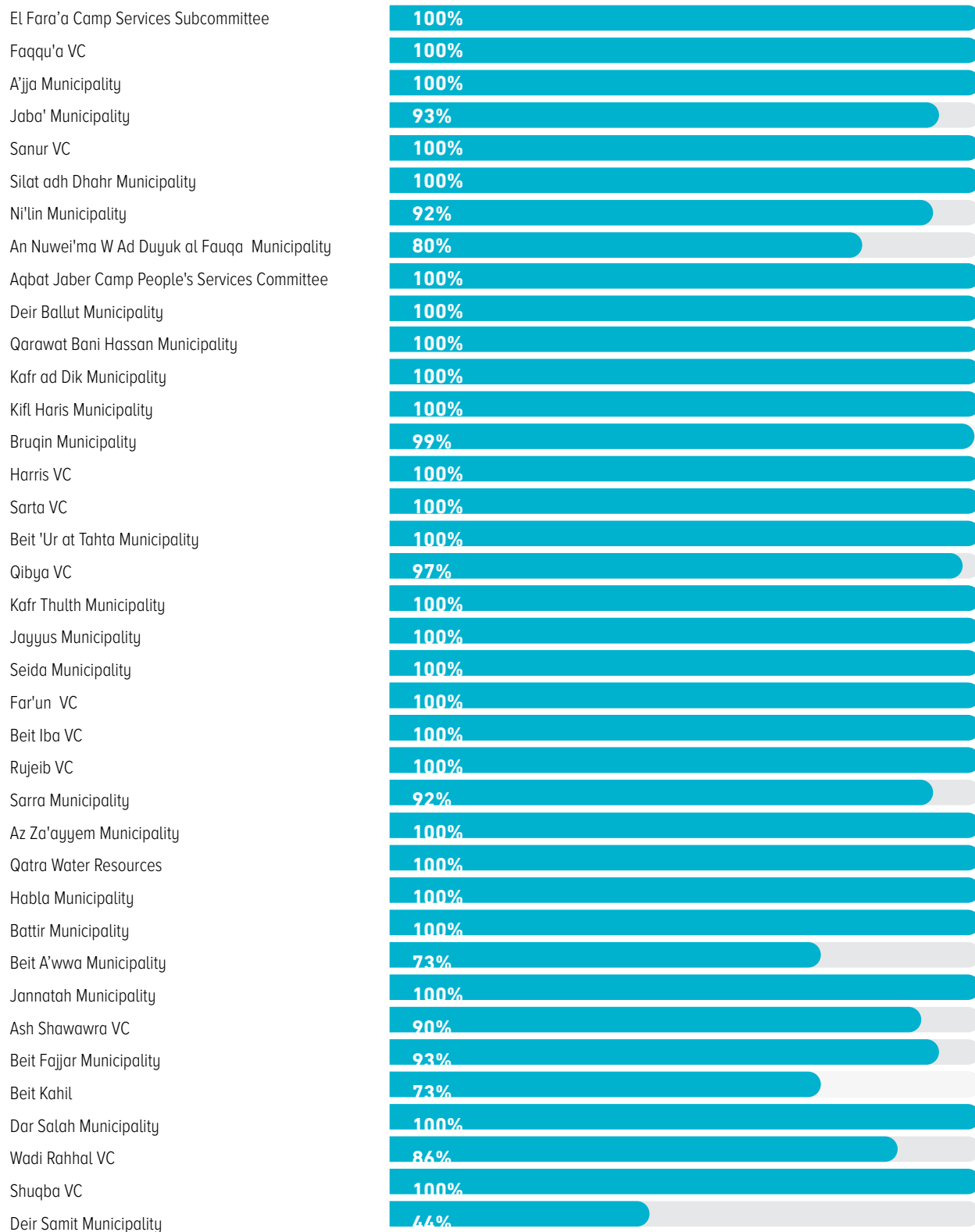
## Water Service Coverage (%)

### Medium service provider



# PERFORMANCE MONITORING REPORT







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It is worth noting that some small service providers have low coverage rates, such as Al Khas Village Council at 30%, Khallet Sakariya Village Council at 52%, and Birin Village Council at 53%.







Table 2 provides data related to service providers, aiming to draw insights on performance levels. A large number of service providers in the West Bank do not provide wastewater services, highlighting the need to intensify efforts to increase the coverage rate of the sewage and wastewater network.

**Table 2: Operational Information of Water and Wastewater Service Providers – West Bank**







	 Water network length including mains "km"	 Total number of water customers	 Total number of Waste water customers	 Population served with water service	 Population served with wastewater service	 Quantity of billed water "Total (including bulk water sales outside the area of service)"
<b>Large service provider</b>						
Jerusalem Water Undertaking	1,500	81,694	-	450,000	-	15,558,409
Water Supply and Sewerage Authority "WSSA" Bethlehem	470	14,586	12,458	117,820	101,325	4,551,480
Hebron Municipality	615	21,345	78,301	249,000	218,000	6,340,753
Nablus Municipality	562	52,373	52,352	218,000	213,640	8,251,428
Tulkarm Municipality	433	18,884	8,700	89,195	49,820	5,640,104
Yatta Municipality	220	5,254	-	84,000	-	919,485
Qalqiliya Municipality	166	13,126	15,939	61,995	60,755	3,942,503
Jenin Municipality	179	9,929	10,411	62,064	38,705	1,337,524
Halhul Municipality	100	4,940	-	25,915	-	841,777
Surif Municipality	98	4,957	-	19,000	-	595,867
Tarqumiya Municipality	100	3,176	-	22,050	-	346,972
Beit Ummar Municipality	115	3,379	-	18,000	-	603,301
As Samu' Municipality	-	5,000	-	25,000	-	-
Adh Dhahiriya Municipality	165	3,080	-	40,000	-	645,810
Dura Municipality	190	4,900	-	38,790	-	881,038
Bani Na'im Municipality	180	4,617	-	32,000	-	654,118
Sa'ir Municipality	80	3,957	-	25,000	-	608,424
Rural Dura JSC	-	8,600	-	43,000	-	-
Beituniya Municipality	65	7,964	-	38,300	-	770,440
Jericho Municipality	208	7,461	2,036	35,442	11,000	3,333,027
Salfit Municipality	82	3,933	1,307	15,000	10,000	800,214
Biddya Municipality	60	4,000	202	14,200	1,300	670,459
Al 'Eizariya Municipality	60	5,469	-	57,000	-	926,924
Qabatiya Municipality	100	4,935	-	28,800	-	999,385
Ya'bad Municipality	63	4,114	-	18,500	-	528,212
West Jenin Water Utility	1,087	12,213	503	62,800	3,700	1,704,062
Tubas Water Utility	410	11,150	1,700	53,000	12,000	1,518,948
Northwest Jerusalem JSC	153	5,790	-	45,000	-	1,088,703
South East Nablus JSC	155	7,602	-	70,092	-	1,230,379
Meithalun JSC	158	5,435	556	27,645	2,991	686,779
Abu Dis Cooperative Society for Water	35	4,322	-	27,500	-	525,054
Arraba Municipality	65	3,021	-	12,865	-	305,694
Beita Municipality	91	3,026	-	12,950	-	506,978
Beit Liqya , Kharbatha Al Misbah JSC	64	3,549	-	17,842	-	658,145

# PERFORMANCE MONITORING REPORT

for Water and Wastewater service providers in Palestine 2023

					
Water network length including mains "km"	Total number of water customers	Total number of Waste water customers	Population served with water service	Population served with wastewater service	Quantity of billed water "Total (including bulk water sales outside the area of service)"

Medium service provider						
Taffuh Municipality	47	1,909	-	15,500	-	404,429
Nuba Municipality	47	1,447	1,077	6,200	3,000	227,370
Beit Ula Municipality	98	2,200	-	15,500	-	334,213
Kharas Municipality	62	1,822	490	10,600	5,200	361,261
Tuqu' Municipality	97	1,799	-	15,000	-	320,483
Nahhalin Municipality	56	1,708	-	10,050	-	335,817
Ubeidiya Municipality	70	2,216	-	17,000	-	458,716
Karmil Municipality	110	1,350	-	13,800	-	207,596
Ash Shugukh Municipality	78	2,066	-	14,000	-	443,369
Za'tara Municipality	84	1,681	-	9,300	-	302,833
Husan VC	30	1,332	-	8,500	-	231,983
Bani Zaid Al Gharbia Municipality	57	2,550	84	10,000	400	346,202
Anabta Municipality	67	2,307	2,251	9,650	6,675	490,243
Beit Lid Municipality	95	1,448	285	7,200	1,200	165,823
Kafr Al Labad Municipality	21	1,147	325	6,100	2,000	194,923
Barta'a ash Sharqiya Water Association	32	2,517	-	6,200	-	270,800
A'nata Municipality	-	2,306	-	18,000	18,000	607,683
Deir al Ghusun Municipality	70	2,862	-	13,000	-	552,575
A'ttil Municipality	68	2,450	-	12,000	-	458,341
Qaffin Municipality	42	2,700	-	11,800	-	496,486
A'zzun Municipality	60	2,272	-	11,000	-	569,013
Qabalan Municipality	55	2,233	-	9,450	-	256,804
Kafr Ra'i Municipality	63	1,721	-	10,000	-	389,073
As Sawahira Ash Sharqiya Municipality	12	1,010	-	12,500	-	244,668
'Illar Municipality	65	2,089	-	8,300	-	890,532
Birajin Municipality	40	1,505	-	7,250	-	226,456
Az Zababida Municipality	23	1,270	-	5,000	-	137,697
Aqraba Municipality	85	2,804	-	10,700	-	276,924
Beit Furik Municipality	45	2,729	-	15,100	-	420,456
A'sira ash Shamaliya Municipality	65	2,426	-	11,800	-	208,607
Bal'a Municipality	23	2,081	496	9,000	3,500	245,517
Az Zawiya Municipality (Salfit)	33	2,133	-	6,500	-	223,384
Baqa Ash Sharqiya Municipality	27	1,519	1,355	5,700	4,800	245,074
Zeita Municipality	12	1,328	907	4,000	3,500	543,595
Burqa VC	30	1,336	-	5,500	-	131,107
Huwvara Municipality	37	2,165	-	10,000	-	238,957
'Urif VC	20	1,150	-	3,500	-	70,979
Tell VC	27	1,020	-	5,100	-	161,453
Salim VC	20	1,231	-	7,000	-	-

	 Water network length including mains "km"	 Total number of water customers	 Total number of Waste water customers	 Population served with water service	 Population served with wastewater service	 Quantity of billed water "Total (including bulk water sales outside the area of service)"
Jamma'in Municipality	31	1,756	-	8,264	-	286,885
El Fara'a Camp Services Subcommittee	70	1,215	-	7,000	7,000	100,660
Faqqu'a VC	41	1,069	-	5,000	-	130,000
A'jja Municipality	28	1,256	-	7,200	-	133,000
Jaba' Municipality	32	2,300	-	13,500	-	237,482
Sanur VC	20	1,305	-	6,000	-	111,609
Silat adh Dhahr Municipality	20	2,000	-	8,555	-	233,302
Ni'lin Municipality	20	1,315	-	5,500	-	322,799
An Nuwei'ma W Ad Duguk al Fauqa Municipality	47	1,534	-	8,000	-	266,435
Aqbat Jaber Camp People's Services Committee	-	2,000	1,500	11,000	8,000	-
Deir Ballut Municipality	25	1,044	-	5,200	-	167,872
Qarawat Bani Hassan Municipality	24	1,787	-	6,500	-	260,114
Kafr ad Dik Municipality	19	1,450	-	6,328	-	146,478
Kifl Haris Municipality	40	1,140	-	4,561	-	86,070
Bruqin Municipality	23	1,100	-	4,600	-	114,936
Harris VC	13	1,052	-	4,711	-	146,642
Sarta VC	29	1,357	-	3,939	-	156,314
Beit 'Ur at Tahta Municipality	14	1,239	-	6,100	-	155,242
Qibya VC	19	1,541	-	6,800	-	226,327
Kafr Thulth Municipality	27	1,400	-	6,468	-	393,307
Jayyus Municipality	23	1,100	-	4,280	-	149,439
Seida Municipality	21	1,150	-	4,165	-	126,575
Far'un VC	25	1,100	-	4,600	-	198,016
Beit Iba VC	16	1,501	1,108	5,000	4,000	241,568
Rujeib VC	35	1,350	1,100	7,000	5,600	206,563
Sarra Municipality	17	1,130	430	6,000	3,000	123,184
Al Jib Municipality		1,600	-	5,500	-	-
Az Za'ayyem Municipality	12	1,305	945	13,000	10,000	217,549
Oatra Water Resources	20	1,732	1,724	7,000	7,000	119,073
Habla Municipality	50	1,956	2,216	8,500	7,250	485,936
Battir Municipality	45	1,070	-	6,500	-	212,467
Beit A'wwa Municipality	16	1,620	-	11,000	-	105,882
Jannatah Municipality	30	1,350	-	8,500	-	269,200
Ash Shawawra VC	80	1,300	-	4,500	-	195,000
Beit Fajjar Municipality	33	2,401	-	14,000	-	520,800
Beit Kahil	12	1,577	-	8,000	-	240,000
Dar Salah Municipality	35	1,812	-	10,100	-	294,929
Wadi Rahhal VC	13	1,213	-	1,800	-	73,500
Shuqba VC	20	1,216	-	7,500	-	215,627
Deir Samit Municipality	6	2,000	-	4,000	-	130,000



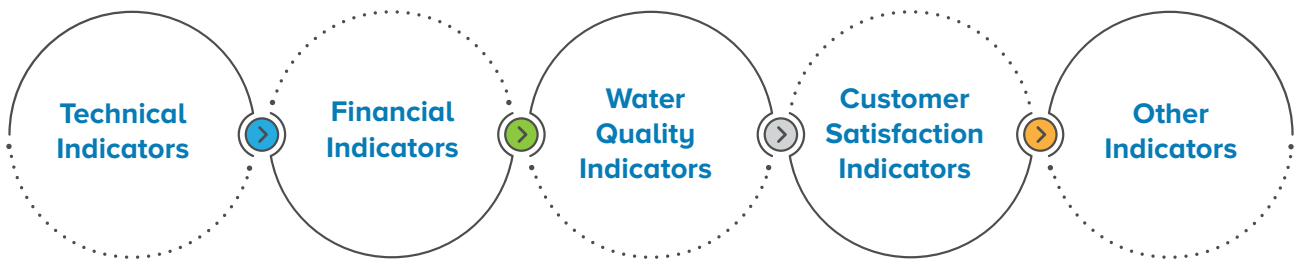




# Monitoring the Performance of Service Providers



The performance of service providers was monitored using five sets of indicators as follows:



This report presents a number of indicators that will be discussed to describe the performance of service providers. It should be noted that the Council's database contains all the data and inputs of all other indicators for reference if needed.

## First: Technical Indicators

### 1. Average daily per capita water consumption for domestic uses indicator

Indicator Definition	Calculation Formula	Reference Standard	Average in the West Bank
Measures the daily per capita consumption rate of water used for domestic purposes only	Total volume of water sold (allocated for domestic consumption only in cubic meters) during the assessment period x 1000 ÷ (number of days x total number of served population)	Minimum of 100 liters/person/day, according to the World Health Organization	73 liters/person/day

This indicator serves as a fundamental pillar in monitoring the performance of service providers globally, as it measures the extent to which citizens are granted their water rights for domestic use according to World Health Organization standards. To accurately measure this indicator, service providers should separate household water consumption from other types, such as commercial, tourism, and industrial uses, and each subscription should ideally serve a single household with an average of six members, based on Palestinian Central Bureau of Statistics data. However, since some service providers do not classify subscriptions, and due to the prevalence of extended families in Palestine where many subscriptions serve more than one household, this indicator may provide misleading, understated values regarding the per capita water share.

The indicator above is based on the volume of billed water rather than produced water, making the percentage of non-revenue water a significant factor in determining each service provider's ability to meet the per capita household consumption rate according to local and international standards. Therefore, service providers should work to reduce non-revenue water and separate subscriptions, which will positively impact the increase in per capita water share and improve other indicators, as will be shown later.



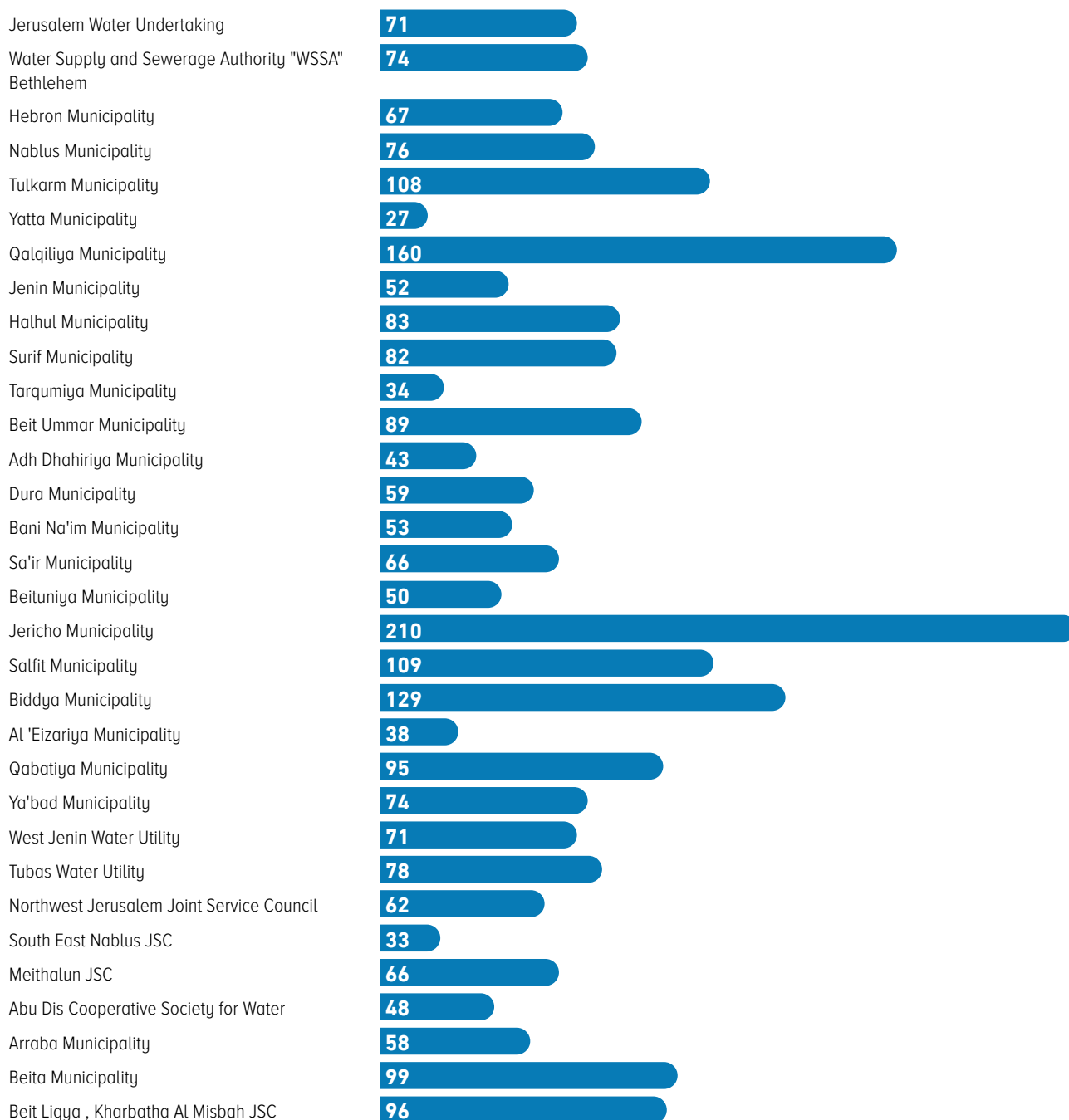
The World Health Organization standards recommend providing **150 liters per person per day**

noting that the globally accepted minimum is

**100 liters per person per day**

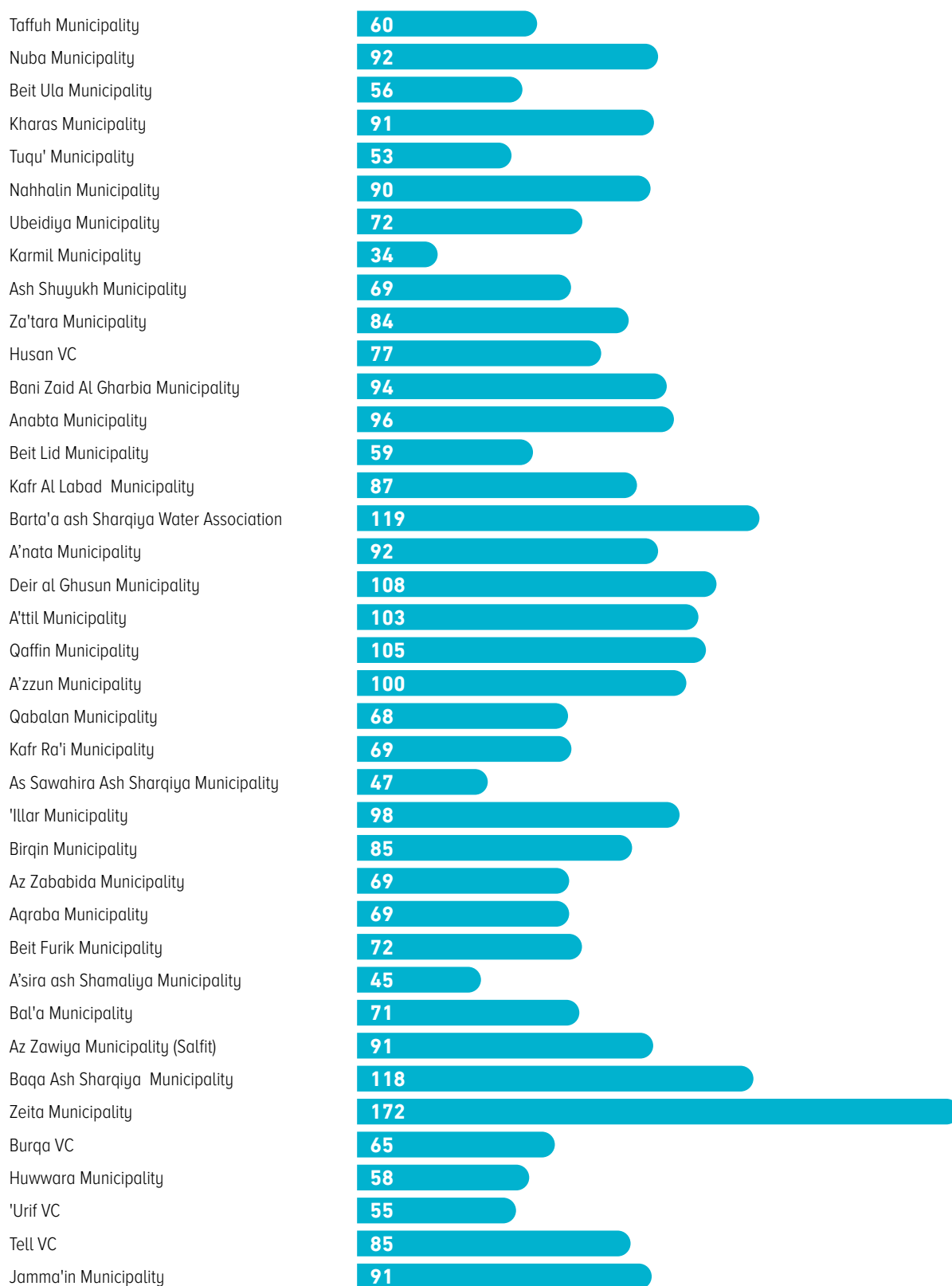
**Average daily water consumption per capita at domestic level (l/c/d)**

**Large service provider**



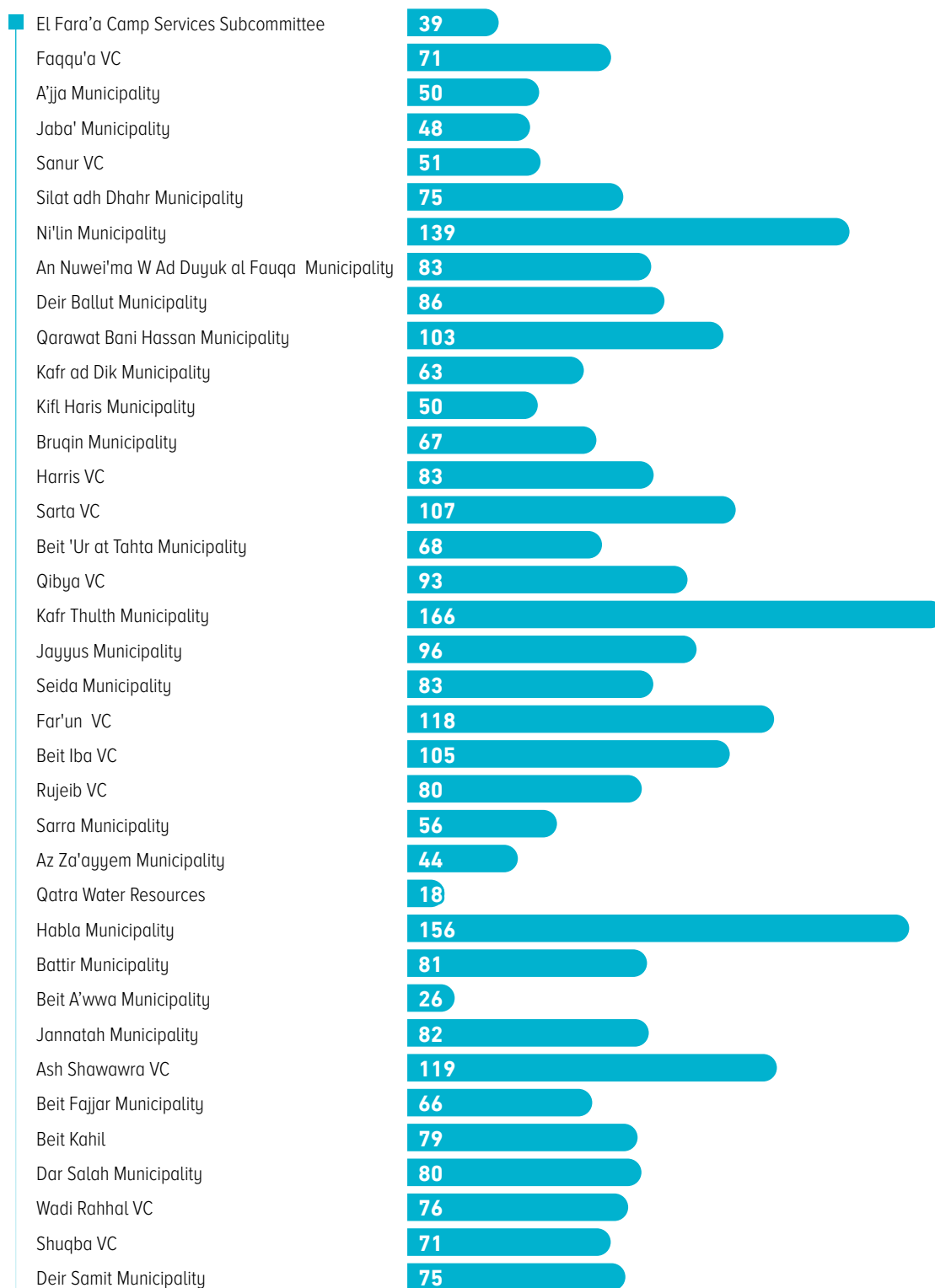
## Average daily water consumption per capita at domestic level (l/c/d)

### Medium service provider

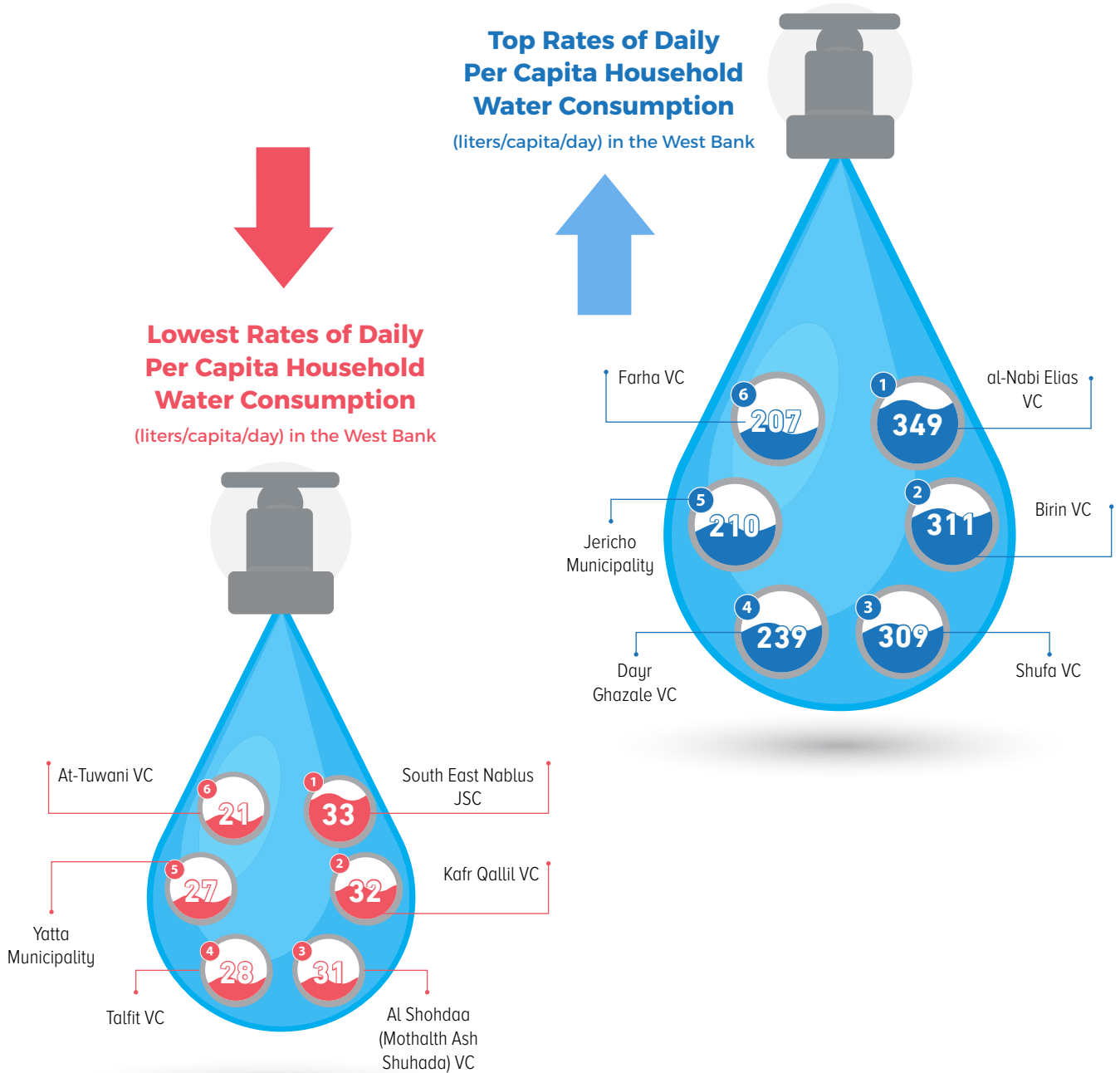


# PERFORMANCE MONITORING REPORT

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## The highest and lowest daily per capita domestic water consumption rates (liters/person/day) in the West Bank



The per capita daily water share (liters/person/day) varies depending on the geographic location of the service provider and the availability of water sources. As southern municipalities (Hebron and Bethlehem governorates) suffer from a shortage of resources due to their geographical nature, in addition to political factors that prevent the drilling and utilization of groundwater wells. Meanwhile, there is an plenty of water for household consumption in areas in the northern West Bank.

## 2. The indicator of the average daily per capita water consumption for all purposes

Indicator Definition	Calculation Formula	Reference Standard	Average in the West Bank
Measures the daily per capita water consumption rate in liters for various purposes	Amount of billed water (for all consumptions) in cubic meters during the calculation period x 1000 ÷ (number of days x total served population)	Minimum of 120 liters per person per day	82 liters per person per day

This indicator measures the total per capita share of water consumption across all legally defined uses, which include **domestic, commercial, industrial, tourism, and bulk consumers**. Due to the absence of a classification of water service subscribers by consumption type, this indicator is calculated to compare the performance of service providers. The lack of classification is often attributed to the fact that many providers apply a uniform tariff across all categories, regardless of consumption type.

Various factors affect this indicator, as some service providers, for example, include home gardens within the household consumption category even if the garden covers an area of three dunums (about 3,000 square meters).

The Water Sector Regulatory Council recommends that service providers intensify their efforts to separate and classify different types of water consumption. This is essential because the "average per capita domestic consumption" indicator can only provide an accurate representation if domestic consumption is distinguished from other usage categories.

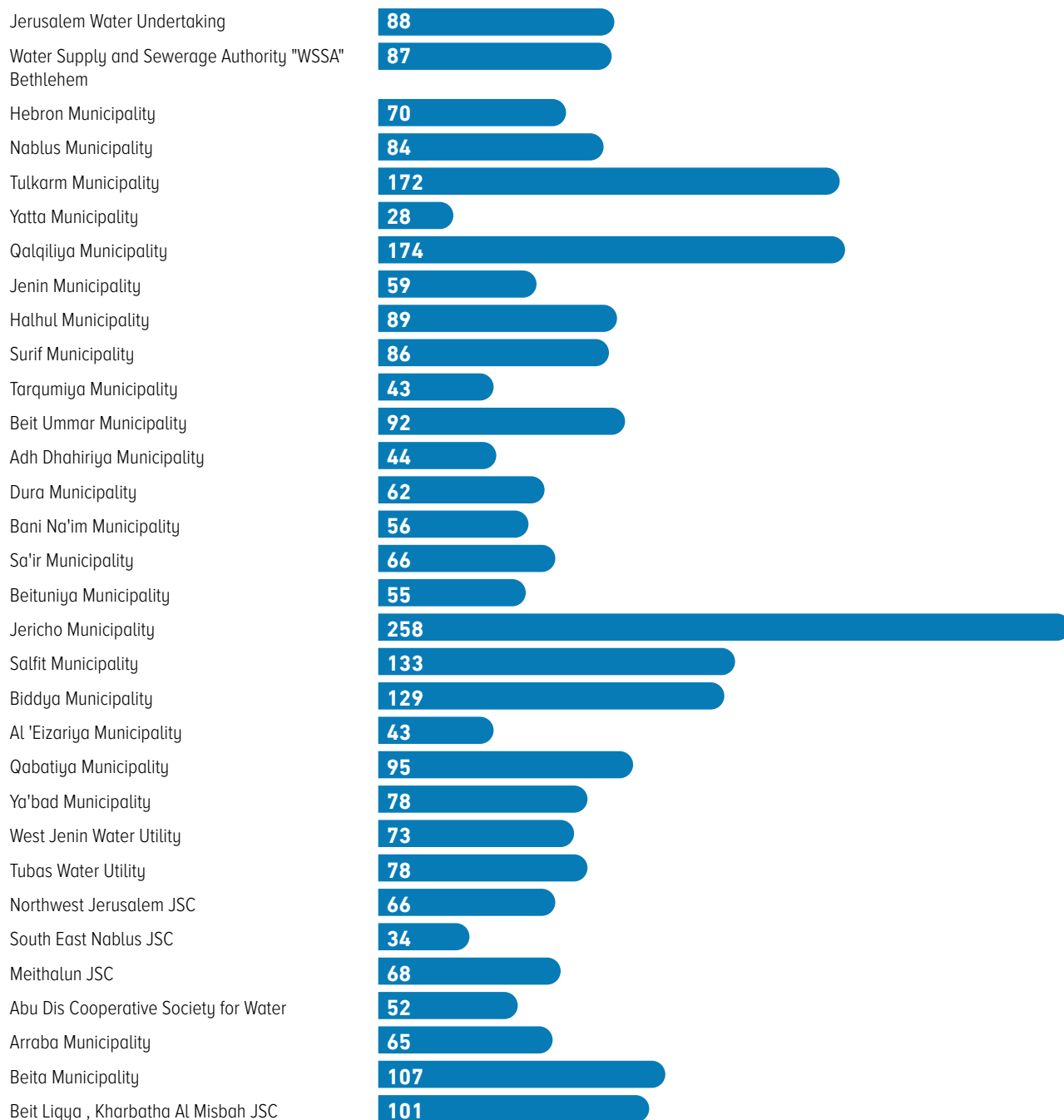
Applying correct classification of subscriber categories will provide a more accurate indicator of per capita consumption for household and other uses, showing the true amount of water available for domestic use compared to other designated uses. This, in turn, will offer an effective tool for developing new tariff structures and identifying which subscriber categories can be encouraged, in alignment with the service provider's strategic direction.

According to the Unified Tariff System for Water and Wastewater No. 4 of 2021, service providers must classify water and wastewater usage types into the following categories: domestic, commercial, industrial, and tourism use. The system also provides clarification for each of these usage types.



## Average daily of water sold per capita for all purposes (l/c/d)

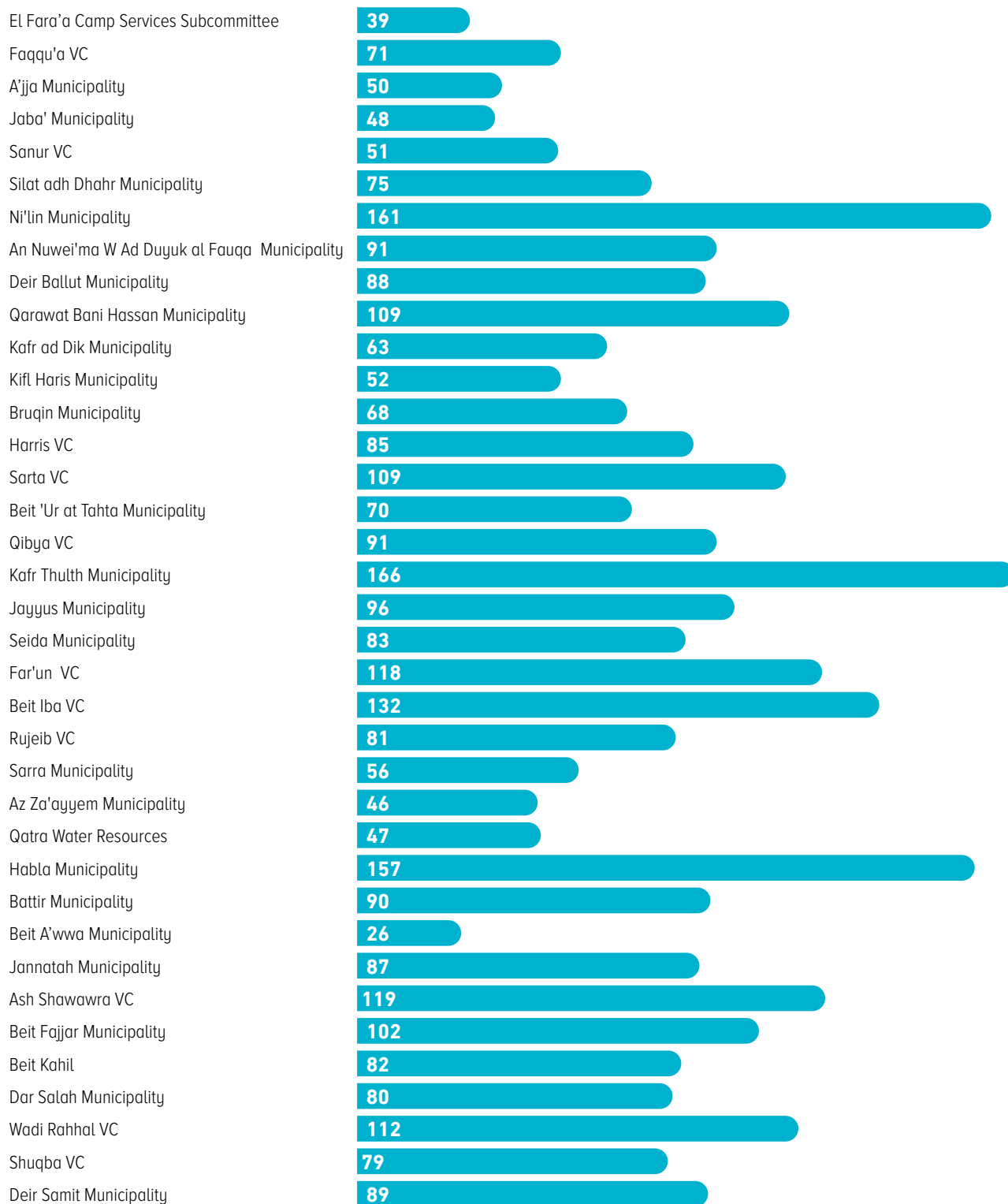
### Large service provider



**Average daily of water sold per capita for all purposes (l/c/d)**

**Medium service provider**



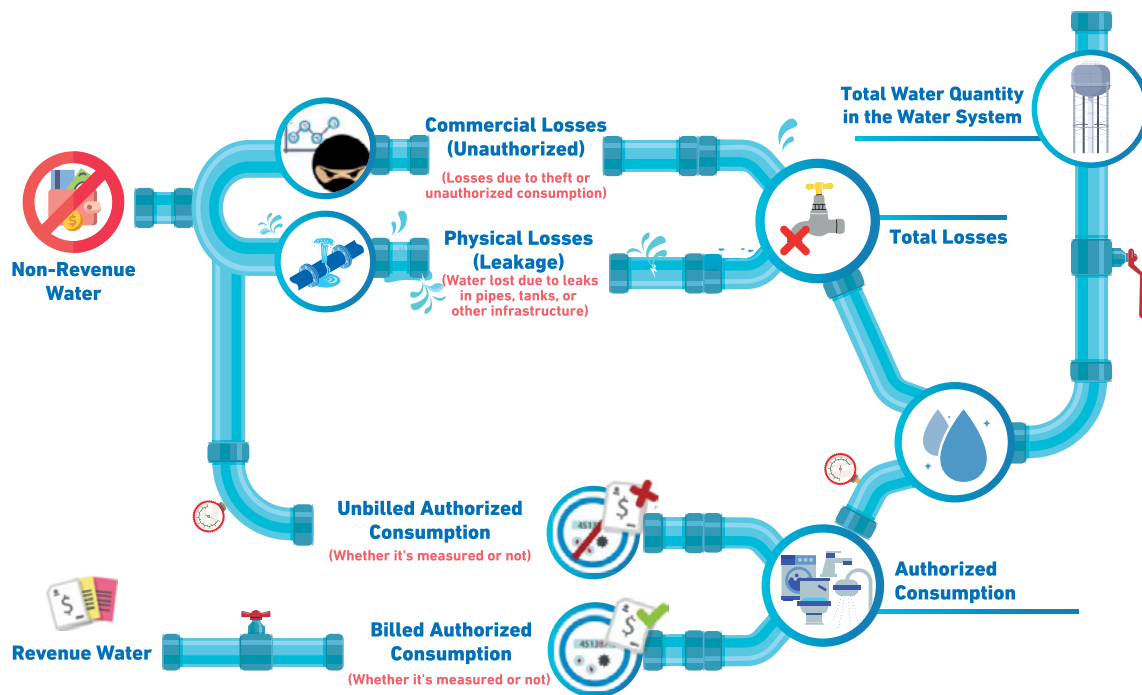


### 3. Indicator of the Percentage of non-revenue Water

Indicator Definition	Calculation Formula	Reference Standard	Average in the West Bank
Measures the percentage difference between the supplied water (produced and purchased) and the water billed to consumers (both domestic and non-domestic) ÷ supplied water (produced and purchased)	$(\text{Amount of available water (produced or purchased)} - \text{amount of billed water (consumed)}) \div \text{amount of available water} \times 100\%$	Less than 30% according to the strategy of the Water Authority	35%

This indicator aims to measure the efficiency of the water distribution system, based on the calculation of the quantities of water produced or purchased that the service provider was unable to measure and bill. It reflects the difference between the supplied water (produced or purchased) and the water sold to consumers.

The diagram below illustrates the components of the water balance, explaining the reasons on which the percentage of this indicator is analyzed.



The water balance diagram highlights the distinction between water loss and Non-Revenue Water (NRW). It is important to emphasize that the high levels of NRW observed in some service providers are often due to administrative, rather than technical, factors. For instance, failing to issue bills for certain institutions, such as schools, mosques, and municipal facilities, significantly contributes to the increase in NRW.

Additionally, a portion of Non-Revenue Water (NRW) stems from the absence of meters on certain outlets and network exits, such as those designated for civil defense. The causes and components of NRW, as outlined in the water balance, vary across service providers. Identifying these causes enables service providers to implement targeted administrative and technical measures to effectively reduce NRW.

Minimizing NRW consider as an additional source of water for service providers, particularly for those suffering from water scarcity or limited water supplies.

For example, reducing the loss rate in the West Bank to 30% (the maximum allowed according to the Palestinian Water Authority's strategy) instead of 35% would increase the per capita share of water sold to 88 liters per person per day, compared to 82 liters.

**In summary, the overall percentage of Non-Revenue Water is relatively high, and the losses from NRW estimated to exceed 250 million shekels in 2023, assuming an average selling price of 5 shekels per cubic meter. This is a relatively large amount.**

This indicator helps the service provider in planning for investment for the rehabilitation and development of the distribution network. It also contributes to reducing operational costs, increasing water sales, and conserving available and limited water resources. Therefore, it enhances the sustainability of the service provider in maintaining water supply and planning for expansion in new areas within its jurisdiction.

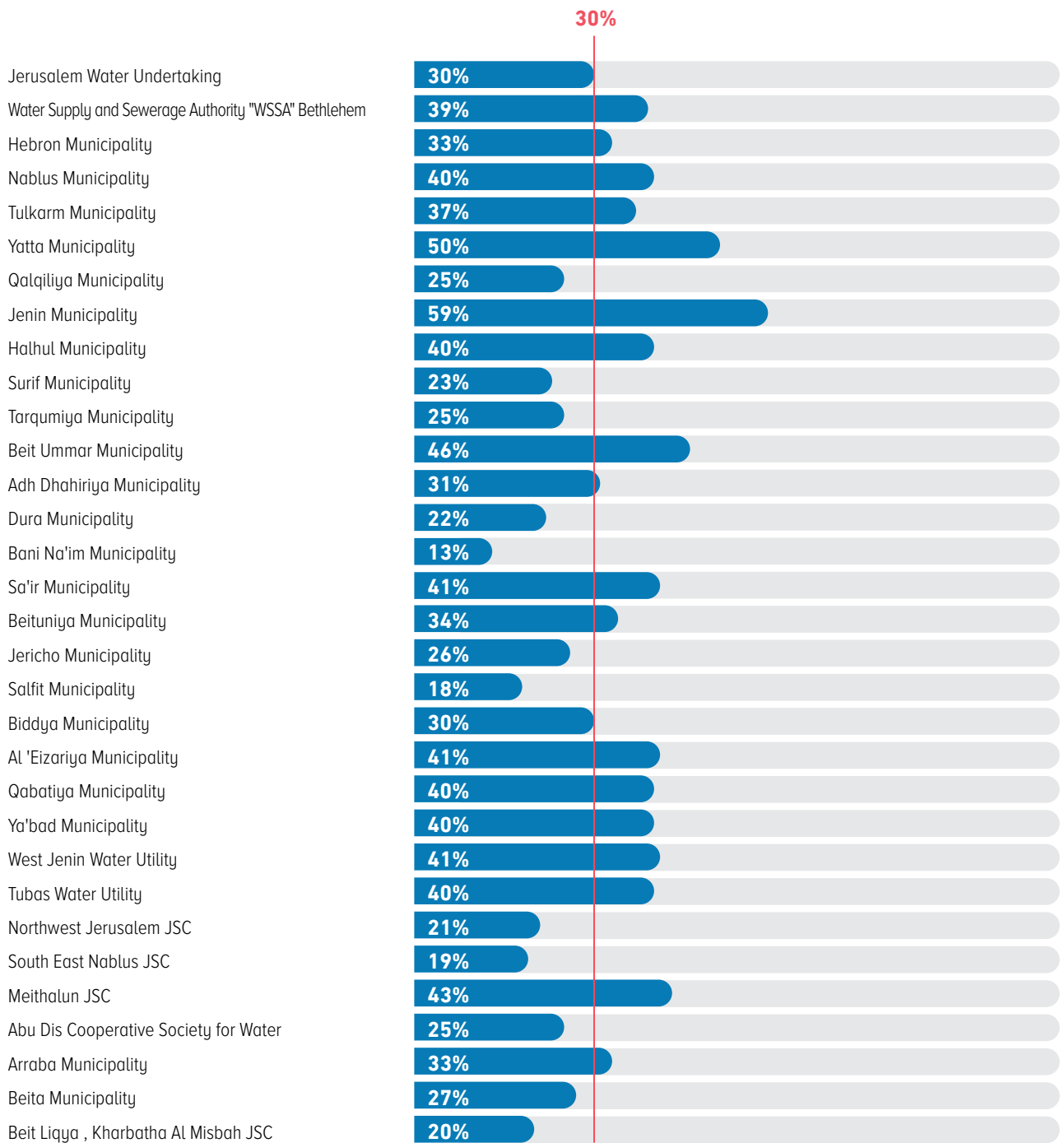
Some service providers have very low Non-Revenue Water rates, with some percentages falling below 15%. The Council has thoroughly reviewed and verified the data for calculating this indicator with the service provider. The likely reason for this low percentage is the implementation of strict measures to reduce water loss, including continuous monitoring of the network's condition, leak detection, enforcement of penalties for illegal connections, and high fines for violations. Some providers also have new water networks and meters that contribute to reducing water loss.

The "Qatra" company stands out with an exceptionally low percentage of Non-Revenue Water. This is due to its modern water network with very high specifications, which directly delivers water to homes from the main reservoir without the need for rooftop water tanks. Additionally, the company uses smart technology to monitor and control the water supply system to citizens. Furthermore, smart meters have been installed for customers, which support remote and real-time reading, making it easier to detect leaks quickly and eliminating a significant portion of reading errors.



## Percentage of non-revenue Water

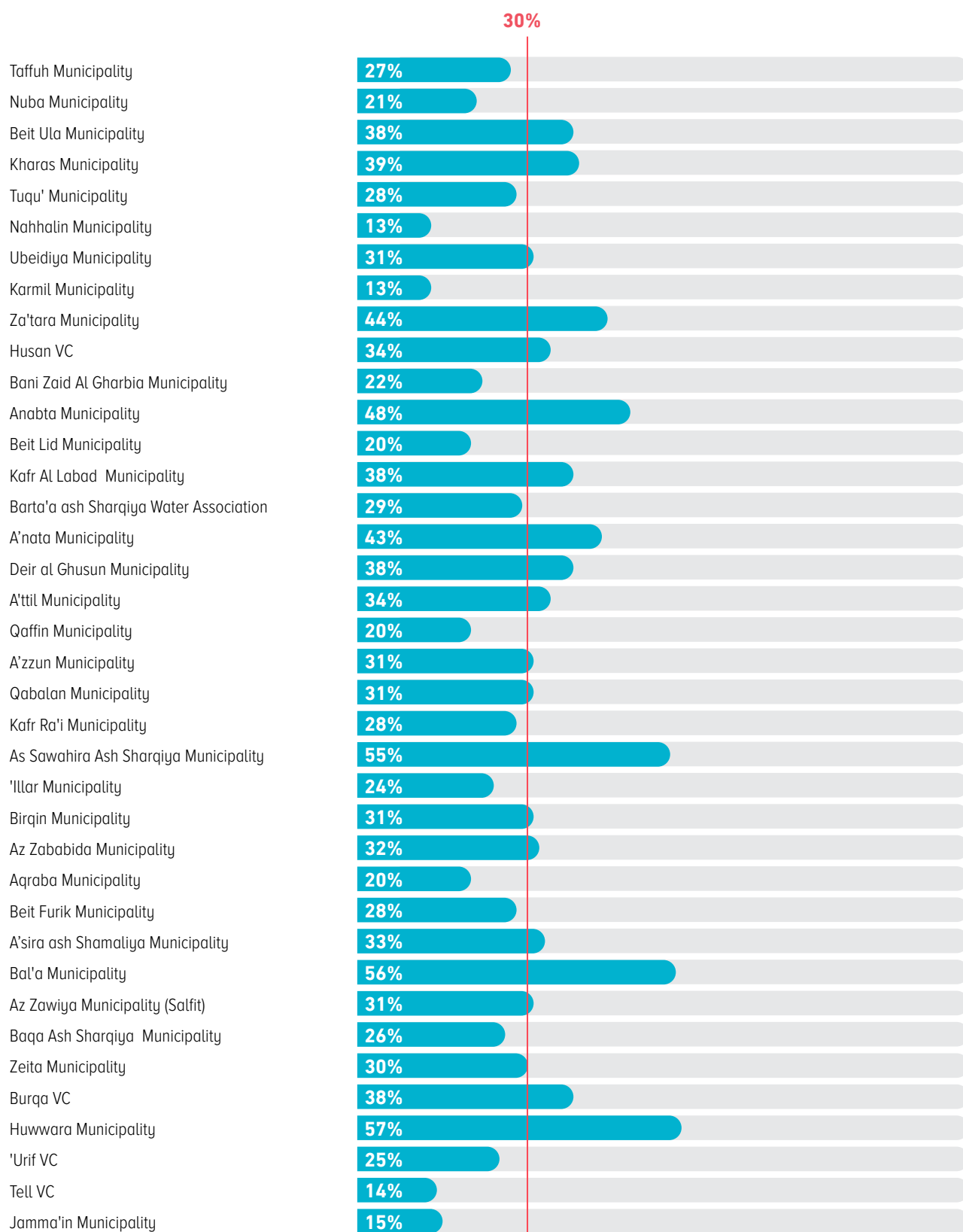
### Large service provider



Among the large service providers, the percentage of Non-Revenue Water. exceeds 40% in Jenin Municipality (59%), Yatta Municipality (51%), Beit Ummar Municipality (46%), Meithalun JSC (43%), and Sa'ir Municipality, Al-Eizariya, and West Jenin Water utility (41%).

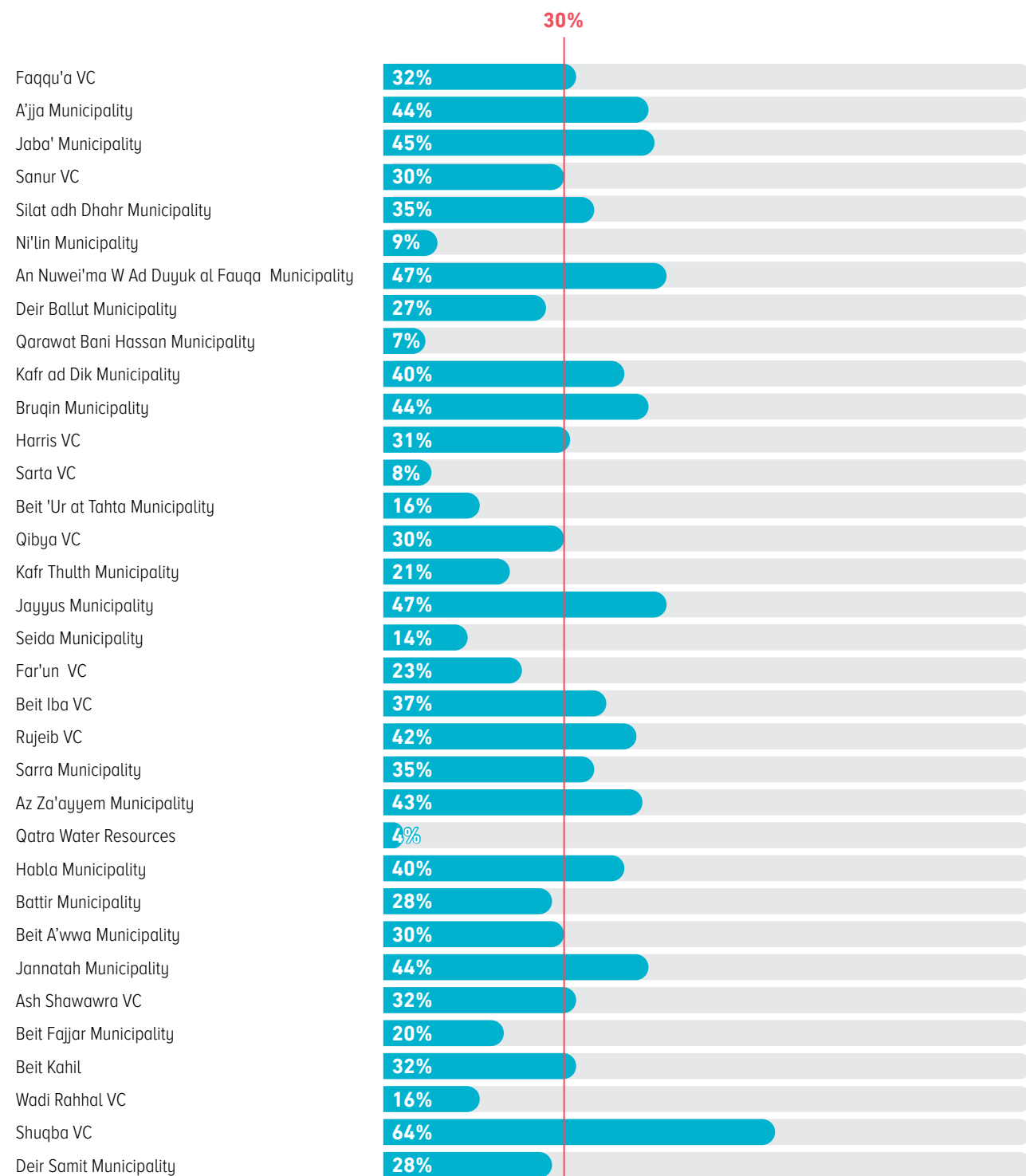
## Percentage of non-revenue Water

### Medium service provider



## Percentage of non-revenue Water

### Medium service provider





The percentage of Non-Revenue Water exceeds 45% for some medium-sized service providers, with 64% in the Shuqba Village Council, and 57%, 56%, and 55% in the municipalities of Huwwara , Balaa, and As Sawahira Ash Sharqiya , respectively. Additionally, it reached 47% in both Jayyus and An Nuwei'ma.

Some service providers supply bulk water to other service providers outside their service areas through their main networks, which has reduced their Non-Revenue Water percentage. For example, the Jerusalem water undertaking percentage becomes 28%, Anabta's becomes 43%, Kafr Ra'i's becomes 20%, and Nablus Municipality's becomes 35%.

#### 4. Indicator of Non-Revenue Water per Kilometer of Network Length per Year

Indicator Definition	Calculation Formula	Reference Standard	Average in the West Bank
Measures the efficiency of water transmission through the main water network and pipelines and reduces discrepancies between networks in terms of length, providing more accurate, credible, and comparable results	Total unaccounted-for water (cubic meters) during the evaluation period ÷ Network length (kilometers)	Not applicable	3,108 cubic meters per kilometer of network length annually

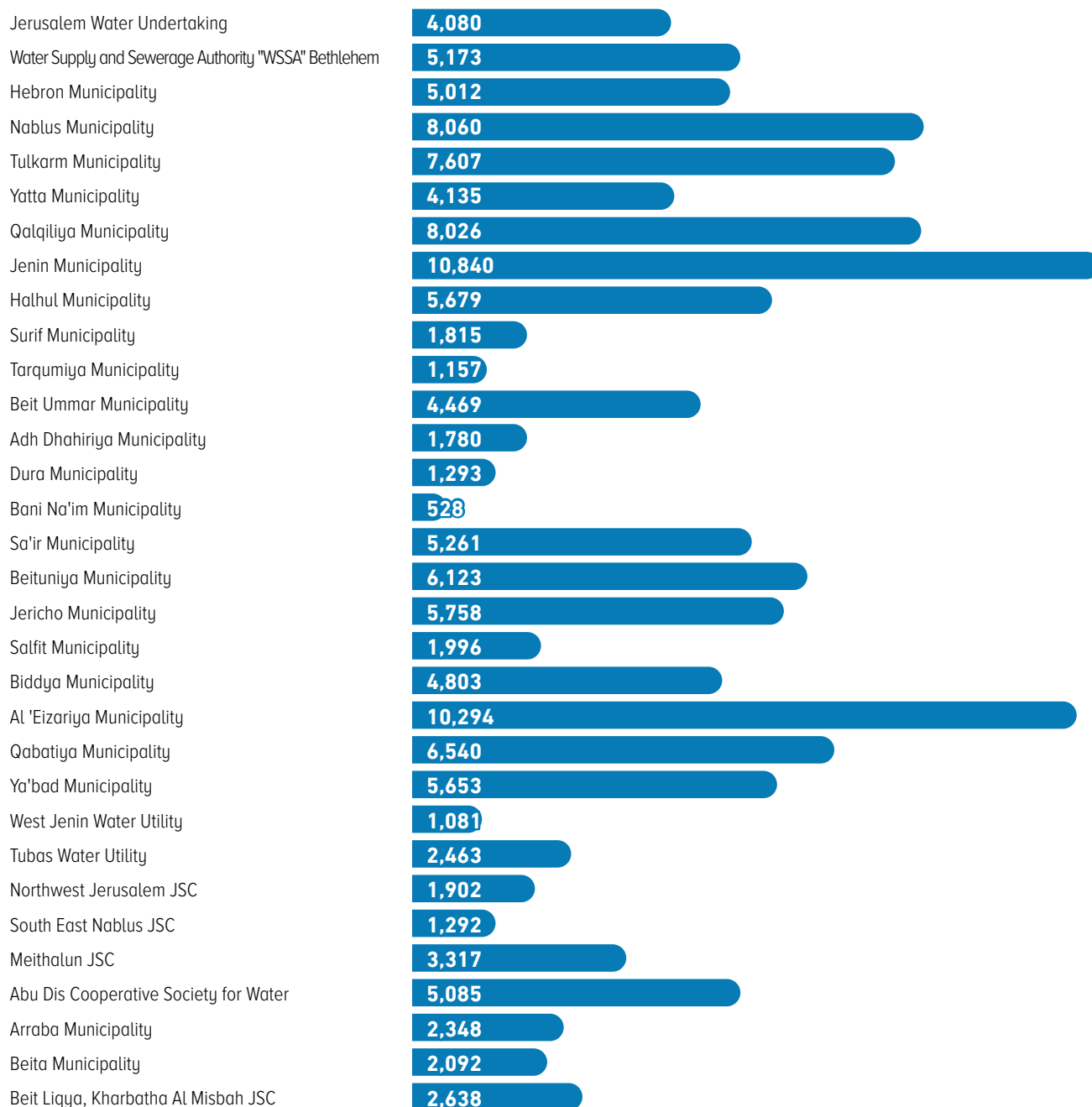
The results of this indicator reflect the efficiency of the distribution network, as it provides data on the amount of water loss caused by network breaks, leaks from connections, or illegal connections per kilometer of the main network. It gives the service provider more accurate and comparable results in real-world terms than those obtained from the Non-Revenue Water percentage indicator. Therefore, the results of this indicator should be read in conjunction with the previous one.

This indicator allows for comparison between service providers of different sizes by neutralizing the network length and comparing the amounts of Non-Revenue Water per kilometer of network. It serves as an indicator of network and transmission line efficiency, and the results derived from this indicator help the service provider in planning investments, as well as rehabilitating or replacing the network.



**NRW per kilometer of the network per year (Cubic meter/KM/Year)**

**Large service provider**



## NRW per kilometer of the network per year (Cubic meter/KM/Year)

### Medium service provider



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## 5. Indicator of Non-Revenue Water per Connection per Day

Indicator Definition	Calculation Formula	Reference Standard	Average in the West Bank
Measures the amount of unaccounted-for water as a daily share per subscription. It is considered a key indicator for water supply networks in urban areas	$\frac{\text{Total unaccounted-for water (cubic meters) during the evaluation period} \times 1000}{(\text{Number of evaluation days} \times \text{Number of subscriptions})}$	Not applicable	249 liters per subscription per day

This indicator represents the percentage of Non-Revenue Water (NRW) as a specific volume of water loss attributed to each active subscription with the service provider. It evaluates the efficiency of household connections and the meters used by service providers. A significant issue is the improper installation of household connections, such as the use of above-ground plastic pipes, which are more prone to damage. This contributes to higher levels of NRW as reflected in the indicator.

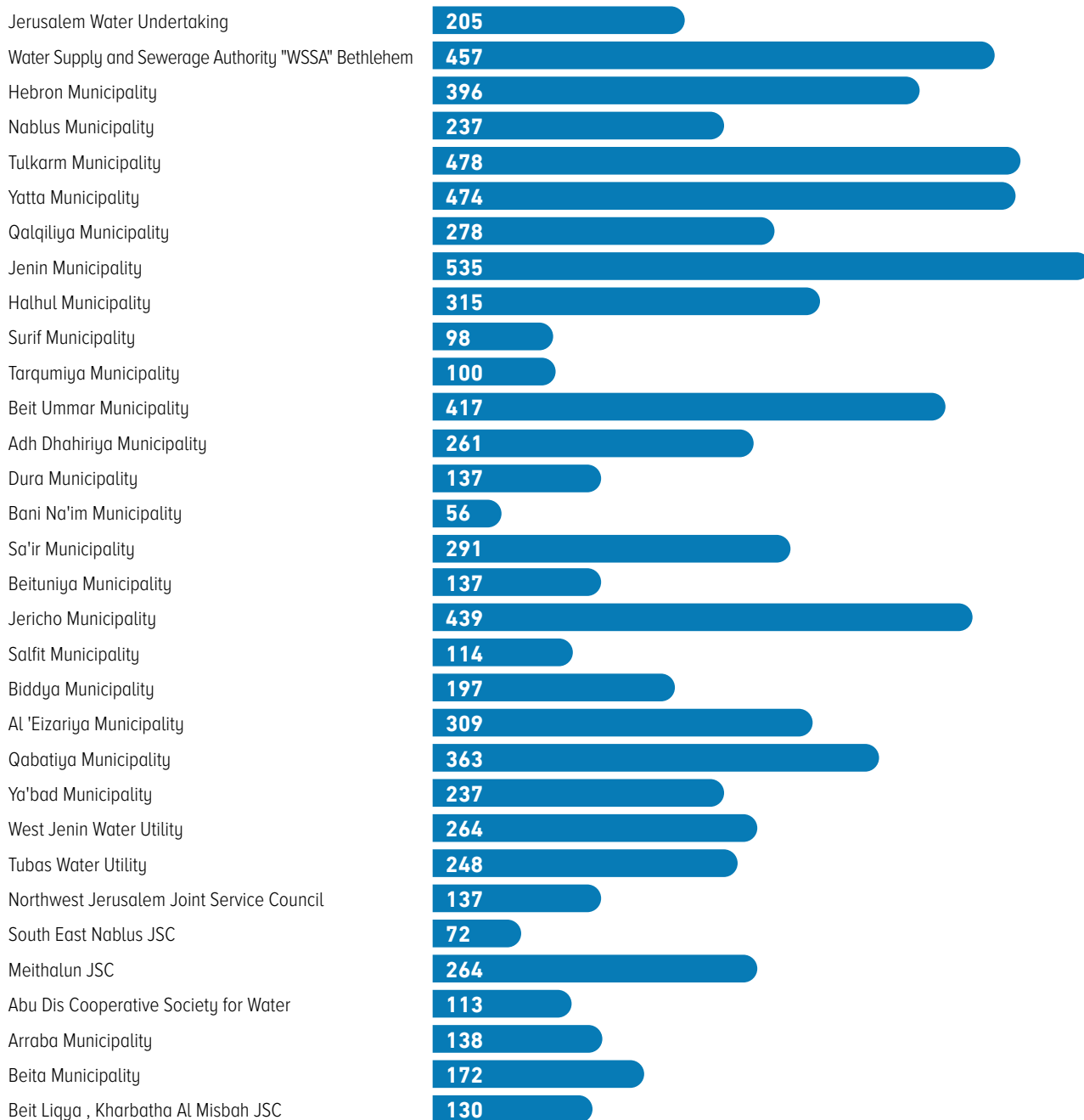
Additionally, the presence of old meters with service providers contributes to raising this indicator. As meters age, the accuracy of readings for the amount of water consumed by citizens decreases. Therefore, meters should be replaced immediately after the end of their lifespan to ensure precise measurement of water consumption.

Furthermore, theft is an integral part of (NRW), and the service provider should conduct campaigns to detect theft and activate the legal system to address these thefts.



**■ Daily NRW per connection indicator (Liter/conn./Day)**

**Large service provider**



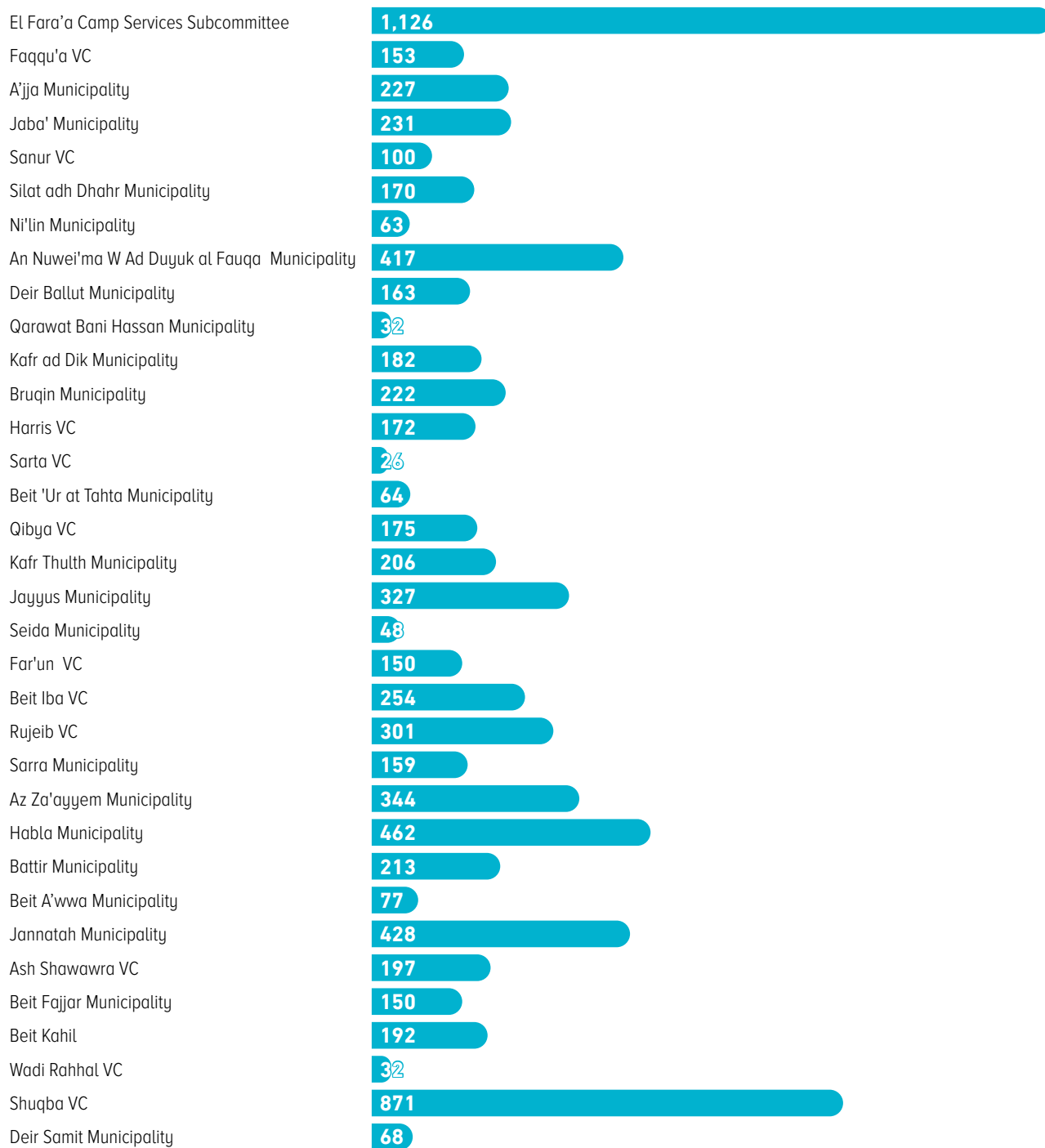
## ■ Daily NRW per connection indicator (Liter/conn./Day)

### Medium service provider



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## Second: Financial Indicators

### Water Services

#### 1. Indicator of the Average Selling Price of a Cubic Meter of Water

Indicator Definition	Calculation Formula	Reference Standard	Average in the West Bank
Represents the calculated average price of selling one cubic meter of water	Total revenue from water sales (in shekels) ÷ Total volume of water sold (in cubic meters, m <sup>3</sup> )	Equal to or greater than the operating cost per cubic meter of water sold	5.08 shekels per cubic meter

This indicator does not refer to the tariff applied by the service provider; rather, it is an indicative measure of the average selling price per cubic meter of water sold. Its purpose is to compare this average price with the operating costs incurred by the service provider.

The indicator holds particular importance for service providers, as it serves as the primary determinant of revenue, especially for municipalities where water services account for more than 60% of their operations. Consequently, it signals whether the service provider is covering its operating costs for water services or not.

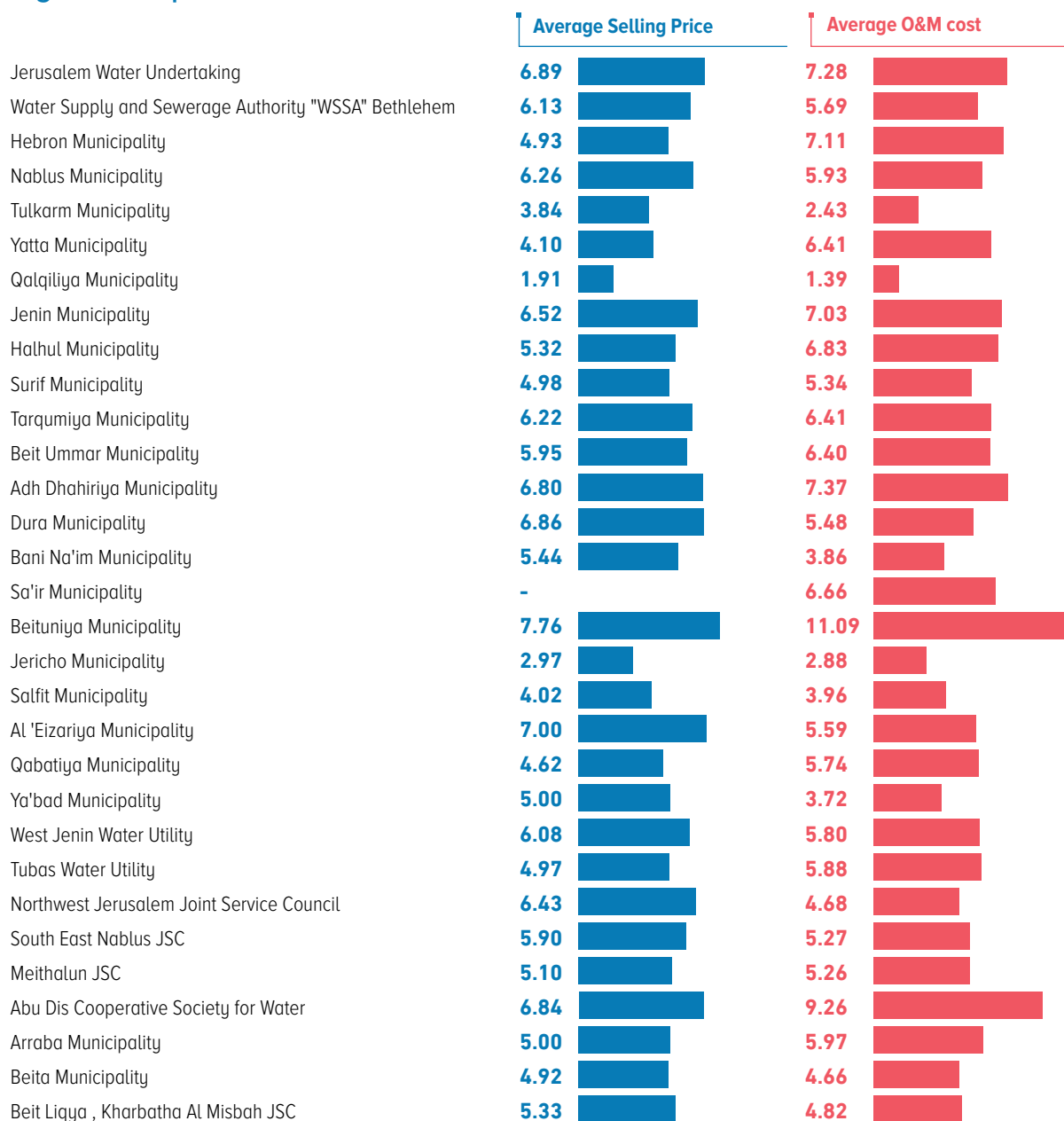
Therefore, this indicator should be analyzed alongside the operating cost per cubic meter of water sold to highlight the gap between the average selling price and the associated operating cost, thus assessing the efficiency of the applied tariff.

Water prices must be determined in accordance with the principles of tariff calculation outlined in the Unified Tariff System for Water and Wastewater No. 4 of 2021 and its related instructions. This system aims to recover actual costs, ensure the financial sustainability of service providers, and standardize the principles and criteria for setting water and wastewater prices, including subscription fees and service charges. It also aims to promote rational consumption and encourage consumers to preserve water resources.



## Average Selling Price Per m<sup>3</sup> of Water and Operating Costs Per m<sup>3</sup> of Water Sold

### Large service provider

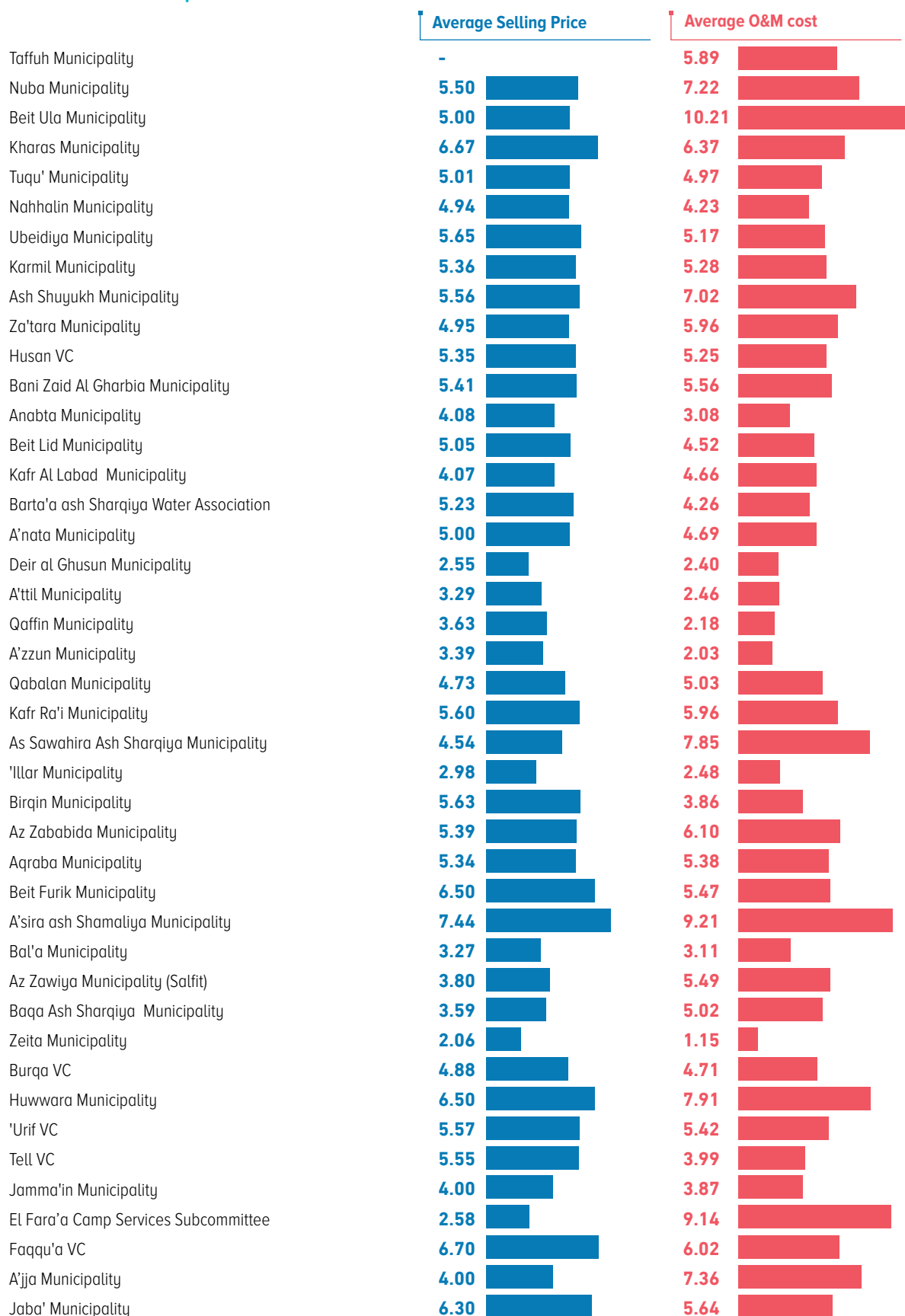


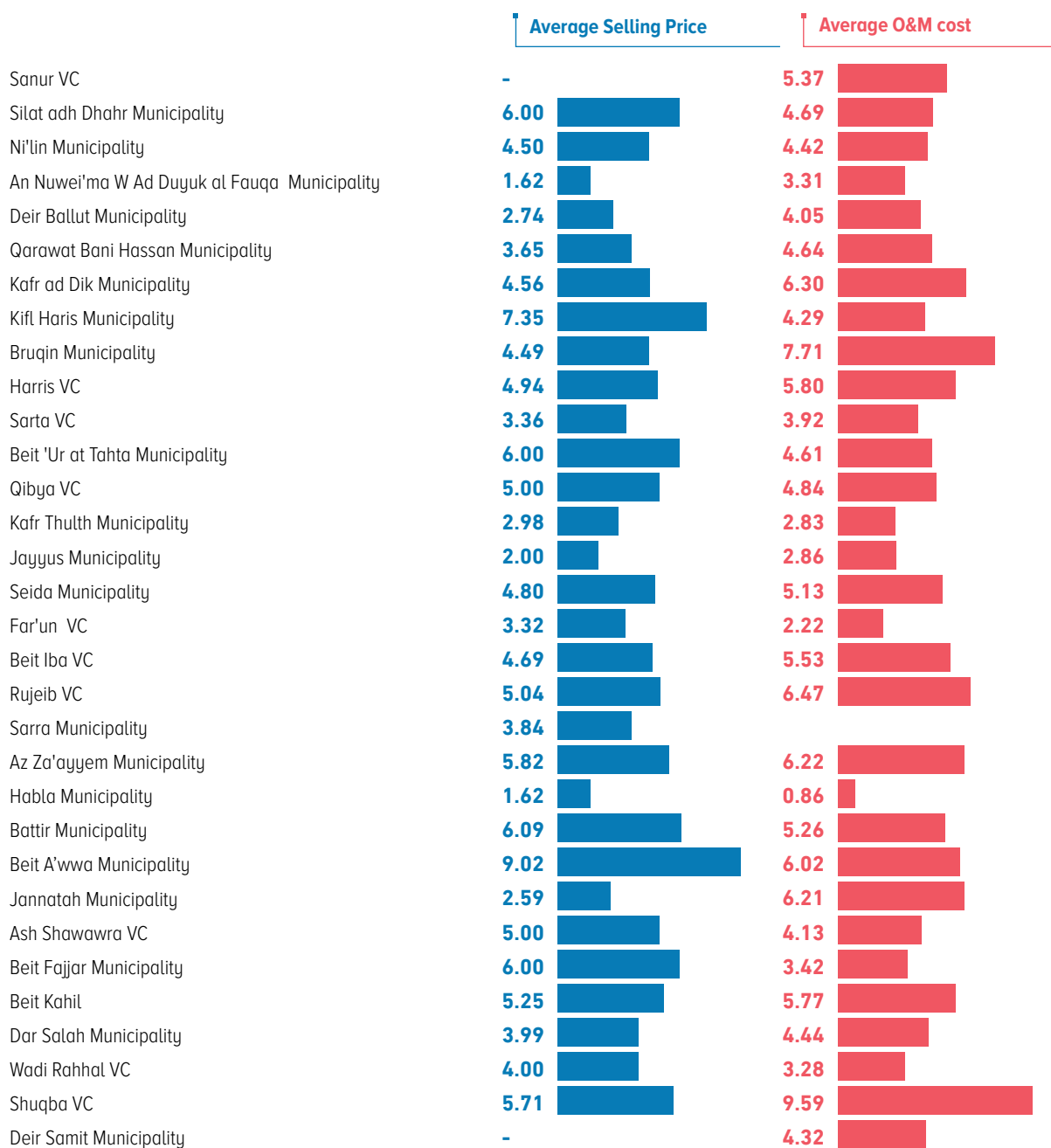
The graph above indicates that some major service providers have relatively high selling prices and operating costs per cubic meter sold. The following table provides a comparison between the selling price and the cost per cubic meter sold:

	Average Selling Price for cubic meter sold (NIS/cubic meter)	Average O&M cost for cubic meter sold (NIS/cubic meter)
Jerusalem Water Undertaking	6.89	7.28
Dura Municipality	6.86	5.48
Beituniya Municipality	7.76	11.09
Al 'Eizariya Municipality	7	5.59
Abu Dis Cooperative Society for Water	6.84	9.26

## Average Selling Price Per m<sup>3</sup> of Water and Operating Costs Per m<sup>3</sup> of Water Sold

### Medium service provider





The graph above also highlights that some medium-sized service providers have relatively high selling prices and operating costs per cubic meter sold. The following table provides a comparison between the selling price and the cost per cubic meter sold:

	Average Selling Price for cubic meter sold (NIS/cubic meter)	Average O&M cost for cubic meter sold (NIS/cubic meter)
Kharas Municipality	6.67	6.37
A'sira ash Shamaliya Municipality	7.44	9.21
Faqqu'a VC	6.7	6.02
Kifl Haris Municipality	7.35	4.29
Beit A'wwa Municipality	9.02	6.02

## 2. Indicator of Operational Costs per Cubic Meter of Water Sold.

Indicator Definition	Calculation Formula	Reference Standard	Average in the West Bank
Measures the average operational (running) costs per cubic meter of water sold	$(\text{Operating, maintenance, and administrative costs in shekels, excluding depreciation}) \div \text{Net water sales in cubic meters}$	Not applicable	5.5 shekels per cubic meter sold

This indicator monitors the operational costs incurred by the service provider for managing, producing, distributing, and operating water supply services to citizens. These costs are accounted for whether they are paid immediately or remain as outstanding debts owed by the service provider. It is important to emphasize, as previously noted, that these costs do not include depreciation expenses for capital assets related to the service or developmental costs for water services.

The data reveals that operational costs vary among service providers due to several factors, including:

- **Source of water:** Service providers primarily reliant on locally produced water have lower costs compared to those dependent on purchased water.
- **Energy and pumping costs:** Geographical differences play a role; for instance, mountainous areas like Nablus require pumping stations to supply water, increasing costs, while flat areas like Jericho distribute water through gravity-fed networks, reducing pumping expenses.
- **Employee salaries in water services:** Slight variations in employee salary levels between municipalities, village councils, and water utilities impact operational costs.
- **Non-revenue water (NRW) percentage:** An increase in NRW levels leads to a higher per-unit cost for water sold. As noted earlier, the indicators for average selling price and operational costs per cubic meter of water sold should be analyzed alongside the NRW percentage, given the direct relationship between water losses and operational costs.

The graph below provides a detailed breakdown of operational costs for each service provider, including:

- Employee costs per cubic meter of water sold.
- Costs of purchased water per cubic meter of water sold.
- Energy costs per cubic meter of water sold.
- Other operational costs per cubic meter of water sold.

## Allocation of operational cost for cubic water meter sold

### Large service provider

	Staff costs	Water purchases	Energy costs	Other operating costs
Jerusalem Water Undertaking	2.20	3.44	0.69	0.95
Water Supply and Sewerage Authority "WSSA" Bethlehem	0.93	3.55	0.44	0.77
Hebron Municipality	0.80	3.88	0.56	1.88
Nablus Municipality	1.43	0.57	2.48	1.45
Tulkarm Municipality	0.63	0.03	0.76	1.01
Yatta Municipality	0.87	4.94	-	0.59
Qalqiliya Municipality	0.24	-	0.65	0.50
Jenin Municipality	1.11	1.12	1.06	3.74
Halhul Municipality	0.43	4.36	0.14	1.90
Surif Municipality	0.51	3.38	0.00	1.45
Tarqumiya Municipality	1.35	3.41	0.05	1.60
Beit Ummar Municipality	0.76	4.69	0.17	0.78
Adh Dhahiriya Municipality	1.31	3.78	0.04	2.24
Dura Municipality	1.37	3.46	0.14	0.51
Bani Na'im Municipality	0.76	2.53	0.03	0.54
Sa'ir Municipality	0.82	4.40	0.02	1.41
Beituniya Municipality	1.03	6.37	-	3.69
Jericho Municipality	0.90	0.17	0.34	1.47
Salfit Municipality	0.40	2.23	0.53	0.80
Al 'Eizariya Municipality	0.92	-	0.01	4.66
Qabatiya Municipality	0.76	3.85	0.41	0.72
Ya'bad Municipality	0.65	-	1.96	1.11
West Jenin Water Utility	1.34	0.11	1.79	2.56
Tubas Water Utility	0.88	4.33	0.07	0.60
Northwest Jerusalem Joint Service Council	1.02	3.32	0.03	0.30
South East Nablus JSC	0.96	3.08	0.06	1.17
Meithalun JSC	0.87	3.62	-	0.78
Abu Dis Cooperative Society for Water	3.44	3.94	0.01	1.86
Arraba Municipality	0.71	4.01	-	1.24
Beita Municipality	0.87	2.04	0.50	1.25
Beit Liqya , Kharbatha Al Misbah JSC	0.65	3.27	0.04	0.87

It was observed that some major service providers incurred high energy costs per cubic meter of water sold, such as:

Nablus Municipality: **2.48 NIS/m<sup>3</sup>**

Ya'bad Municipality: **1.96 NIS/m<sup>3</sup>**

West Jenin Water utility: **1.79 NIS/m<sup>3</sup>**

Jenin Municipality: **1.06 NIS/m<sup>3</sup>**

Additionally, some major service providers showed high employee costs per cubic meter of water sold, including:

Abu Dis Cooperative Association: **3.44 NIS/m<sup>3</sup>**

Jerusalem water undertaking: **2.2 NIS/m<sup>3</sup>**

Nablus Municipality: **1.43 NIS/m<sup>3</sup>**

## Allocation of operational cost for cubic water meter sold

### Medium service provider

	Staff costs	Water purchases	Energy costs	Other operating costs
Taffuh Municipality	1.49	3.03	0.11	1.26
Nuba Municipality	1.85	3.15	0.09	2.14
Beit Ula Municipality	1.88	4.18	0.67	3.48
Kharas Municipality	0.56	4.40	0.51	0.90
Tuqu' Municipality	0.96	3.62	0.01	0.38
Nahhalin Municipality	0.98	2.98	-	0.27
Ubeidiya Municipality	0.78	3.78	-	0.61
Karmil Municipality	1.23	2.99	0.07	0.99
Ash Shuyukh Municipality	0.66	-	0.32	6.04
Za'tara Municipality	0.99	4.62	0.03	0.32
Husan VC	1.01	3.95	-	0.28
Bani Zaid Al Gharbia Municipality	1.23	3.35	-	0.98
Anabta Municipality	0.66	-	1.54	0.87
Beit Lid Municipality	0.61	3.27	-	0.64
Kafr Al Labad Municipality	0.51	2.55	1.21	0.38
Barta'ash Sharqiya Water Association	0.62	3.19	-	0.46
A'nata Municipality	-	-	-	4.69
Deir al Ghusun Municipality	0.47	-	0.32	1.60
A'ttil Municipality	0.56	1.21	0.25	0.43
Qaffin Municipality	0.28	0.13	0.51	1.26
A'zzun Municipality	0.13	0.78	0.85	0.27
Qabalan Municipality	0.94	3.78	-	0.30
Kafr Ra'i Municipality	0.30	3.96	0.56	1.14
As Sawahira Ash Sharqiya Municipality	0.10	5.77	-	1.98
'Illar Municipality	0.62	1.15	0.39	0.31
Birqin Municipality	0.24	1.93	0.92	0.77
Az Zababida Municipality	0.80	4.36	0.01	0.94
Aqraba Municipality	0.34	4.13	0.00	0.91
Beit Furik Municipality	0.67	4.48	0.01	0.31
A'sira ash Shamaliya Municipality	0.67	4.55	1.54	2.44
Bal'a Municipality	0.50	-	1.33	1.29
Az Zawiya Municipality (Salfit)	0.62	3.79	-	1.07
Baqa Ash Sharqiya Municipality	0.73	1.54	0.59	2.16
Zeita Municipality	0.07	-	0.37	0.71
Burqa VC	0.52	3.44	0.04	0.72
Huwwara Municipality	1.06	6.03	-	0.82

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	Staff costs	Water purchases	Energy costs	Other operating costs
'Urif VC	1.06	3.45	0.01	0.90
Tell VC	0.31	3.00	0.68	-
Jamma'in Municipality	0.37	3.07	-	0.43
El Fara'a Camp Services Subcommittee	1.39	-	4.38	3.38
Faqqu'a VC	0.92	3.80	-	1.30
A'jja Municipality	0.24	4.71	0.08	2.33
Jaba' Municipality	1.24	1.02	2.46	0.92
Sanur VC	0.81	3.71	-	-
Silat adh Dhahr Municipality	0.74	2.14	1.01	0.81
Ni'lin Municipality	0.33	2.84	-	1.26
An Nuwei'ma W Ad Duyuk al Fauqa Municipality	0.87	-	0.79	1.64
Deir Ballut Municipality	0.14	3.48	-	0.43
Qarawat Bani Hassan Municipality	0.74	2.81	0.02	1.08
Kafr ad Dik Municipality	0.53	4.31	-	1.46
Kifl Haris Municipality	0.78	-	-	3.51
Bruqin Municipality	1.10	-	-	6.61
Harris VC	0.73	3.77	-	1.30
Sarta VC	0.48	2.86	0.04	0.55
Beit 'Ur at Tahta Municipality	0.44	3.08	0.37	0.72
Qibya VC	0.42	3.73	-	0.69
Kafr Thulth Municipality	0.34	0.33	1.01	1.15
Jayyus Municipality	0.60	-	1.37	0.89
Seida Municipality	0.73	2.75	-	1.65
Far'un VC	0.20	1.83	-	0.19
Beit Iba VC	0.37	0.90	-	4.27
Rujeib VC	0.39	4.47	0.36	1.25
Sarra Municipality	0.37	3.99	0.22	-
Az Za'aygem Municipality	1.48	4.56	-	0.18
Habla Municipality	0.23	-	-	0.64
Battir Municipality	0.96	3.62	-	0.68
Beit A'wwa Municipality	1.87	3.71	-	0.43
Jannatah Municipality	0.63	4.64	0.11	0.83
Ash Shawawra VC	0.19	3.85	-	0.09
Beit Fajjar Municipality	0.69	3.26	-	-
Beit Kahil	1.09	4.17	-	0.51
Dar Salah Municipality	1.06	2.60	0.01	0.77
Wadi Rahhal VC	-	3.09	-	0.19
Shuqba VC	0.38	7.28	-	1.94
Deir Samit Municipality	-	-	0.05	-

Among medium-sized service providers, relatively high energy costs per cubic meter sold were also observed, such as:

Jaba' Municipality: **2.46 NIS/m<sup>3</sup>**

Anabta Municipality: **1.54 NIS/m<sup>3</sup>**

A'sira ash Shamaliya Municipality: **1.54 NIS/m<sup>3</sup>**



The topography of the service area and the lack of alternative energy sources in the West Bank are the main reasons for high energy costs based on the operational processes performed by the service provider. Consequently, energy costs account for up to 40% of operational expenses in some municipalities due to the absence of alternative energy sources and the presence of numerous pumping stations for different elevations. Conversely, energy costs are almost negligible for service providers relying on purchased water.

It should be noted that high energy expenses may be related to energy losses. In this case, a review and energy audit are necessary to identify and verify such losses and to ensure the efficiency of the pumps being used.

This indicator is also influenced by other factors, such as the percentage of non-revenue water (NRW) and the volume of purchased water. A lower NRW percentage reduces the cost of purchased water as it increases the volume of billed water, thus decreasing the cost per cubic meter of water sold. Similarly, other factors and indicators play a role.



### 3. Indicator of Collection Efficiency

Indicator Definition	Calculation Formula	Reference Standard	Average in the West Bank
Measures the service provider's ability to collect the value of annual billed water sales, both current and past years, during the evaluation period	Total water revenues collected during the year ÷ Total value of annual water sales (in currency) x 100%	≥ 95%	73%

The availability of financial liquidity for the service provider contributes to the sustainability of service delivery. Therefore, this indicator reflects the service provider's ability to collect the value of its annual billed sales for both the current and previous years in a way that helps cover the operational expenses of the service provider and secure the water rights for consumers.

Hence, the service provider must intensify its efforts and plan effectively to increase the collection rates for water services in order to meet its obligations in improving service efficiency and achieving citizens' satisfaction.

It is noteworthy that some municipalities in the West Bank have begun installing prepaid meters instead of the old ones, with the percentage of prepaid meters installed reaching about 32% of the total meters in the West Bank in 2023.

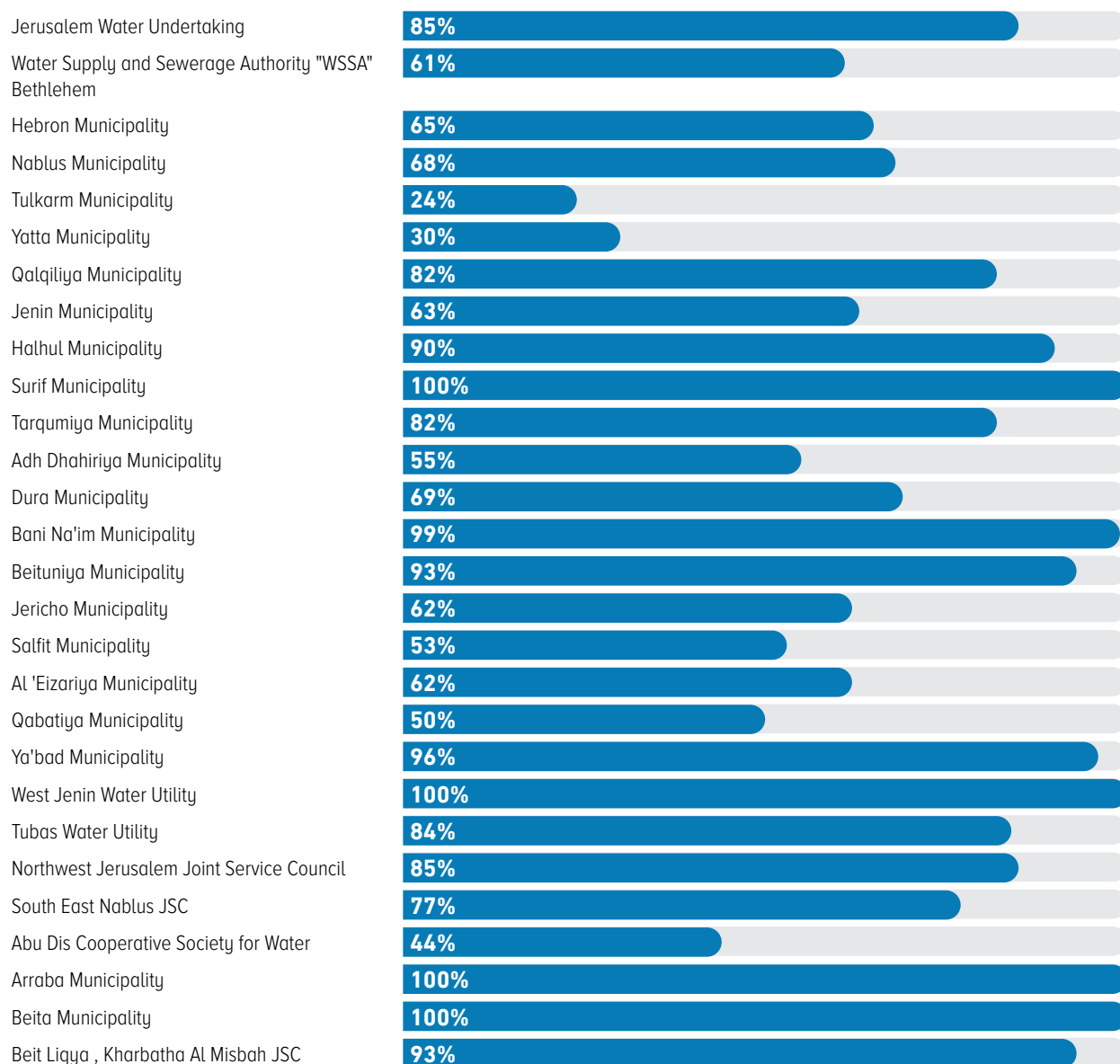
The difficult economic situation in the West Bank has significantly impacted citizens' ability to pay water bills. As a result of the war on the Gaza Strip, many workers in the occupied territories were laid off, and public sector employees are receiving reduced salaries. These combined factors have led to a decline in the collection rate for water fees compared to previous years.

Although the highest percentage for this indicator is 100%, some service providers have achieved higher percentages, due to their collection of part of the previous debts in addition to collecting the current bill. It should be noted that there is no clear mechanism yet among service providers to separate collections for the current year from those of previous years, as the collection is recorded in total.



## Collection Efficiency "Water Service" (%)

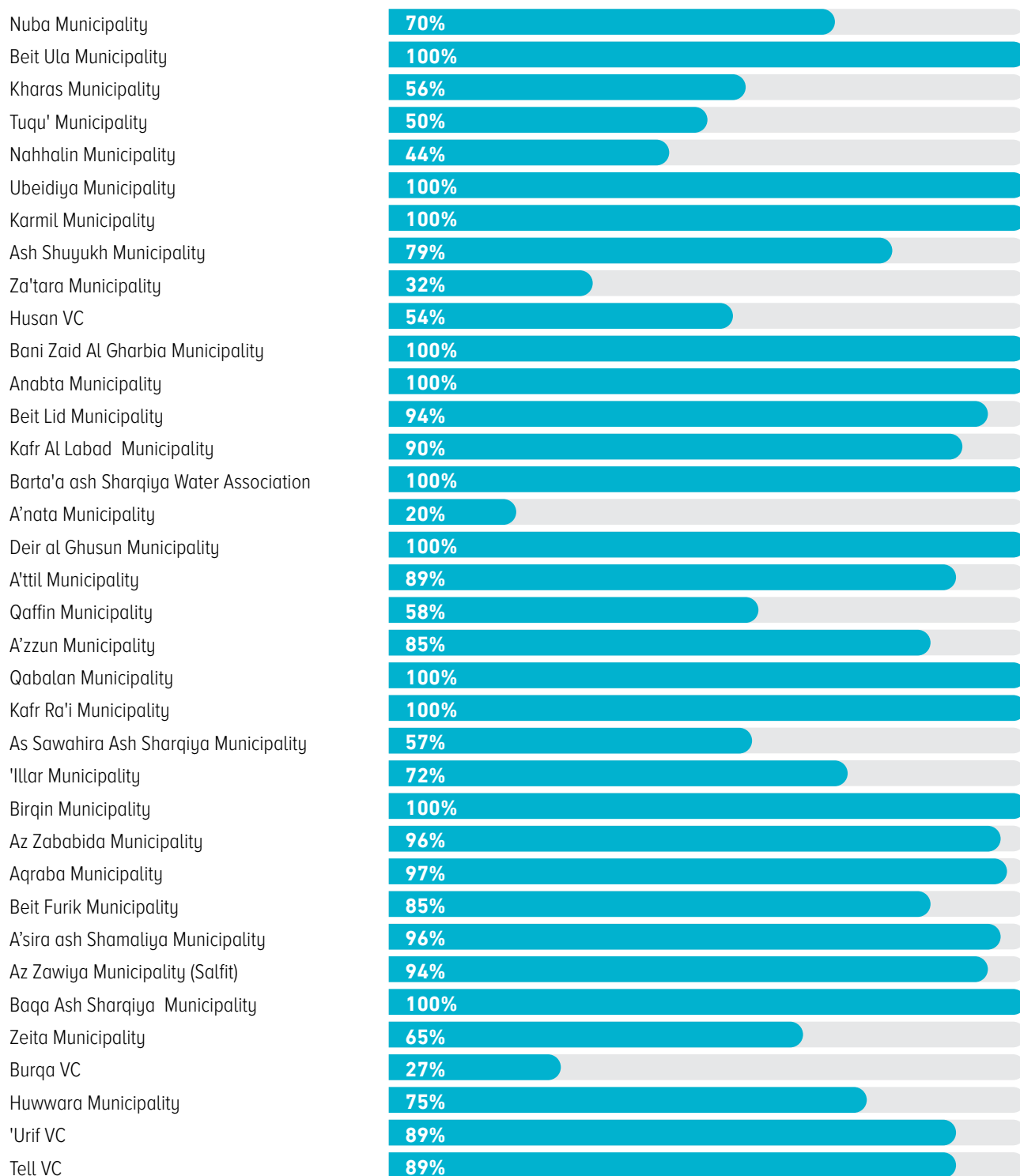
### Large service provider

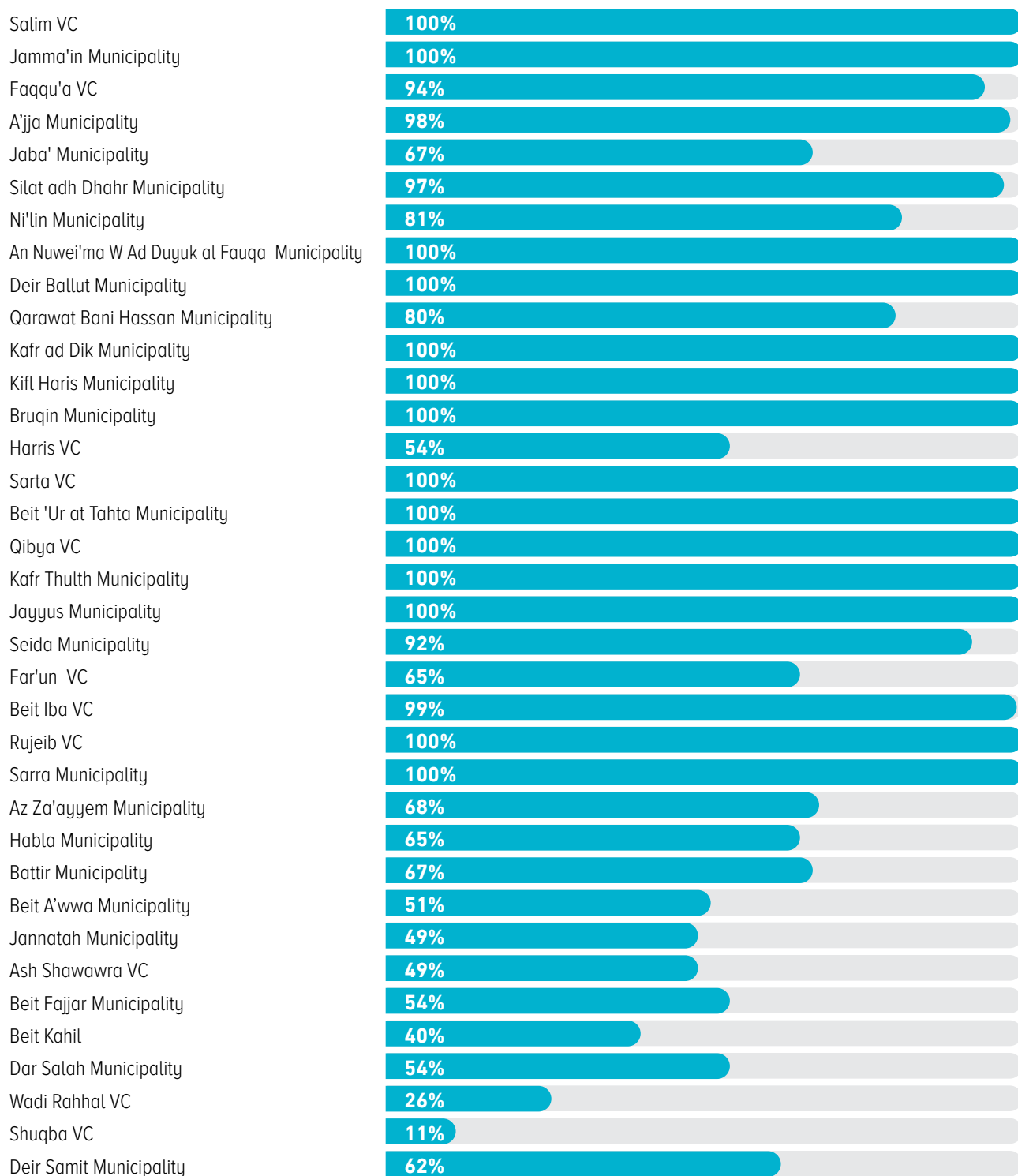


It is observed from the above figure that there are low collection rates among some large service providers, with the collection rate reaching 24% in Tulkarem, 30% in Yatta, and 44% in the Abu Dis Cooperative Association. This threatens the sustainability of service delivery for these providers.

## Collection Efficiency "Water Service" (%)

### Medium service provider





As for medium-sized service providers, there are several providers where the collection rate does not exceed 50%. This rate reached 20% in A'nata, 26% in the Wadi Rahhal Village Council, 27% in the Burqa Village Council, 32% in Za'tara Municipality, and 40% in the Beit Kahil Municipality.

#### 4. Working Efficiency ratio Indicator

Indicator Definition	Calculation Formula	Reference Standard	Average in the West Bank
Measures the extent to which the applied tariff covers the operational costs of the service provider. The lower the ratio (less than 1), the better it covers operational costs while providing surplus funds to cover depreciation, debt payments, and capital development expenditures.	$\frac{\text{(Operating, maintenance, and administrative costs (excluding depreciation))}}{\text{Operating revenues}}$	Less than or equal to 1	0.99

This indicator serves as a benchmark for the service provider to assess the extent to which billed operating revenues can cover the operational costs of providing water services. It also indicates the availability of an additional financial margin to help cover development costs and capital expenditure. At the same time, this indicator helps the provider compare its achievements and shortcomings year after year.

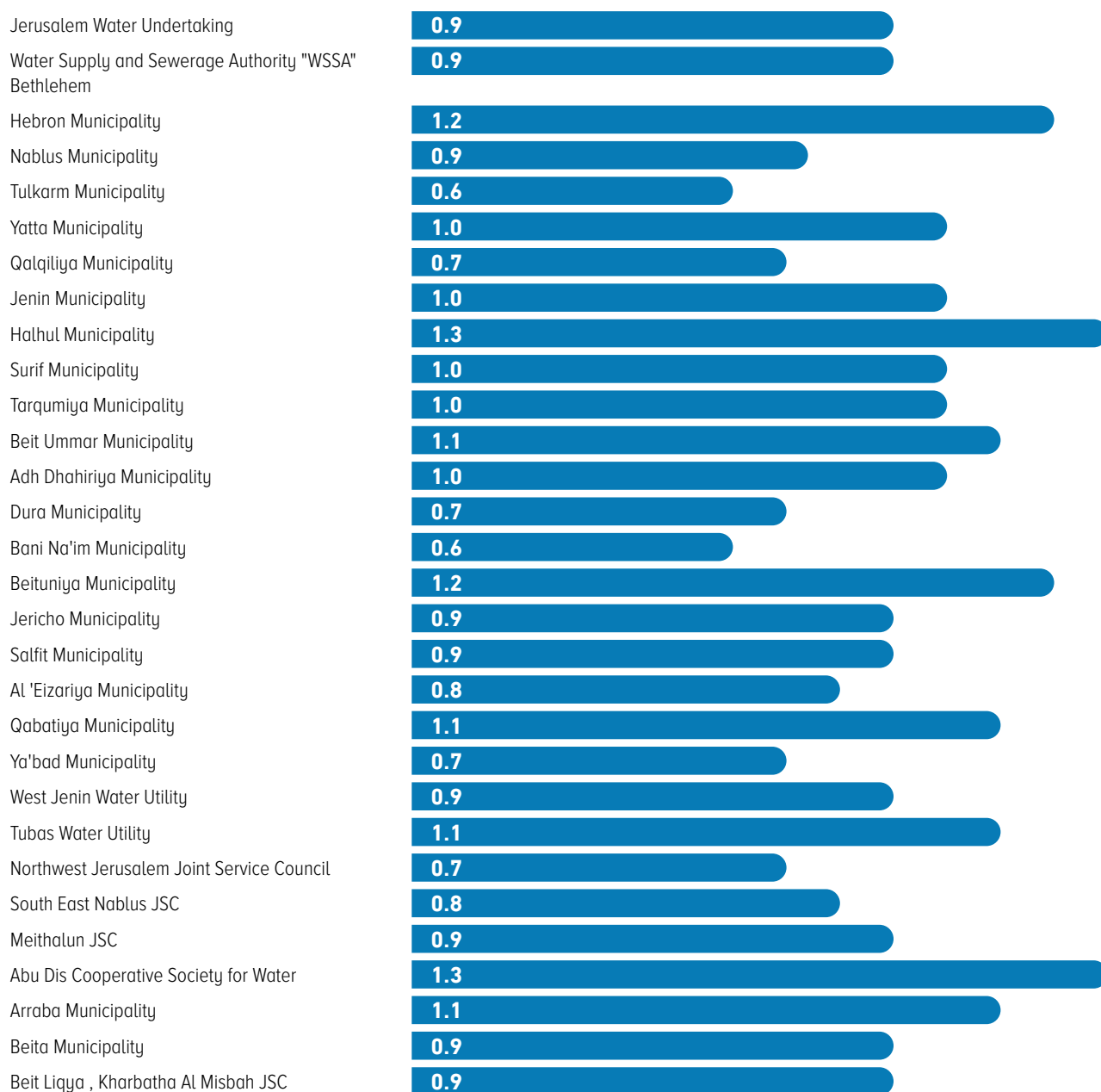
The indicator primarily measures the efficiency of the tariff applied by the service provider. If the ratio is greater than 1, it means that the total operating and administrative costs are higher than the operating revenues billed, resulting in a financial deficit in the operating cycle. This requires the service provider to immediately review the tariff to ensure service sustainability and stop operational losses. On the other hand, if the ratio is less than 1, it means that operating revenues exceed the operational and administrative costs, indicating that the service provider is generating a surplus in the operating cycle, which can cover part or all of the consumption expenses and capital costs.

With the issuance of the Unified Water and Wastewater Tariff System No. 4 of 2021, the council began targeting service providers with a ratio greater than 1 in order to review their tariffs. In 2023, the council reviewed approximately 30 tariffs, covering about 50% of the population served.



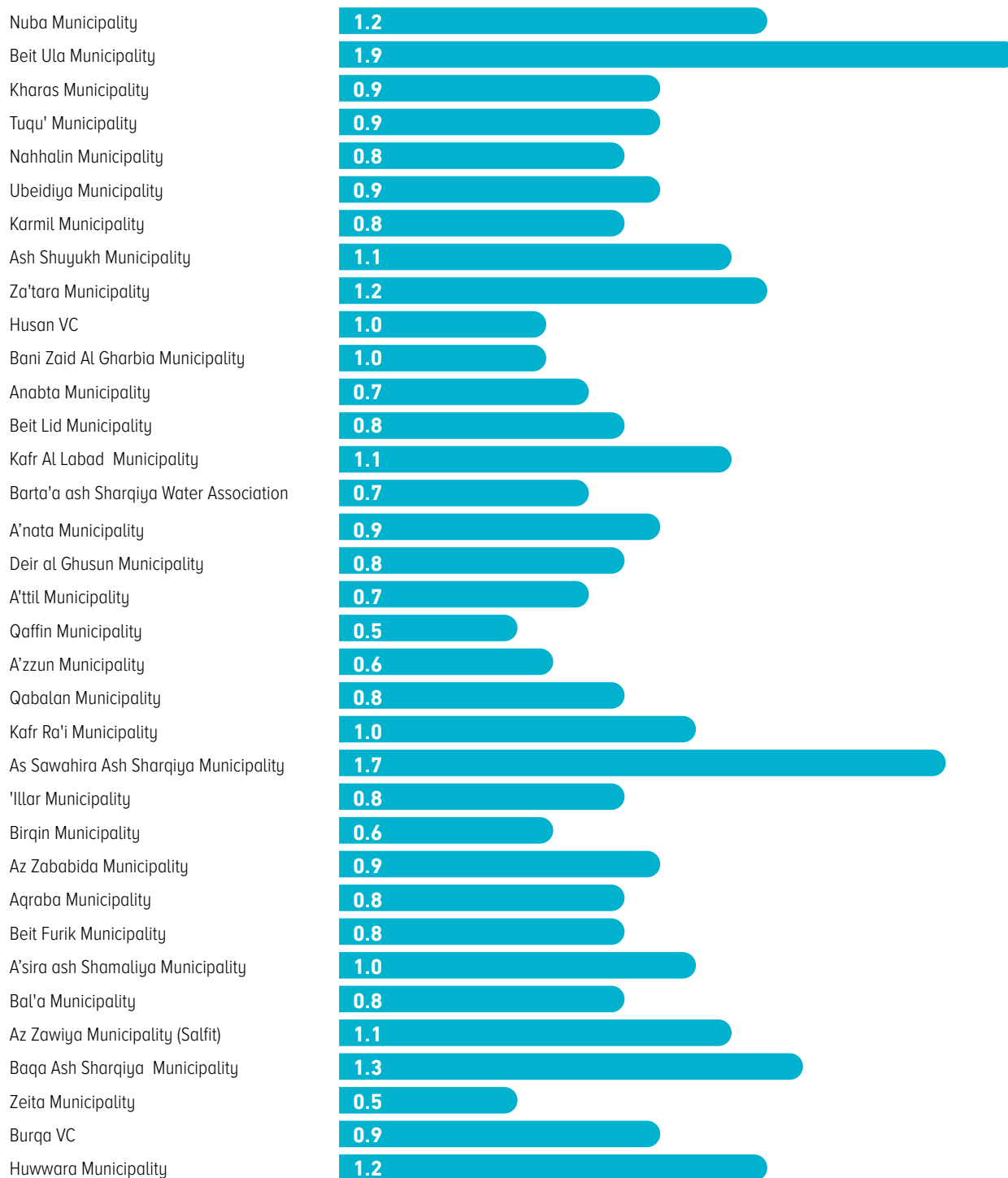
## Working Ratio "Water Service" (No)

### Large service provider

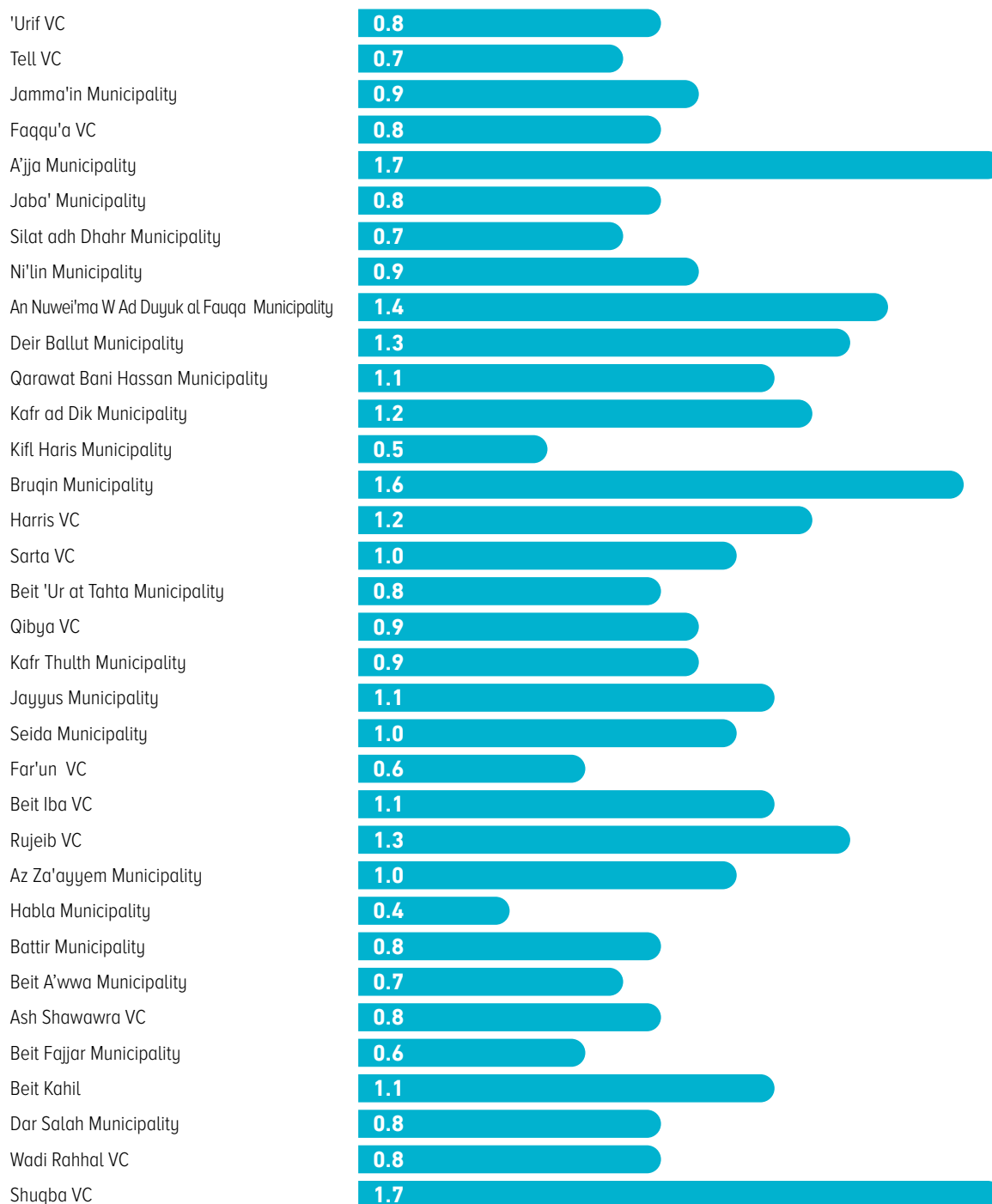


**Working Ratio "Water Service" (No)**

**Medium service provider**







It is observed from the above chart that several service providers have a work ratio greater than 1, which indicates the presence of operational losses. As a result, the council reviewed their tariffs in 2023, and the impact of the tariff implementation will be reflected in 2024.

## Sewage Service

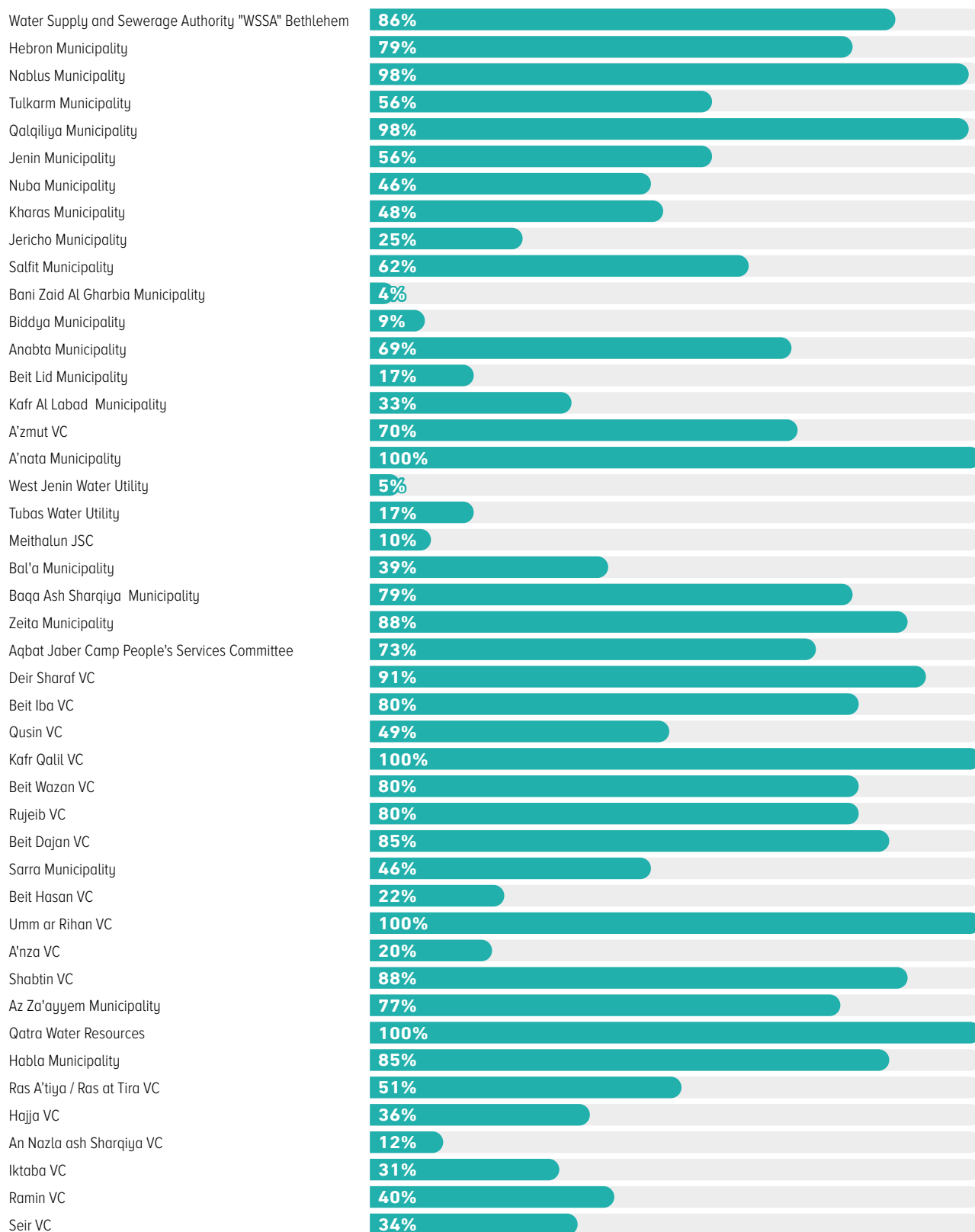
### 1. Wastewater service Coverage Percentage

Indicator Definition	Calculation Formula	Reference Standard	Average in the West Bank
It measures the extent of coverage of sewage services for the population in the service area	$\left( \frac{\text{Number of populations served by wastewater services}}{\text{Total population in the service area}} \right) \times 100\%$	Not applicable	35%

This indicator reflects the extent of coverage of wastewater services provided by the service provider in the service area. It compares the number of people served by wastewater services (whether through collection and treatment or just collection) with the total population in the service area. It is important to note that wastewater services refer to the collection of wastewaters through networks, not through cesspits.



## Wastewater service Coverage Percentage



As shown in the above figure, the provision of wastewater services remains weak in the West Bank, with only 45 service providers out of 284 water service providers offering wastewater services, and with varying coverage rates. Certain local government entities exclusively provide wastewater management services. For instance, the Ramallah Municipality, Al-Bireh Municipality, the Joint Service Council for Ramon and Taybeh, and the Village Council of Ein Sinya are among these providers. Meanwhile, residents in these areas receive their water supply services from other providers, such as the Jerusalem District Water Utility (JWU).

## 2. Wastewater Collection Efficiency Indicator-Wastewater service

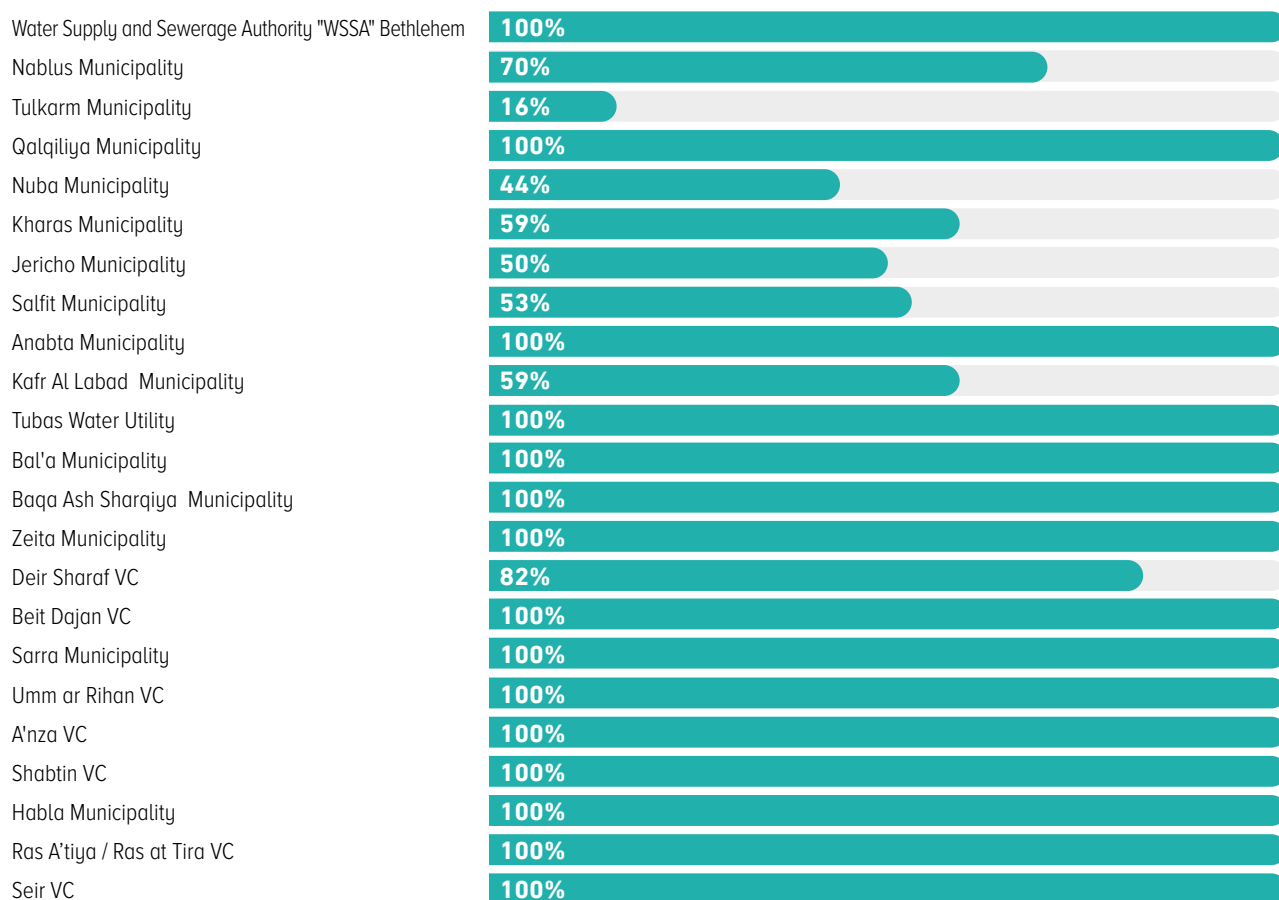
Indicator Definition	Calculation Formula	Reference Standard	Average in the West Bank
Measures the service provider's ability to collect the billed wastewater fees and outstanding debts (from the current and previous years) during the evaluation period	Collected wastewater fees during the year ÷ Total annual wastewater fees (Shekels) x 100%	≥ 95%	81%

This indicator should be interpreted alongside the Water Service Collection Efficiency Indicator, as most service providers do not issue separate bills for wastewater services. Therefore, the wastewater fees and water charges are typically issued on the same bill. As a result, the collection process for service providers is based on the total bill amount, which may also include other items besides water and wastewater.

The Unified Water and Wastewater Tariff System No. 4 of 2021 obliges service providers to apply a separate wastewater tariff from the water tariff, in order to recover the costs of wastewater services incurred by the provider. The system also emphasizes the need for separate cost centers for both water and wastewater services in order to ensure accuracy in calculating the specific costs of each, and thereby determining the correct tariff.



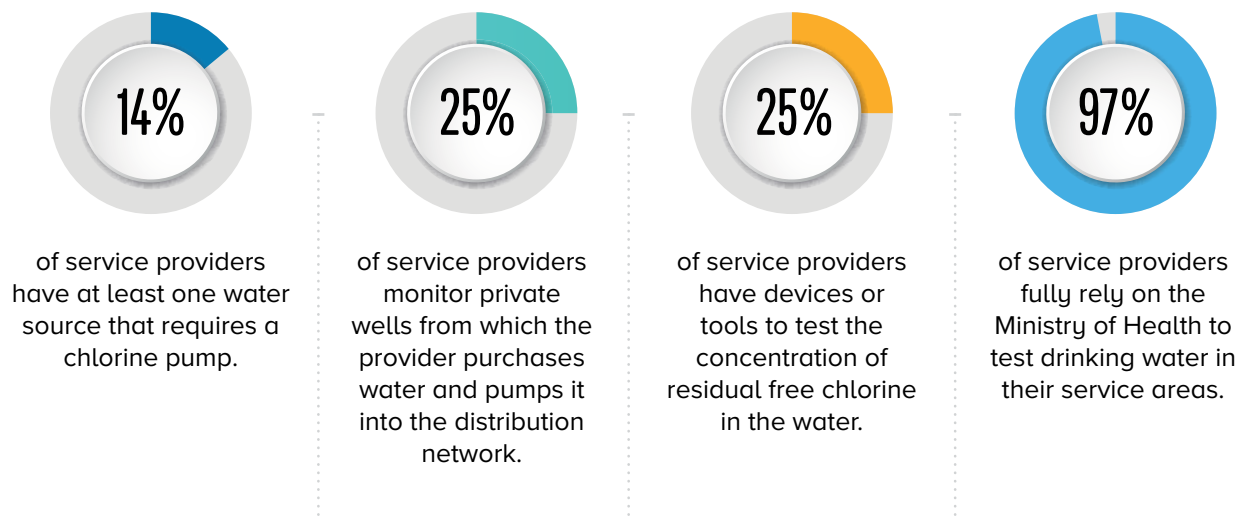
## Collection Efficiency Indicator-Wastewater service



### Third: Water Quality Indicators

The legal responsibility entrusted to the Water Sector Regulatory Council, as per the Law No. 14 of 2014 on water, keeps it in its permanent oversight role regarding the performance of service providers. In the current circumstances, the Council has continued its cooperation with relevant parties within the framework of collecting periodic data to assess the outcomes of water quality tests. This has led service providers to pay more attention to monitoring water quality in their service areas, as there is another regulatory body alongside the Ministry of Health and the Water Authority.

In this context, the Council primarily relies on data from nine service providers in the main governorates, who conduct drinking water tests either in their own laboratories or with an accredited external entity. Meanwhile, the Council is the main source of data for other providers who do not have monitoring tools for drinking water, through receiving the annual and quarterly data on tests conducted by the Ministry of Health in all governorates. To cover all service providers, the Council updated additional variables on water quality, The key outputs of these variables, as included in the report, are as follows:



Additionally, the Council held specialized discussion sessions aimed at enhancing the performance of major service providers, including a meeting on how to input water quality data into the database, as well as a discussion session on the mandatory technical regulations for water intended for human consumption (108-2023). A meeting was also held regarding the first draft of the Palestinian standard for sodium hypochlorite (liquid chlorine). The role of other service providers was highlighted through workshops related to entering and reviewing data, focusing on the importance of chlorinating water sources, monitoring the operation and repair of pumps, and coordinating as much as possible between providers and the Water Authority.

Based on a review of the data from water service providers in the West Bank, the Council presents the results and outcomes of the water quality indicators in two main areas as follows:

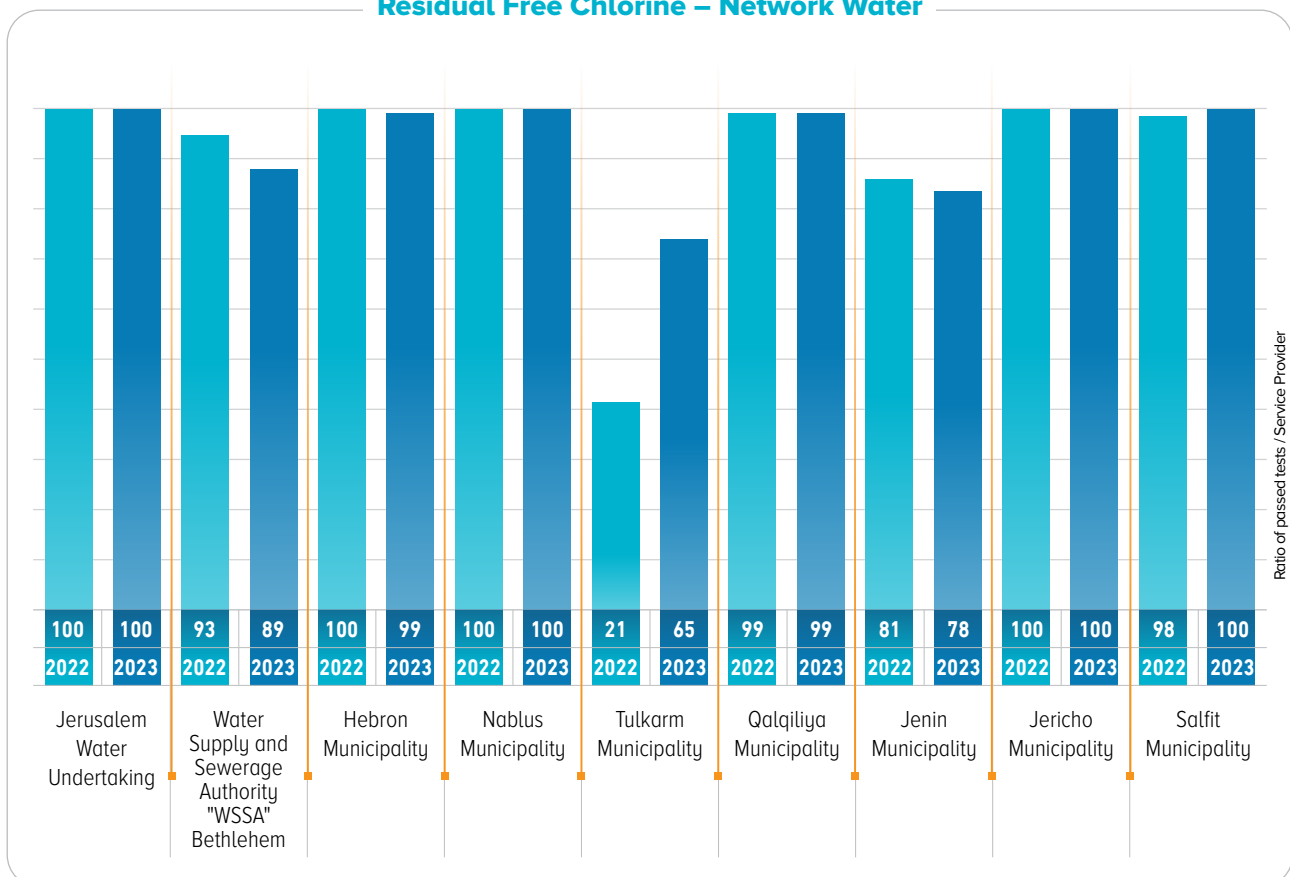
**First: Results and Outcomes of Water Quality Tests Conducted by Service Providers (West Bank)**

The charts below illustrate the main indicators related to service providers who conduct water tests in the main governorates of the West Bank, comparing the indicators for 2023 with some indicators from 2022. The indicators are as follows:

**1. Percentage of passed water samples (taken from the network, including main water pipelines) containing free chlorine residual within the network and main pipelines.**

Indicator Definition	Calculation Formula	Reference Standard
Percentage of passed water samples (taken from the network, including main water pipelines) containing free chlorine residual within the network and main pipelines.	$(\text{Number of water samples tested that contain residual free chlorine in compliance with the standards} \div \text{Number of samples tested for this purpose}) \times 100\%$	(0.2-0.8) mg/L

**Residual Free Chlorine – Network Water**



Based on the above percentages, there is an improvement in the residual free chlorine indicator for Tulkarm Municipality, where the indicator reached 65% in 2023 compared to 21% last year. This improvement is due to the doubling of the number of samples tested from the network, as well as an increase in chlorine concentration in water sources. The ongoing practices of the occupation lead to the destruction of infrastructure, which puts the municipality on high alert for any potential contamination of drinking water networks. Additionally, the monitoring process requires time due to the inability to access and repair water pipelines during periods of incursions.

Jenin Municipality faces significant challenges in monitoring water quality as well, and as a result, the chlorine indicator on the water network has decreased due to the lower number of tested samples, caused by strikes and frequent incursions by Israeli occupation in the city. The municipality also suffers from a shortage of liquid chlorine due to financial constraints, which has led to the need for increased testing of coliform bacteria in water sources to ensure the safety and quality of the water.

Currently, some municipalities are facing a heavy burden in supplying water to citizens compared to previous years, especially after the repeated sabotage of water network lines by Israeli occupation forces in the camps of Tulkarm and Jenin. This has placed a financial burden on the municipalities to repair these lines and continuously monitor for the potential leakage of wastewater into the network pipelines. To mitigate this issue, Tulkarm Municipality has resorted to providing water tanks in the camps for emergency use, in collaboration with some organizations, which has led to more stringent monitoring to ensure the health and quality of the water.

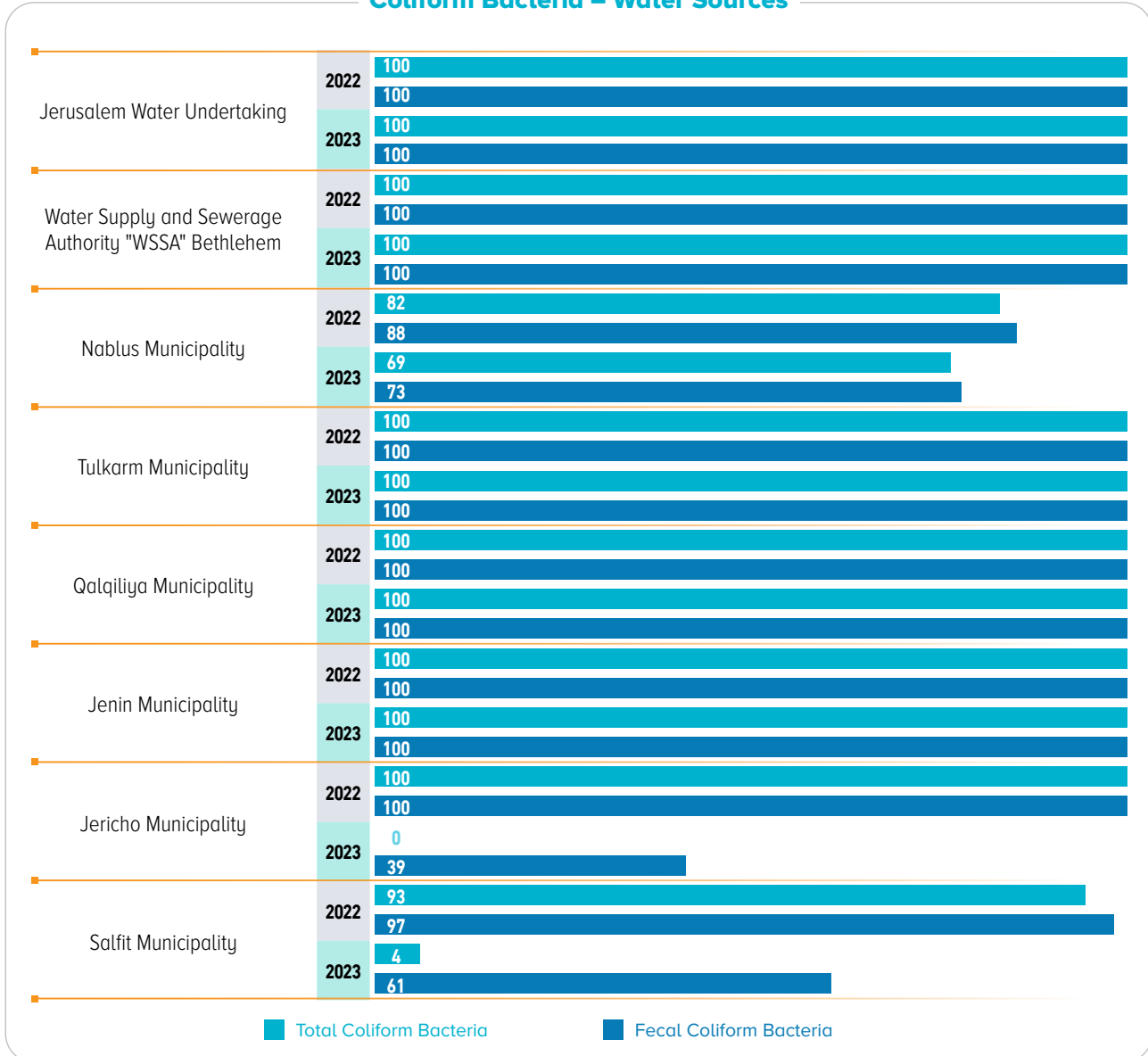
According to Palestinian standards, the residual free chlorine must not be less than 0.2 mg/L when the water reaches the consumer, to ensure its effectiveness in case of microbiological contamination in the consumer's tank.

**2. The percentage of passed water samples (taken from the source) for testing coliform bacteria (Total and fecal coliform).**

Indicator Definition	Calculation Formula	Reference Standard
The percentage of passed water samples (taken from the source) for testing Total coliform bacteria	$\left( \frac{\text{Number of water samples tested that meet the standards}}{\text{Number of samples tested for this purpose}} \right) \times 100\%$	3 (CFU/100ml)
The percentage of passed water samples (taken from the source) for testing fecal coliform bacteria	$\left( \frac{\text{Number of water samples tested free of fecal coliform bacteria}}{\text{Number of samples tested for this purpose}} \right) \times 100\%$	0 (CFU/10)



### Coliform Bacteria – Water Sources



It is important to note that the accuracy of the data collected in 2023 is better than in 2022, due to training and guiding service providers on entering variables according to instructions that standardize the format of information from all providers. This includes considering any samples taken after water sources as part of the network, which includes transmission lines, supply and filling points, pumping stations, public tanks, and water connections. In previous years, the number of samples tested for coliform bacteria was entered for both before and after chlorination at the sources.

As a result, we observe a decline in the coliform bacteria indicator above for some municipalities due to the lower number of samples taken before chlorinating the sources. Also, the number of samples that passed the tests before chlorination logically decreased, thus affecting the percentage, as seen in the municipalities of Salfit and Nablus.

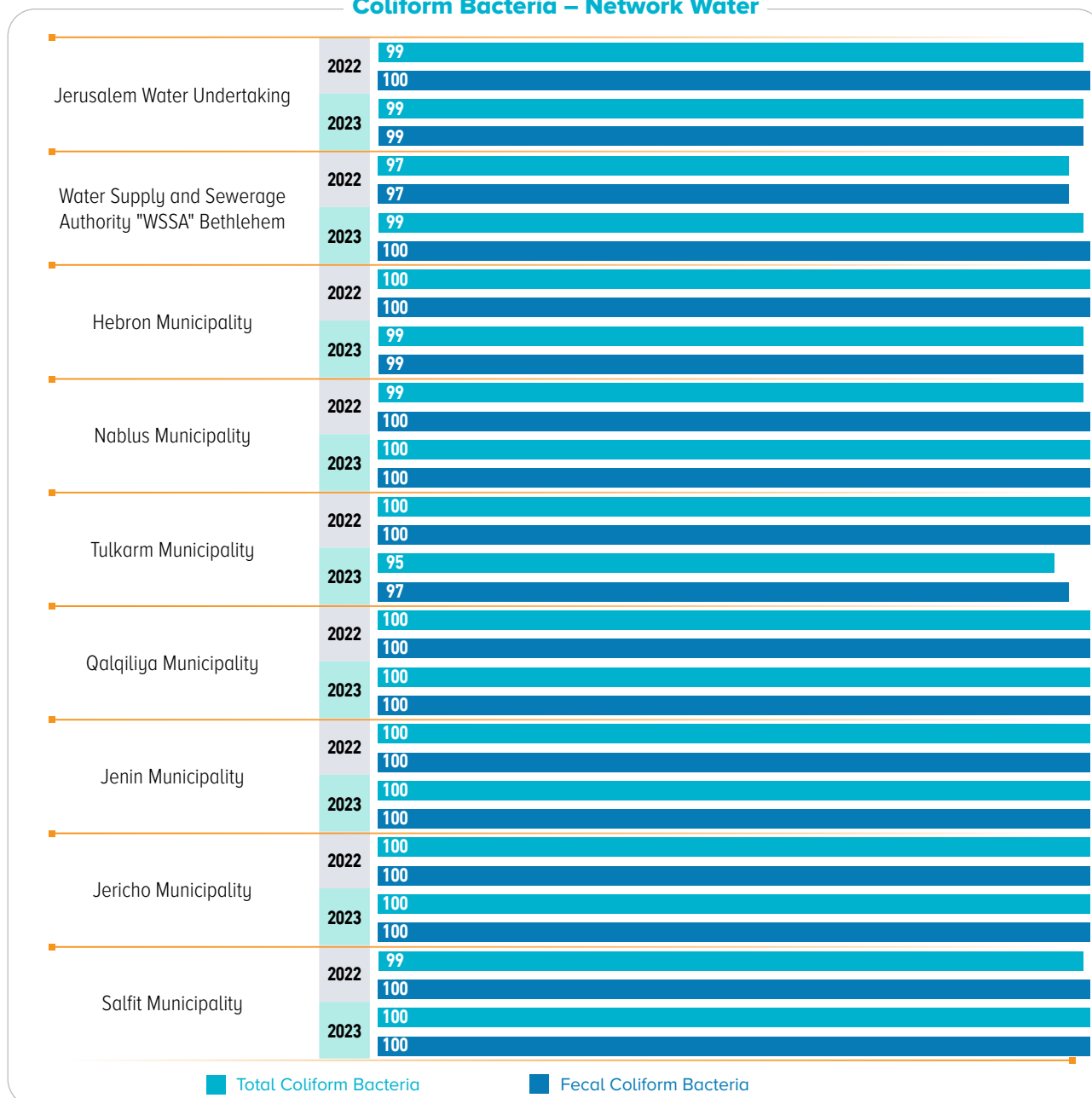
Regarding Jericho Municipality, although we observed a significant decline in microbial indicators due to the difference in the data entry method mentioned above, the test results (fecal coliform bacteria) at the water sources before disinfection did not exceed the reference values stated in the mandatory technical regulations for water intended for human consumption (108-2023), specifically concerning the operational monitoring of water sources.

Hebron Municipality does not have its own water sources, and instead relies on water purchased through the West Bank Water Department. Therefore, Hebron Municipality does not appear in the coliform bacteria indicator for water sources.

**3. The percentage of passed water samples (taken from the network, including main water pipelines) for testing coliform bacteria (Total and fecal coliform).**

Indicator Definition	Calculation Formula	Reference Standard
The percentage of passed water samples (taken from the network, including main water pipelines) for testing Total coliform bacteria	$(\text{Number of water samples tested that meet the standards} \div \text{Number of samples tested for this purpose}) \times 100\%$	3 (CFU/100ml)
The percentage of passed water samples (taken from the network, including main water pipelines) for testing fecal coliform bacteria	$(\text{Number of water samples tested free of fecal coliform bacteria} \div \text{Number of samples tested for this purpose}) \times 100\%$	0 (CFU/10)

**Coliform Bacteria – Network Water**

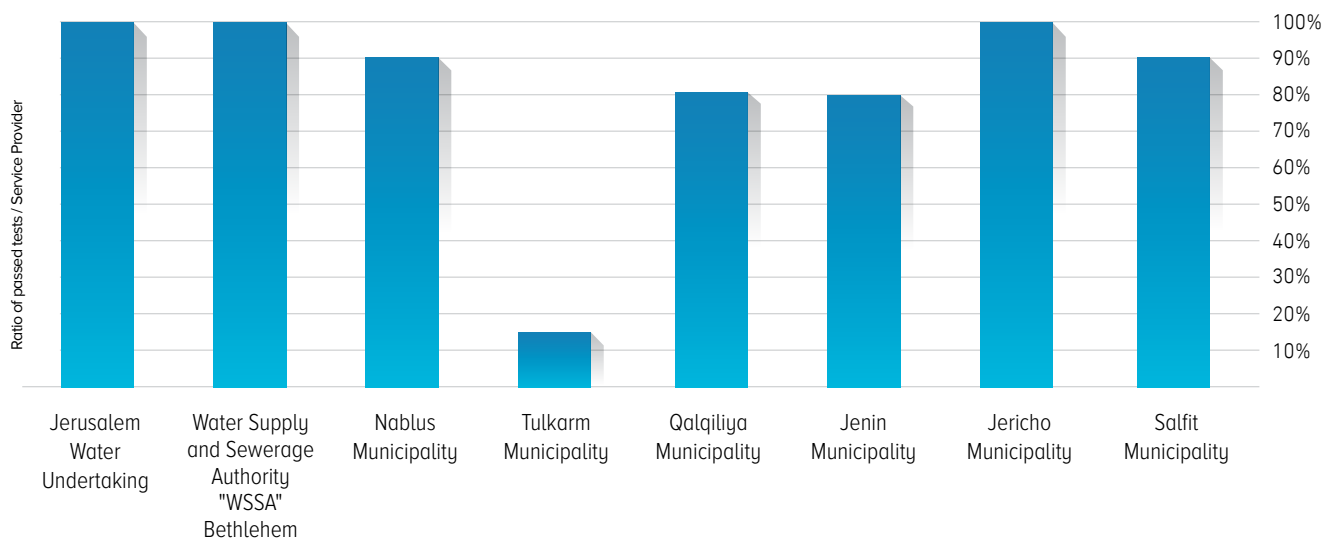


The bacteriological testing indicator for water networks reflects the effectiveness of the water disinfection process in eliminating biological contaminants, and it highlights any potential sources of contamination that could lead to the unwanted growth of harmful microorganisms that pose a public health risk. All service providers have achieved an indicator of at least 95%, with improvements observed for some providers, such as the Water and Sewerage Authority (Bethlehem - Beit Jala - Beit Sahour).

#### 4. Percentage of passed water samples (taken from the source) for testing nitrate.

Indicator Definition	Calculation Formula	Reference Standard
Percentage of passed water samples (taken from the source) for testing nitrate	$\left( \frac{\text{Number of water samples tested that meet the standards}}{\text{Number of samples tested for this purpose}} \right) \times 100\%$	50 mg/L

#### Nitrates – Water Sources – 2023



Nitrate testing is one of the most important tests that service providers must monitor on water sources. This is primarily due to the large number of cesspits in the West Bank, as well as various agricultural activities, which lead to increased nitrate pollution and consequently a decrease in the related indicator, as shown in the chart. This is particularly evident in the service areas of the Municipality of Tulkarm, as well as in Qalqilya and Jenin. Therefore, the solution, according to the available resources of the municipalities, is to mix water from sources with nitrate concentrations exceeding 50 mg/L with water from other sources that have better specifications. The water is then tested after mixing and at the storage locations. This approach is adopted by the Municipality of Tulkarm, which currently faces significant challenges in monitoring water quality due to the destruction of sewage lines, water networks, and roads by the occupation.

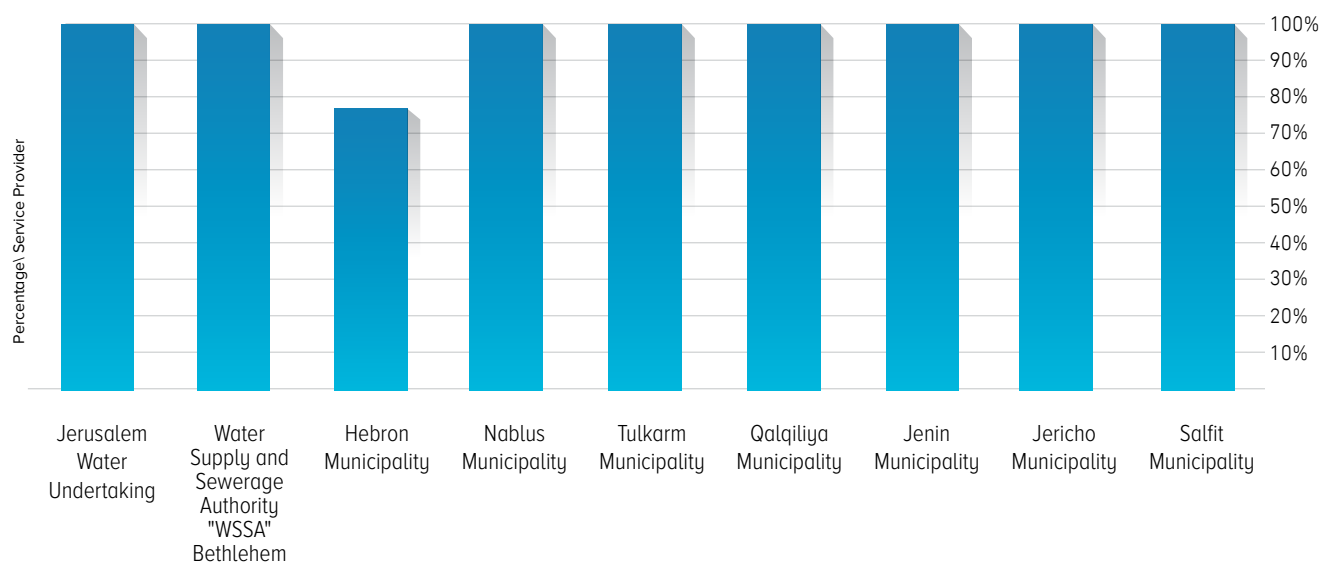
In addition to the above observations, the calculation method for the nitrate ( $\text{NO}_3$ ) indicator for the 2023 data was affected by the reference value set according to the mandatory technical regulations for drinking water (108-2023). The nitrate testing value specified a concentration of 50 mg/L, with competent authorities determining any exceptions. However, the previously adopted drinking water specification (41-2005) and the associated technical regulations allowed the nitrate concentration to reach 70 mg/L as a maximum in the absence of an alternative water source.

There are no water sources belonging to the Municipality of Hebron, and it relies on water purchased from the West Bank Water Department. Therefore, Hebron Municipality does not appear in the nitrate indicator for water sources.

5. The percentage of microbiological tests conducted.<sup>1</sup>

Indicator Definition	Calculation Formula
The percentage of microbiological tests conducted	$\left( \frac{\text{Number of bacteriological tests conducted on chlorinated water during the evaluation period}}{\text{Number of bacteriological tests required by the standards or regulations during the evaluation period}} \right) \times 100\%$

Percentage of Microbiological Tests Conducted



The World Health Organization (WHO) recommends a minimum number of tests (fecal coliform bacteria) on distribution systems as per the fourth edition of the Guidelines for Drinking-Water Quality. It also emphasizes that increasing the frequency of testing aids in faster identification of microbial safety issues in water.

Reviewing the data shows that, despite a decrease in the number of coliform bacteria tests taken from the network compared to 2022 for some service providers, the number of tests conducted on chlorinated water during the evaluation period remained higher than the required standards for the same period—except for Hebron Municipality. This was due to emergency conditions affecting the municipality’s performance in this regard. Additionally, the water network’s length, reaching 615 kilometers, posed significant challenges. There was only one employee responsible for collecting samples, testing, and addressing all related issues during 2023. Moreover, accessing some areas was difficult, and water supply interruptions lasted for extended periods, up to 40 days.

1. It does not include water sources.

## **Secondly: Water Quality Testing Conducted by the Palestinian Ministry of Health (West Bank)**

The Water Sector Regulatory Council relied on service providers' data as well as data provided by the Palestinian Ministry of Health across all governorates. However, post-October 2023 events had noticeable impacts on public health in the West Bank. Most notably, Environmental Health Inspectors at the Ministry of Health faced restricted access to many areas due to movement restrictions at checkpoints and security concerns. This significantly reduced the number of drinking water samples tested in the fourth quarter of 2023.

Reviewing the data reveals that the Ministry of Health collected over 2,800 samples in the third quarter of 2023 from 351 communities and sent them to the central testing laboratory. However, the number of samples collected from October to December of the same year did not exceed 1,100 samples from 225 communities. It is worth noting that the average number of samples typically collected by health inspectors exceeds 2,000 every three months.

Political conditions and a lack of human and material resources remain significant challenges to the work of Environmental Health Inspectors. Nevertheless, ministry staff strive to cover as many communities and service providers' areas as possible to ensure the safety and quality of water, as per Palestinian Public Health Law No. 20 of 2004. The Ministry of Health's responsibilities include monitoring water in all communities through a periodic inspection plan for each governorate.

The Water Sector Regulatory Council aims to improve the quality of collected data and strengthen cooperation between the Ministry of Health and service providers through proposed regular meetings between the two parties in the near future. In this context, the council's main recommendations to the Ministry of Health include:

- Clearly specifying the names of all communities in the data.
- Recording free chlorine residual levels for all tested samples.
- Adding nitrate test results for water sources to the report sent to the council.

**For more detailed data, service providers and any concerned parties can access the breakdown of tests conducted in each service area through the Water Quality Report issued by the council, available on the council's website and database.**

## Fourth: Customer Satisfaction Indicators

Although water and wastewater services are primarily consumer-oriented, measuring customer satisfaction levels regarding service quality and continuity remains challenging. Most service providers in the West Bank and Gaza Strip lack accurate and reliable records regarding customer complaints and inquiries. This includes data on the categorization of complaints, the actions taken in each case, and the time spent addressing and/or responding to complaints and inquiries.

It is evident that most water service providers in the West Bank do not have dependable data concerning citizen complaints. Consequently, calculating this indicator is currently difficult despite the council's efforts to encourage the activation and application of existing complaint systems to enable effective management.

The absence of accountability by responsible entities and regulators of service sectors linked to municipalities regarding customer satisfaction indicators—combined with a lack of scrutiny over the existence of citizen complaint and inquiry records—has resulted in service providers neglecting to document complaint data, details, and handling procedures.

Article 24, Section 13 of Water Law No. 14 of 2014 grants the Water Sector Regulatory Council legal authority to address complaints between service providers and consumers if the provider does not respond or if no agreement is reached between the parties. Accordingly, the council has established a system for receiving and addressing customer complaints via its website. This system aims to follow up on and resolve complaints in collaboration with service providers to protect the interests of all parties involved.



## Fifth: Other Indicators

### 1. Employee Productivity Ratio – Water Services

Indicator Definition	Calculation Formula	Reference Standard	Average in the West Bank
Measures the efficiency of the available human resources in service providers to maintain good and integrated service levels, as well as measuring job redundancy that negatively impacts service levels.	Total number of employees (water service) ÷ (Number of active subscriptions ÷ 1000 subscribers)	2-4 employees per 1000 subscribers	2.5 employees per 1000 water subscription

This indicator is typically used to measure the efficiency of human resource management and task execution effectiveness. It is calculated by dividing the number of full-time employees by the number of service subscriptions multiplied by 1,000. This indicator is not applicable to service providers with fewer than 1,000 subscriptions.

The indicator eliminates size discrepancies among service providers by linking workforce size to the number of subscriptions per 1,000, enabling productivity levels to be assessed. It is closely tied to the operational cost indicator, as the contribution of employee costs to the service per cubic meter of water correlates with the number of employees per subscription. There is a direct relationship: the more employees per subscription, the higher the operational cost. Service providers should understand this relationship to strike a natural balance between these indicators.

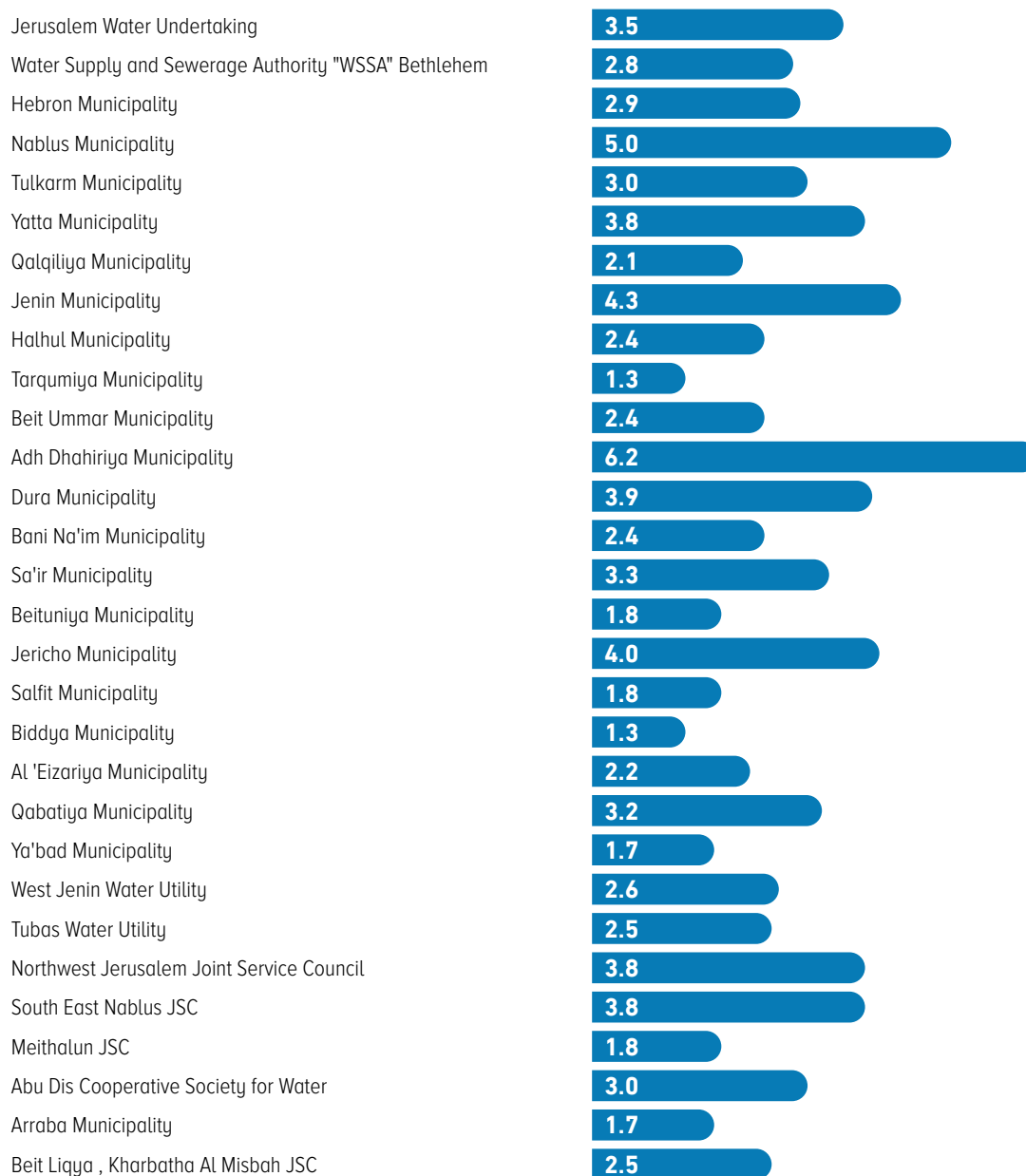
This indicator, like others, cannot be used to make absolute comparisons among service providers due to varying operational needs. For instance, the workforce requirements differ between a service provider managing its own wells and pumping stations and one that only purchases and distributes water.

**The general overview of service provider data clearly highlights a noticeable increase in the number of employees for many municipalities and service providers in the West Bank, such as Nablus (5), Adh Dhahiriya (6.2), Jericho (4), and Jenin (4.3). This suggests an overstaffing issue, which appears excessive and unnatural, impacting the overall performance of service providers and driving up operational costs.**



## ■ Staff Productivity Index "Water Service" (No.)

### Large service provider

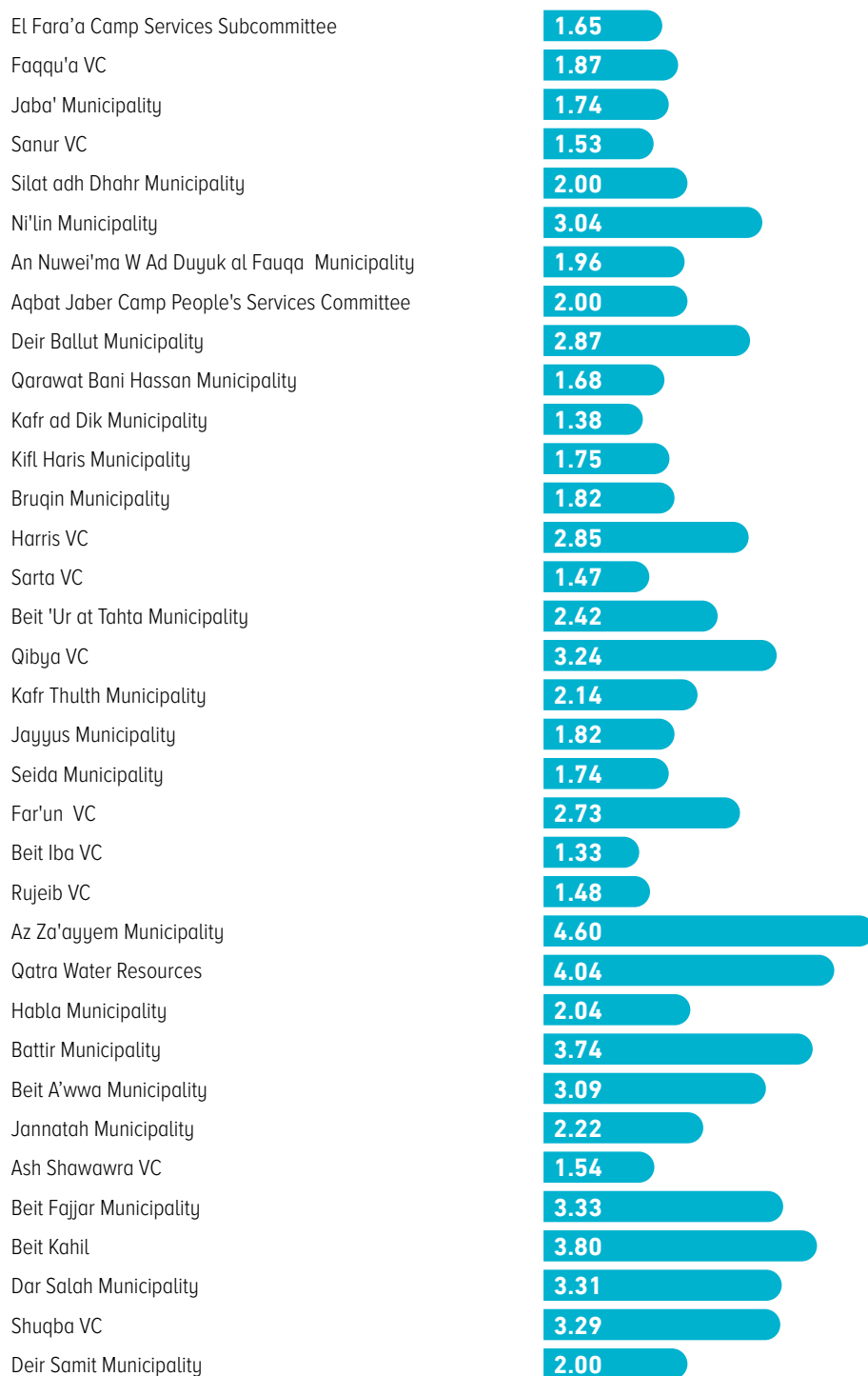




## ■ Staff Productivity Index "Water Service" (No.)

### Medium service provider





We notice in the above charts that service providers with fewer than 1,000 subscriptions have been excluded, as the indicator does not apply to them because it is calculated based on dividing the number of employees per 1,000 subscriptions.

## 2. Employee Participation by Gender – Water and Wastewater Services

(Female employees as a percentage of the total number of employees)

Indicator Definition	Calculation Formula	Reference Standard	Average in the West Bank
Determining the level of female representation in water service provision institutions compared to the total number of employees of both genders	Number of female employees ÷ Total number of employees of both genders (water and wastewater services)	Not applicable	8%

The Council monitors gender considerations in water and wastewater services for 2023 through various indicators. Despite the efforts made by concerned and funding bodies to improve female participation in water and wastewater services, the results of this indicator remain very low in the West Bank.

The reason for this low percentage is primarily because most of the full-time employees dedicated to water service are male workers, such as collectors, maintenance workers, guards, and well operators. Women in municipalities typically occupy reception, secretarial, or administrative roles in financial departments, but these positions are not counted in the worker tally for this indicator. This is because the indicator looks specifically at employees dedicated 100% to water service.

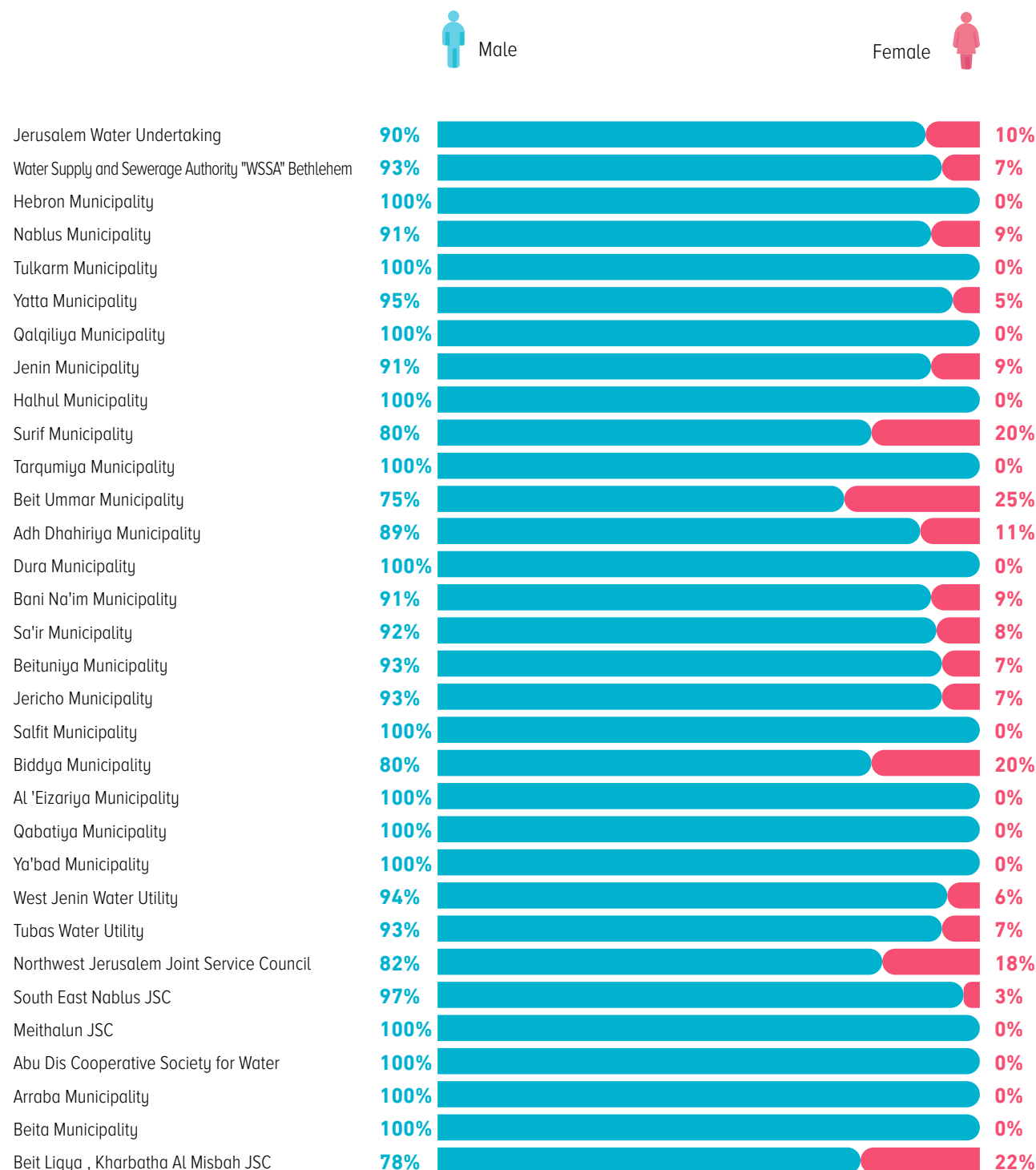
Thus, the focus should not be on the number of women in water and wastewater services, but rather on the nature of the tasks they perform. While many local and international organizations call for the empowerment of women and enhancing their roles in various fields, there is still little implementation of this in the water and wastewater service sector.

Considering the potential added value of women's participation in water services and the success that some service providers led by women have achieved, it is necessary to address the enhancement of gender considerations at various levels. This includes supporting women's higher education in relevant fields, creating incentive programs to encourage service providers to adopt policies for women's involvement in the sector, raising awareness about it, and improving the physical environment in service provider facilities.



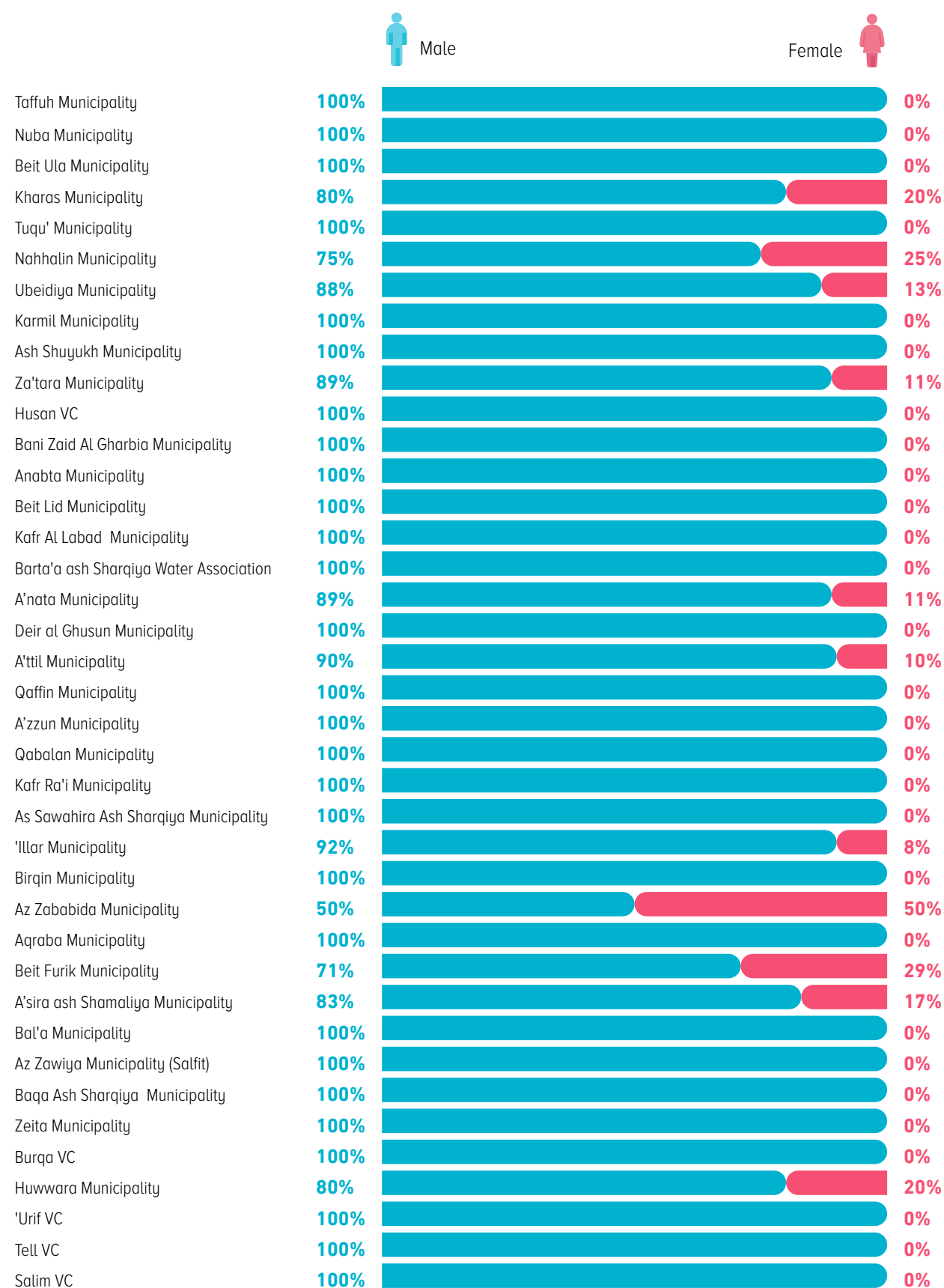
## Gender Representation Ratio

### Large service provider



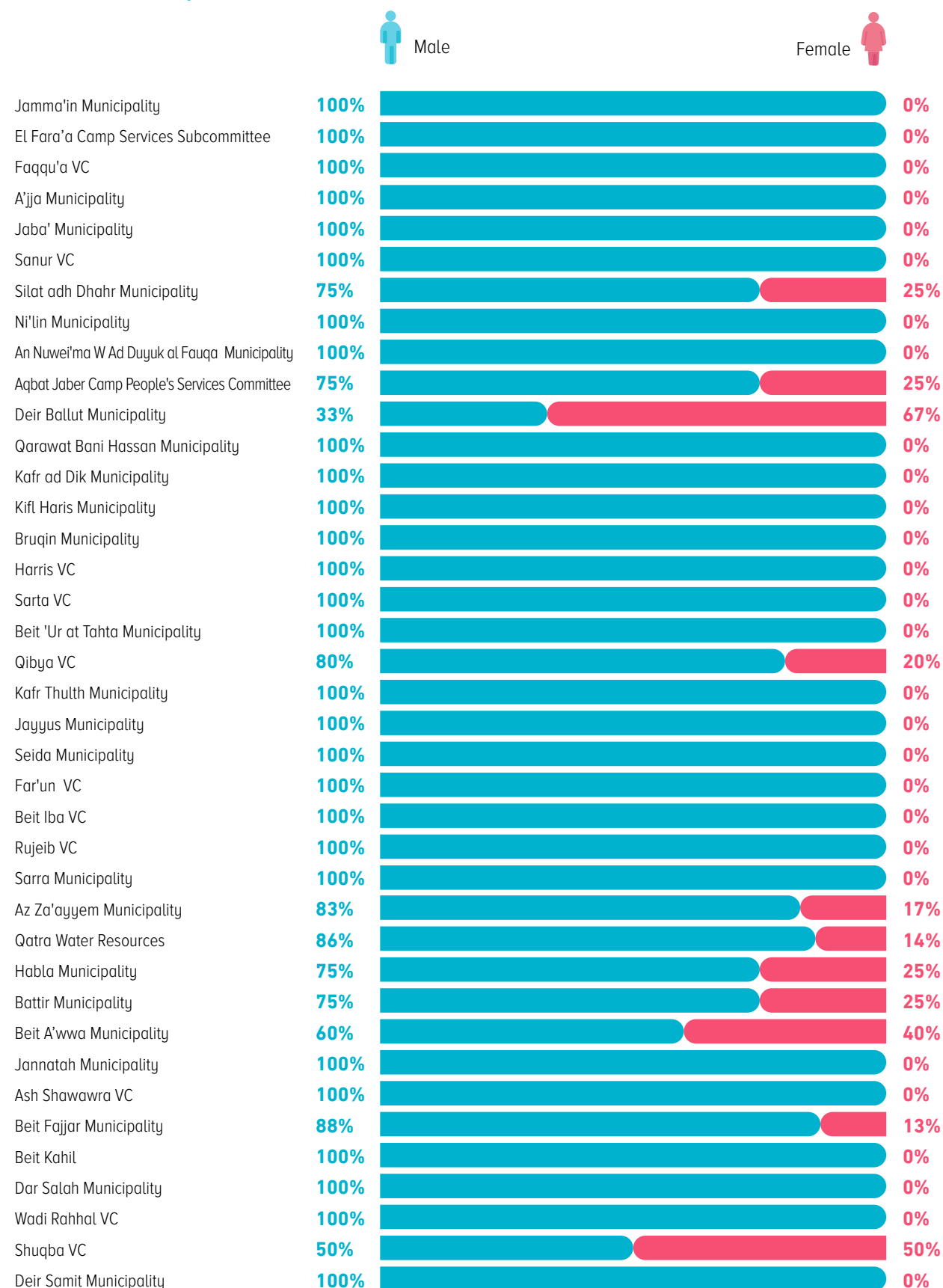
## Gender Representation Ratio

### Medium service provider



## Gender Representation Ratio

### Medium service provider



## Observations and Recommendations for the 2023 Report

1. A large number of service providers, particularly municipalities, still do not separate water accounts from other municipal accounts, especially concerning expenses. This weakens the accuracy of water-related data in municipalities.
2. There is no breakdown of subscriptions by type of use (residential, commercial, industrial, and tourism), which affects the calculation of the daily average household consumption per capita.
3. The percentage of unbilled water is high in some municipalities, such as Bal'a and Jenin. This increases the cost per cubic meter of water and leads to significant loss of limited water quantities. A study is needed to identify the causes of this high loss and reduce it to acceptable levels.
4. Some service providers have operational costs for water services that exceed their revenues, indicating that the applied tariffs are ineffective, which threatens the financial and technical sustainability of service delivery. Therefore, it is essential to initiate a review of the applied tariffs according to the unified tariff system.
5. The mandatory technical regulations for water intended for human consumption (108-2023) remain the primary reference for all service providers concerning water safety and quality monitoring.
6. The Water Sector Regulatory Council directs all service providers to monitor private wells that pump water into the water networks.
7. When water is sold from one service provider to another, the responsibility for water monitoring shifts from the first provider to the buyer once the water reaches the buyer's supply system.
8. Efforts should be made to provide liquid chlorine (sodium hypochlorite) in cooperation with relevant authorities, as some service providers are currently facing a shortage of financial resources.
9. Government institutions and supporting agencies must work on finding mechanisms that enhance the continuity of water quality monitoring for service providers under the current political circumstances.
10. There is a need to support service provider laboratories with necessary equipment and tools and to establish central water testing laboratories.
11. Improving cooperation between the Ministry of Health and service providers in a way that serves both parties and achieves the public interest.



# Appendices



**Appendix No.1: Key Indicators for some small size water service providers**

	Water service coverage rate %	Total consumption rate per capita per day (litres/capita/day)	Water loss rate (within service area)	Average selling price per cubic meter of water	Operating costs per cubic meter of water sold	Work Percentage - Water Service	Collection Efficiency - Water
A'zmut VC	100%	46.6	65%	4.00	11.28		82%
Al A'uja Municipality	100%	154.3	58%	4.06	7.50	1.8	10%
Wadi Al Far'a VC	91%	87.8	36%	3.50	3.69	1.0	100%
Ras karkar village council	100%	93.8	12%	5.55	5.29	0.9	98%
Sabastiya Municipality	100%	105.5	44%	4.00	3.42	0.8	137%
Ijnisiya VC	173%	60.4	15%	4.59	6.22	1.0	119%
Beit Imrin VC	93%	84.7	59%	5.64	4.42	0.7	68%
Nisf Jubeil VC	100%	164.9	11%	3.37	1.66	0.3	44%
An Naqura VC	100%	85.6	24%	5.61	2.63	0.4	92%
Madama VC	96%	54.9	36%	5.15	6.83	1.2	100%
A'sira al Qibliya VC	100%	53.8	41%	4.97	5.88	1.1	100%
Zeita Jamma'in VC	100%	143.3	11%	4.00	3.43	0.8	59%
'Einabus VC	100%	36.8	28%	4.97	6.85	1.3	118%
Burin VC	100%	81.4	32%	5.00	4.86	0.9	104%
As Sawiya VC	100%	88.5	26%	6.48	4.70	0.6	44%
Al Lubban ash Sharqiya VC	100%	85.4	6%	4.56	2.19	0.4	46%
A'mmuriya VC	100%	131.6	20%	7.07	6.05	0.8	34%
Yasid VC	99%	38.7	31%	3.51	16.19	-	51%
Al Badhan VC	90%	90.8	52%	4.00	53.16	-	18%
Talluza VC	94%	131.1	5%	5.35	22.61	-	-
Deir al Hatab VC	100%	91.7	39%	5.02	4.74	0.9	-
'Iraq Burin VC	100%	46.2	5%	6.99	7.30	1.0	100%
Bazzariya VC	100%	60.6	10%	5.86	4.60	0.7	136%
An Nassariya VC	91%	167.1	45%	3.42	4.64	1.3	30%
Udala VC	100%	86.3	13%	4.16	4.85	1.1	24%
Kufeirit VC	100%	80.8	17%	5.99	5.35	0.8	100%
Al Khuljan VC	100%	48.3	45%	6.11	5.60	0.9	88%
Dhafer al Malih VC	100%	92.1	29%	4.94	5.19	1.1	100%
Zibda Al Jdida VC	100%	100.5	51%	3.59	2.25	0.6	99%
Umm at Tut VC	100%	43.1	32%	5.98	7.65	1.2	94%
Raba VC	100%	50.7	24%	1.20	7.39		50%
Al Mughayyir VC	97%	43.6	24%	5.55	5.72	1.0	100%
Jalqamus VC	93%	66.1	45%	5.35	7.32	1.2	112%
Al Jalama VC	100%	86.9	12%	4.49	7.16	1.6	98%
Telfit VC	100%	27.7	24%	6.00	12.30	1.9	100%
A'rрана VC	100%	76.0	23%	6.40	4.85	0.7	100%
Deir Ghazala VC	90%	250.4	31%	3.79	5.04	1.3	56%

	Water service coverage rate %	Total consumption rate per capita per day (litres/capita/day)	Water loss rate (within service area)	Average selling price per cubic meter of water	Operating costs per cubic meter of water sold	Work Percentage - Water Service	Collection Efficiency - Water
A'ba Al Sharqiya VC	100%	38.7	8%	4.75	1.63	0.3	99%
Tura VC	100%	75.6	30%	6.41	6.20	0.9	105%
Umm Dar VC	100%	108.1	10%	4.98	5.07	1.0	85%
Mothalth Ash Shuhada VC	100%	39.5	42%	5.25	5.87	1.0	100%
Fahma VC	100%	48.5	42%	7.79	10.94	1.4	62%
Al Fandaqumiya VC	100%	66.8	13%	5.00	4.15	0.7	100%
Az Zawiya VC	100%	47.6	57%	5.25	9.77	1.7	100%
Mirka VC	97%	66.8	9%	6.00	6.22	1.0	100%
Bir Al Basha VC	100%	56.7	19%	4.97	4.23	0.8	81%
Ar Rama VC	100%	62.3	43%	6.19	9.03	1.4	100%
Wadi Du'oq VC	100%	51.4	30%	7.89	10.59	1.2	100%
Deir Qaddis VC	100%	100.0	16%	4.99	4.76	0.9	100%
Al Midya VC	100%	118.5	12%	3.71	1.32	0.3	100%
Rantis VC	100%	85.2	8%	5.00	3.21	0.6	116%
Jammala VC	100%	79.3	62%	5.93	8.87	1.5	34%
Deir A'mmar VC	100%	103.4	44%	4.80	5.89	1.2	80%
Beit Sira VC	100%	86.5	47%	5.30	5.94	1.0	100%
Saffa VC	100%	86.7	12%	5.00	4.20	0.8	100%
Bil'in VC	100%	127.8	19%	5.77	4.16	0.7	63%
Marda VC	100%	78.0	14%	3.80	4.13	0.9	100%
Rafat VC	91%	74.6	-	4.93	1.51	0.3	47%
At Tira VC	100%	76.5	15%	5.00	3.92	0.8	100%
Beit 'Ur al Fauqa VC	100%	128.6	11%	5.04	3.45	0.7	100%
Qira VC	100%	75.0	30%	4.21	7.17	1.5	77%
Iskaka VC	83%	66.4	30%	6.98	5.82	0.8	74%
Yasuf VC	92%	88.6	21%	-	5.01	-	-
Deir Istiya Municipality	99%	76.7	31%	4.27	4.52	1.0	100%
Qarawat Bani Zeid VC	95%	79.2	21%	5.05	7.03	1.4	100%
Farkha VC	100%	207.0	42%	3.58	0.77	0.2	23%
Sanniriya VC	100%	120.0	27%	4.00	4.30	1.0	91%
Beit Amin VC	100%	131.6	20%	3.50	3.74	1.0	100%
A'zzun A'tma VC	100%	125.2	9%	3.00	1.92	0.6	71%
'Isla VC	102%	141.1	39%	4.25	5.52	1.2	100%
An Nabi Elyas VC	100%	353.1	9%	3.95	2.45	0.6	46%
Kafr Laqif VC	100%	186.3	22%	5.00	4.75	0.8	83%
Jinsafut VC	100%	81.6	12%	5.00	5.69	1.1	69%
Al Funduq VC	100%	79.9	21%	5.52	4.98	0.9	44%
Kafr Qaddum VC	100%	94.1	20%	5.19	4.06	0.8	64%
Amatin VC	100%	95.1	18%	3.87	5.10	1.2	-

	Water service coverage rate %	Total consumption rate per capita per day (litres/capita/day)	Water loss rate (within service area)	Average selling price per cubic meter of water	Operating costs per cubic meter of water sold	Work Percentage - Water Service	Collection Efficiency - Water
Jit VC	<b>100%</b>	<b>74.5</b>	<b>20%</b>	<b>3.24</b>	<b>3.93</b>	<b>1.2</b>	<b>87%</b>
Falameya VC	<b>100%</b>	<b>153.5</b>	<b>23%</b>	<b>2.50</b>	<b>2.25</b>	<b>0.9</b>	<b>58%</b>
Kafr A'bbush VC	<b>100%</b>	<b>60.2</b>	<b>48%</b>	<b>5.20</b>	<b>8.14</b>	<b>1.4</b>	<b>51%</b>
An Nazla Al Wusta VC	<b>100%</b>	<b>121.5</b>	<b>38%</b>	<b>4.81</b>	<b>4.57</b>	<b>0.9</b>	<b>66%</b>
Al Nazla Al Gharbiya VC	<b>96%</b>	<b>123.9</b>	<b>15%</b>	<b>2.97</b>	<b>2.91</b>	<b>0.9</b>	<b>71%</b>
Nazlat 'Isa VC	<b>100%</b>	<b>103.3</b>	<b>25%</b>	<b>2.91</b>	<b>2.41</b>	<b>0.8</b>	<b>87%</b>
Al Jarushiya VC	<b>100%</b>	<b>107.3</b>	<b>39%</b>	<b>3.34</b>	<b>4.60</b>	<b>1.3</b>	<b>100%</b>
Jubara VC	<b>73%</b>	<b>204.1</b>		<b>2.38</b>	<b>2.84</b>	<b>1.1</b>	<b>99%</b>
Ar Ras VC	<b>100%</b>	<b>176.8</b>	<b>28%</b>	<b>4.98</b>	<b>7.11</b>	<b>1.1</b>	<b>92%</b>
Kafr Sur VC	<b>100%</b>	<b>307.3</b>	<b>12%</b>	<b>5.51</b>	<b>4.05</b>	<b>0.7</b>	<b>45%</b>
Kafr Jammal VC	<b>100%</b>	<b>72.3</b>	<b>37%</b>	<b>4.45</b>	<b>5.05</b>	<b>1.1</b>	<b>41%</b>
Shufa VC	<b>100%</b>	<b>308.8</b>	<b>23%</b>	<b>2.95</b>	<b>2.07</b>	<b>0.7</b>	<b>85%</b>
Saffarin VC	<b>100%</b>	<b>72.4</b>	<b>42%</b>	<b>4.98</b>	<b>4.08</b>	<b>0.7</b>	<b>96%</b>
Kur VC	<b>100%</b>	<b>72.2</b>	<b>17%</b>	<b>6.52</b>	<b>10.42</b>	<b>1.1</b>	<b>63%</b>
Kafr Zibad VC	<b>100%</b>	<b>99.2</b>	<b>42%</b>	<b>5.47</b>	<b>7.60</b>	<b>1.3</b>	<b>82%</b>
Deir Sharaf VC	<b>100%</b>	<b>140.1</b>	<b>40%</b>	<b>5.79</b>	<b>4.73</b>	<b>0.8</b>	<b>65%</b>
Qusin VC	<b>89%</b>	<b>81.2</b>	<b>36%</b>	<b>6.59</b>	<b>5.42</b>	<b>0.7</b>	<b>99%</b>
Kafr Qalil VC	<b>100%</b>	<b>32.5</b>	<b>-</b>	<b>6.04</b>	<b>14.30</b>	<b>-</b>	<b>-</b>
Beit Wazan VC	<b>80%</b>	<b>90.2</b>	<b>16%</b>	<b>4.32</b>	<b>3.85</b>	<b>0.7</b>	<b>105%</b>
Beit Dajan VC	<b>96%</b>	<b>78.3</b>	<b>19%</b>	<b>5.40</b>	<b>4.12</b>	<b>0.7</b>	<b>117%</b>
Beit Hasan VC	<b>69%</b>	<b>52.4</b>	<b>47%</b>	<b>3.50</b>	<b>7.81</b>	<b>-</b>	<b>50%</b>
Umm ar Rihan VC	<b>100%</b>	<b>139.1</b>	<b>14%</b>	<b>5.97</b>	<b>4.71</b>	<b>0.8</b>	<b>100%</b>
A'nza VC	<b>100%</b>	<b>73.2</b>	<b>39%</b>	<b>6.14</b>	<b>6.49</b>	<b>1.0</b>	<b>62%</b>
Shabtin VC	<b>100%</b>	<b>91.0</b>	<b>9%</b>	<b>4.82</b>	<b>5.35</b>	<b>1.1</b>	<b>98%</b>
Ras A'tiya / Ras at Tira VC	<b>100%</b>	<b>175.9</b>	<b>21%</b>	<b>2.00</b>	<b>2.42</b>	<b>1.1</b>	<b>80%</b>
Hajja VC	<b>100%</b>	<b>113.6</b>	<b>27%</b>	<b>5.12</b>	<b>4.96</b>	<b>0.9</b>	<b>61%</b>
An Nazla ash Sharqiya VC	<b>100%</b>	<b>61.4</b>	<b>35%</b>	<b>3.35</b>	<b>3.99</b>	<b>1.0</b>	<b>132%</b>
Iktaba VC	<b>92%</b>	<b>95.9</b>	<b>45%</b>	<b>5.03</b>	<b>4.91</b>	<b>0.9</b>	<b>92%</b>
Ramin VC	<b>100%</b>	<b>71.7</b>	<b>51%</b>	<b>5.31</b>	<b>7.37</b>	<b>1.2</b>	<b>94%</b>
Ar Ramadin Municipality	<b>87%</b>	<b>53.0</b>	<b>37%</b>	<b>5.90</b>	<b>8.48</b>	<b>1.3</b>	<b>100%</b>
Al Ma'sara VC	<b>97%</b>	<b>109.6</b>	<b>22%</b>	<b>3.80</b>	<b>3.49</b>	<b>0.9</b>	<b>27%</b>
Umm Salamuna VC	<b>100%</b>	<b>118.6</b>	<b>17%</b>	<b>3.70</b>	<b>3.35</b>	<b>0.9</b>	<b>27%</b>
Jurat ash Sham'a VC	<b>100%</b>	<b>87.2</b>	<b>41%</b>	<b>4.00</b>	<b>5.11</b>	<b>1.3</b>	<b>99%</b>
Masafer Yatta VC	<b>68%</b>	<b>41.8</b>	<b>17%</b>	<b>6.00</b>	<b>8.59</b>	<b>1.2</b>	<b>41%</b>
At Tuwani VC	<b>100%</b>	<b>22.5</b>	<b>15%</b>	<b>4.50</b>	<b>6.66</b>	<b>1.3</b>	<b>48%</b>
Al Khas VC	<b>30%</b>	<b>91.3</b>	<b>33%</b>	<b>5.00</b>	<b>4.85</b>	<b>1.0</b>	<b>28%</b>
El Kaum VC	<b>78%</b>	<b>68.9</b>	<b>13%</b>	<b>7.94</b>	<b>11.23</b>	<b>1.4</b>	<b>52%</b>
Marah Rabah VC	<b>80%</b>	<b>175.1</b>	<b>24%</b>	<b>3.50</b>	<b>3.75</b>	<b>1.1</b>	<b>84%</b>

	Water service coverage rate %	Total consumption rate per capita per day (litres/capita/day)	Water loss rate (within service area)	Average selling price per cubic meter of water	Operating costs per cubic meter of water sold	Work Percentage - Water Service	Collection Efficiency - Water
Hindaza and Bureida'a Municipality	<b>93%</b>	<b>163.4</b>	<b>33%</b>	<b>5.00</b>	<b>4.02</b>	<b>0.8</b>	<b>50%</b>
Wadi Fukin VC	<b>100%</b>	<b>3.8</b>	<b>16%</b>	<b>4.76</b>	<b>17.38</b>		<b>70%</b>
Al Manshiya VC	<b>100%</b>	<b>75.9</b>	<b>50%</b>	<b>5.00</b>	<b>5.97</b>	<b>1.2</b>	<b>10%</b>
Hitta VC	<b>100%</b>	<b>77.4</b>	<b>25%</b>	<b>5.50</b>	<b>4.57</b>	<b>0.8</b>	<b>21%</b>
Wadi an Nis VC	<b>89%</b>	<b>60.8</b>	<b>36%</b>	<b>5.00</b>	<b>4.85</b>	<b>1.0</b>	-
Beitillu VC	<b>100%</b>	<b>73.0</b>	<b>16%</b>	<b>5.06</b>	<b>4.93</b>	<b>0.8</b>	<b>98%</b>
Al Janiya VC	<b>100%</b>	<b>97.2</b>	<b>8%</b>	<b>4.80</b>	<b>3.74</b>	<b>0.8</b>	<b>100%</b>
'Ein Shibli VC	<b>85%</b>	<b>77.2</b>	<b>40%</b>	<b>1.50</b>	<b>1.36</b>	<b>0.7</b>	<b>100%</b>
Baqat al Hatab VC	<b>100%</b>	<b>87.6</b>	<b>39%</b>	<b>4.95</b>	<b>3.77</b>	<b>0.7</b>	<b>59%</b>
Al'izab Algarby JSC	<b>100%</b>	<b>189.1</b>	<b>9%</b>	<b>2.80</b>	<b>2.80</b>	<b>0.9</b>	<b>75%</b>
Seir VC	<b>100%</b>	<b>207.1</b>	<b>31%</b>	<b>4.00</b>	<b>5.34</b>	<b>1.2</b>	<b>100%</b>
Far'ta VC	<b>100%</b>	<b>54.3</b>	<b>20%</b>	<b>4.00</b>	<b>5.41</b>	<b>1.2</b>	<b>122%</b>
Deir Abu Masha'l VC	<b>100%</b>	<b>115.6</b>	-	-	<b>0.18</b>	-	-
Fahma al Jadida VC	<b>90%</b>	<b>73.8</b>	<b>38%</b>	<b>4.38</b>	<b>7.31</b>	<b>1.7</b>	<b>37%</b>
Khallet al Maiyya Municipality	<b>82%</b>	<b>43.9</b>	<b>14%</b>	<b>7.10</b>	<b>8.21</b>	<b>1.1</b>	<b>39%</b>
Beit Ta'mir VC	<b>97%</b>	<b>172.2</b>	<b>19%</b>	<b>4.00</b>	<b>3.36</b>	<b>0.8</b>	<b>17%</b>
Marah Ma'alla VC	<b>92%</b>	<b>85.6</b>	<b>50%</b>	<b>4.00</b>	<b>5.48</b>	<b>1.4</b>	<b>20%</b>
Khallet al Haddad VC	<b>79%</b>	<b>164.4</b>	<b>23%</b>	<b>3.48</b>	<b>3.59</b>	<b>1.0</b>	<b>35%</b>
Khallet Sakariya	<b>52%</b>	<b>48.3</b>	<b>43%</b>	-	<b>4.96</b>	-	-
Al Maniya VC	<b>74%</b>	<b>154.9</b>	<b>40%</b>	<b>4.00</b>	<b>4.37</b>	<b>1.1</b>	<b>6%</b>