



Activities and Interventions of the Coastal Municipalities Water Utility during the war on Gaza 2023-2025

July, 2025

Abstract

Since the beginning of the war on the Gaza Strip on 7th October, 2023 which resulted in severe damages in all aspects of life, including water and sanitation services, which are among the most important components of life and resilience, the CMWU has been working since the first day in cooperation with PWA, its partners, and international humanitarian institutions to provide the minimum life-saving water and sanitation services, through production, transportation and distribution of drinking water to IDPs shelter and networks as well, the CMWU has been distributing the potable water to IDPs and residents by its owned water trucks, the distributed water from desalination plants up to date is more than **4.39** million cubic meter. Moreover, the CMWU has rented **17** trucks and installed water tanks on them to be used in transporting and distributing water in order to enhance the system capacity in various areas.

Also, the CMWU, through daily operational activities, has been able to pump domestic water from wells through the distribution networks in an amount of **31.31** million cubic meters since the onset of the war till July 2025 , whereas the wells' production is still no more than 20% of the needed demand, in addition the CMWU continues to maintain and fix the damages of facilities and infrastructure in the accessible areas of Gaza Strip, including desalination plants, wells, sewage pumping stations, water and sewage networks, WASH generators, and electromechanical maintenance.

During the ceasefire period, the CMWU and its partners exerted significant efforts to restore and assess the damage of water and wastewater systems. As a result, there was a notable improvement in these essential services. Unfortunately, this progress was short-lived, as the ceasefire collapsed on 18 March 2025 when the IDF resumed hostilities. This led to a significant decline in service delivery and further exacerbated the already dire humanitarian situation in Gaza.

The collapse of ceasefire also impacted the critical water facilities in the Gaza Strip when the Israeli side decided to cut off the dedicated power supply line of the main desalination plant in the southern governorate on 9 March 2025 reducing its daily production to less than 1500m³ instead of 17,000m³. In addition, Israel continues to reject all coordination requests to repair Mekorot water connection in the Middle Area, which has been out of service since 22 January 2025. These two key sources Mekorot and SGDP supply the majority of drinking water to the Middle and Southern governorates and their continued disruption has a devastating impact on water availability in these areas. Furthermore, multiple evacuation orders have been issued for various southern and eastern

parts of Gaza since the collapse of the ceasefire. As a result, many water facilities in these areas have become inaccessible and are at risk of further damage.

Throughout July 2025 there were limitations to complete the repairs and assessment works as large part of Gaza Strip was inaccessible and had military operations. In this regards the CMWU has submitted coordination requests through PWA even to access WASH facilities or to bring materials from warehouses for repairs. However, these requests have been repeatedly refused by the IDF, severely hindering repairs and operational efforts.

In the same context, and with all electricity supplies being cut off by the Israeli side, in addition to stoppage of Gaza power plant since the beginning of the war, the CMWU, through cooperation with various partners, was able to distribute till July 2025 around **7.58 million liters of fuel** in order to ensure the operation of standby generators, to run water production and pumping facilities, sewage pumping stations. In July 2025, fuel supplies significantly dropped compared to the previous months, as Israel continued to block the entry of fuel and all essential needs. This resulted in a significant decline in water production and distribution across the entire Gaza Strip. The fuel is received from the United Nations Relief Agency through UNICEF Fund, and the CMWU stores the fuel in 2 central fuel tanks, and then distribute it to around **190 water and sanitation facilities**, including desalination plants, wells, sewage stations and pumping stations in addition to desalinated water tanks. The fuel distribution process is subject to a monitoring system, where monitoring is carried out through UNICEF via a local field consultant, and UNOPS.

The CMWU has also worked to receive and distribute water tanks of different sizes, which are being installed in places of displacement as emergency response measures which is considered as one of the most important activities that the CMWU is still carrying out. In addition, the CMWU ensures the process of sterilizing and disinfecting water sources by distributing the chlorine to various wells and desalination plants; whereas more than **218,030 liters** have been distributed since the beginning of the war, in order to avoid the spread of more diseases and epidemics.

After 22 months of war, Gaza local market is now depleted and the essential materials for repairs are not available, which hinders most of repair interventions leaving water and wastewater services in a catastrophic condition. Also losing the CMWU water sector central warehouse during this war hindered many of repairs. However, the CMWU was able, with the support of international partners, to gradually return to its O&M activities and overcome to some extent this major damages and

materials shortage, and it continued to provide services according to the available capabilities and resources.

The continuous follow-up and assessing the levels of infrastructure destruction in various areas, and according to initial estimates, the process of repairing and rebuilding various facilities, systems and infrastructure and reviving the system again in all governorates of the Gaza Strip is estimated at approximately **682 million dollars** where this amount is subject to increase due to the current hostilities and military operations which definitely will cause further destruction to WASH facilities and infrastructure, The reconstruction of water and wastewater infrastructure and the operation of facilities are considered among the most important priorities immediately after the end of the war, in order to enhance the resilience of the population, protect public health, and limit the spread of epidemics and diseases, according to a matrix of interventions starting from the current and urgent repairs, and reaching the restoration and reconstruction stage.

The continuing stressful state of war and the weakness of available resources have created a state of catastrophic depletion of the remaining functioning water and sanitation facilities and systems. This is not evidenced by the consumption of electricity generators, which have become the heart of the system in light of the cutting off of all electricity supplies from the sector for more than 21 months. The continued subjection of supplies through the crossings to the dual-use mechanism and standards has completely prevented the entry of any equipment and spare parts for the water sector, which will lead to the gradual cessation of many facilities that are still operating and have not been destroyed militarily. Furthermore, the frequent closure of crossings has severely worsened the water crisis, as most facilities have ceased operations due to fuel shortages and a lack of essential supplies. Numerous appeals have been made to humanitarian and international organizations to support and facilitate the entry of the necessary fuel and materials to keep WASH facilities operational.

1. Introduction:

As a result of the war that started on October 7th, 2023, more than two million people were forcibly displaced from Gaza City and the North Gaza Governorate to the southern areas of the Gaza Strip, following evacuation instructions issued by the IDF. This unprecedented displacement occurred in parallel with a complete shutdown of electricity and water supplies, creating a catastrophic humanitarian crisis. The conflict led to the widespread destruction of key water and sanitation infrastructure, including wells, water pipelines, reservoirs, wastewater pumping stations, desalination plants, and treatment facilities. Additionally, the Israeli-imposed restrictions on the

entry of essential materials, equipment, fuel, and spare parts severely hampered the ability to operate or repair critical facilities.

Throughout the hostilities and over 21 months of war, the water and wastewater sector in Gaza is still operated under extreme duress. Communities, particularly IDPs sheltering in overcrowded areas and UNRWA shelters, faced dire shortages of potable water and sanitation services, which increased the risks of disease outbreaks and public health emergencies. Despite these challenges, the CMWU, in close coordination with international humanitarian partners, local municipalities, and service providers, exerted extraordinary efforts to maintain minimal functionality of key services under the most constrained conditions.

CMWU adopted a multi-faceted emergency response strategy to mitigate the crisis and keep as many facilities operational as possible. This included rapid damage assessments and emergency repair operations on severely damaged key water facilities, sewage networks, and desalination plant often carried out using available materials and limited stock of spare parts due to blockade conditions. Besides operating the main two seawater desalination plants in the middle area, CMWU also facilitated the installation of small-scale, modular desalination plants to serve communities with no access to safe water, particularly in displacement shelters, also mobile water tankers are being deployed across the Gaza Strip to ensure emergency water distribution to the most vulnerable populations.

Additionally, CMWU supported the continuity of municipal services by coordinating the delivery and distribution of essential resources, such as fuel, chemicals for water treatment, spare parts, and heavy machinery required for excavation and repairs activities. These interventions were critical in stabilizing the sector amidst the war and laying the groundwork for early recovery.

Following the IDF evacuation orders and military operations in Rafah and North Gaza, all water and wastewater facilities in both areas were completely shut down. These facilities may have suffered extensive or complete destruction as a result of the ongoing hostilities. Additionally, all residents from these areas were forcibly displaced to Khan Younis and Gaza City, both of which already have highly vulnerable and severely damaged WASH infrastructure.

In response to these dire circumstances, the CMWU rapidly scaled up its emergency and recovery operations. Efforts were directed toward rehabilitating damaged infrastructure, restoring service pipelines, and increasing water production and distribution capacities in areas hosting large

numbers of internally displaced persons (IDPs). CMWU response prioritized the reactivation of non-functional wells, the rehabilitation of main water carriers, and the repair of damaged wastewater systems to mitigate environmental hazards and public health risks especially amid the severe deterioration of all aspects of daily life.

The commitment of CMWU and its partners during this critical period has been essential in alleviating human suffering and initiating the restoration of essential services in post-war Gaza, despite ongoing challenges related to access, security, and resource limitations.

2.0 Activities of the Coastal Municipalities Water Utility during July 2025:

2.1 Operation of Water Supply Facilities

2.1.1 Desalination plants

1- Al Bassa seawater desalination plant – Middle Area

The CMWU is still operating the seawater desalination plant in the Middle area (Al-Bassa) depending completely on the existing generators. The average daily water production during **July 2025** was reported of around **1744 m³**. Water production in July slightly increased as to meet to some extent the increasing of drinking water demand

The CMWU supplies water through its owned water tankers, besides the rented private tankers, which represented a turning point in covering the needs of the population and citizens with desalinated water, in addition the desalination plants are provided with 23 filling points and recently the CMWU has installed additional 10 filling points all around the desalination plant to facilitate filling the water.



2-Southern Gaza seawater desalination plant (SGDP)

Since 17th November 2024, the CMWU started operating SGDP depending completely on the newly connected power line instead of electrical generators which increased the daily production of the plant from 2000 m³/day to approximately 17000 m³/day. Connecting the plant with the dedicated power line 5 Mega watt was a result of great efforts exerted by the CMWU and PWA in order to operate the plant with its full capacity to cover part of the high-water demand during the current situation. However, since 9th March 2025, F11 power line switched off by Israel side resulting in a severe drop in water production. The average daily production during July 2025 reached **3,383.5 m³/day**



3- Emirati Desalination plant to the Saudi water tank

A desalination plant with a capacity of 2,400 cubic meters per day was established at the Egyptian side financed by the United Arab Emirates through the Emirates Red Crescent and was operated in December 2023. The pipeline was connected to the closest water network and also a filling point has been installed. Since mid of May 2024 till the period of this report, this plant is not operational due to the Israeli invasion at Rafah area and the destruction of the water carrier lines. However, the Emirati Red Crescent has expanded and increased the production capacity of the plant in the Egyptian side to reach 10,000 m³/day, this expansion aims to secure a safe source of drinking water for southern governorates.

Recently, to meet the water demand in Al Mawasi area, which is fully occupied by IDPs, the CMWU, through Emirati funding, signed an agreement for the construction of a 6.7 km water

pipeline from this plant to Al Mawasi. The pipeline will serve the western parts of Khan Younis and Rafah around 600,000 residents and IDPs. It is expected to be completed by the end of August 2025.



4- CMWU Desalination plant in the CMWU Warehouse west of Khan Younis

Since January 2025 the CMWU has started the operation of the newly constructed desalination plant in its warehouse west of Khan Younis (50m³/hr). This plant enhances the system of supplying safe and clean drinking water to citizens and IDPs in various areas of Al-Mawasi, west of Khan Younis.

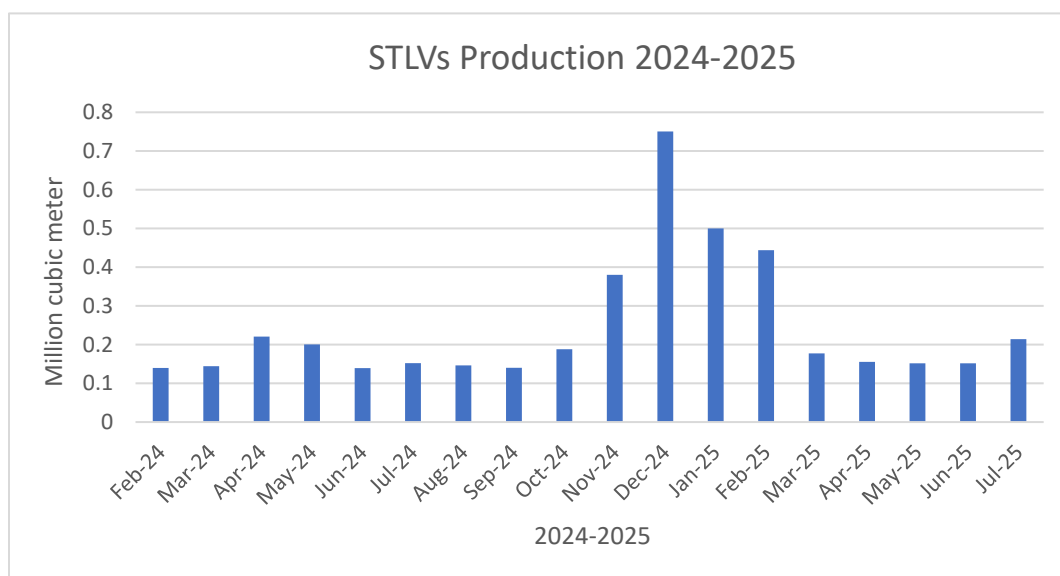
The plant is equipped with a water filling point to serve residents and IDPs of Khan Younis. Moreover, this plant currently serves Rafah IDPs via water trucking as all Rafah residents have forcibly displaced to Khan Younis area which has limited drinking water sources after the severe destruction of most water facilities.

As part of ongoing efforts to enhance water services provided to citizens and IDPs, a delegation from MSF, PARC and CARE International visited the desalination plant in July to assess with CMWU technical teams the possibility of increasing the plant's production capacity and expanding its services to meet the growing demand for water, particularly given the rising number of displaced people in surrounding camps and communities.



In July, the average daily water production from all wellhead public RO desalination plants in the Gaza Strip was **1594 m³**

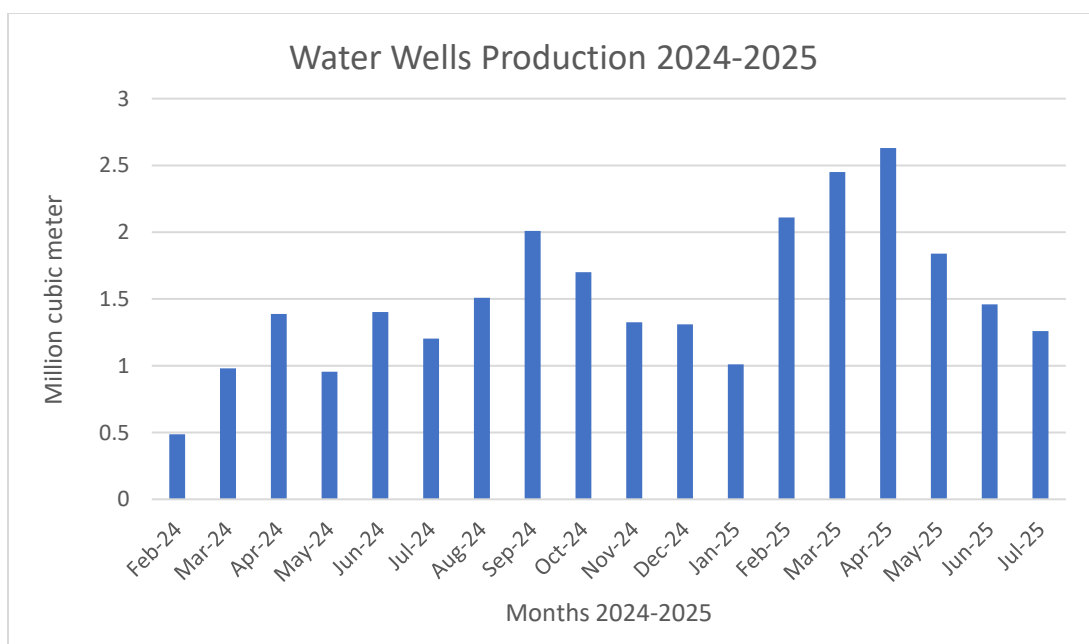
The figure below shows the large scale desalination plants' production from February 2024 till July 2025. The records indicate a slight increase in water production in July compared with the last two months and that referred to increasing the operation hours of water supply facilities to meet the high needed demand. The complete shutdown of F11 power line by the Israeli side since 9th March 2025 and the severe fuel shortage exacerbated the water crisis which led the CMWU to increase the operation hours of the two seawater desalination plants MADP and SGDP to alleviate the suffering of IDPs and residents particularly during summer months. This situation persists as the Israeli side continues to prevent the entry of fuel and essential materials needed for the WASH sector and other critical services.



Water Desalination Production from February 2024 to July 2025

2.1.2 Operation of Water Wells

Limited water wells are still operational during war as most water wells are partially or completely damaged, hence the daily domestic water production from wells over war months did not exceed 20% of the original production. The below figures show the records of monthly water production from February 2024 till July 2025, whereas the fluctuation in water production depends on fuel availability, security issues and status of facility (operational or damaged) during each month. Water production in July 2025 declined significantly due to the continued evacuation orders and fuel crisis, as the Israeli side continues to prevent the entry of fuel and essential materials into Gaza since the collapse of the ceasefire in March 2025. Additionally, evacuation orders and ongoing military operations have further impacted production, reducing the average daily water production in July to **35,977 m³**.



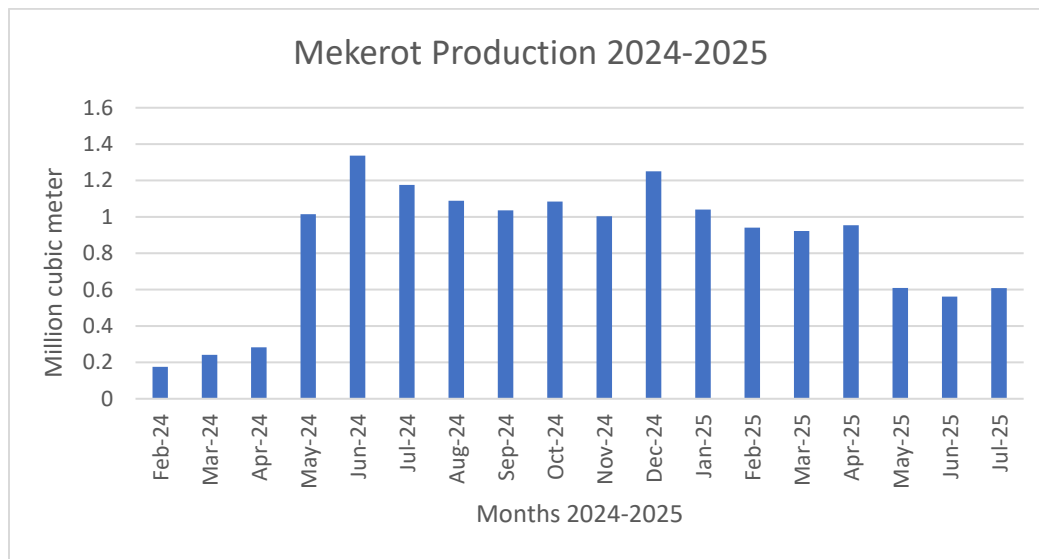
Wells Production from February 2024-July 2025

2.1.3 Mekorot Supply

There are Three Mekorot water supply Connections from Israel as follow:

- The first in the middle governorate called Ben Saed with capacity 14,000 m³ /day, this source of water was not operational during March as the feeder pipeline was damaged since 21 January 2025, that affected negatively on the water supply in the middle area including Maghazi, Zawaida, Nusirate and Deir Al Balah, the municipalities still operate the water wells for more hours to compensate the deficit from this main source of water. In parallel the CMWU with its partners increased their water trucking to all middle area to cover the drinking water needs as the people were using Mekorot water for drinking. PWA and ICRC sent a request of coordination for the Israeli side to allow to reach the damage for the repair, without any positive reply.
- The second is east Khan Younis connection with a capacity of 16,000 m³/day, where it is working during the month with average daily of **7,520m³** this decline is due to the frequent damages.
- The third for Gaza governorate with 20,000 m³/day capacity, the records also show that the average daily production in July was **9,857 m³**, this declination in water supply referred to the frequent breakdowns and damages resulting from the Israeli Military operations east of Gaza City.

Mekorot connections have been partially damaged and interrupted during the war and after negotiation with the Israeli side through PWA. The connections were reactivated again to serve the people and to ensure providing the minimum level of water supply along with water wells and desalination plants. The below figure shows a fluctuation in water production which depends on the status of carrier lines and pumping facilities (operational or damaged) during this period.



Mekorot monthly production from February till July 2025

2.2 Water Supply Quota:

The table below presents the average daily water production from various sources municipal wells, Mekorot supply, and public desalination plants as well as the water consumption quotas for domestic and drinking purposes across Gaza Strip governorates during July 2025. The total average daily water production amounted to approximately 60,075 m³, covering all governorates of the Gaza Strip. Gaza and the North received a combined average water quota of 9.48 liters per capita per day (L/C/D), while the South and Middle Areas received a slightly higher average of 13.74 L/C/D, resulting in an overall average of 11.82 L/C/D across the entire Gaza Strip. These figures remain significantly below the minimum humanitarian standards and are subject to frequent fluctuations due to multiple challenges, mainly the security situation, ongoing fuel shortages affecting the operation of water facilities, frequent infrastructure damages, and evacuation orders that render key sites inaccessible or unsafe to operate.

Area	Average Daily Water Production			Water Consumption Quota		
	Water wells	Mekorot	Desalination	Domestic	Drinking	Total
	m ³ /day	m ³ /day	m ³ /day	Liter/C/D	Liter/C/D	Liter/C/D
Gaza & North	14224	9857	600	6.67	2.81	9.48
South & Middle	21752	7520	6122	7.05	6.70	13.74
All Gaza Strip	35976	17377	6722	6.88	4.94	11.82

2.3 Operation of Sewage Facilities

2.3.1 Sewage Pumping Stations

Limited sewage pumping stations are still operational as most of them are partially or completely damaged especially in Khan Younis, Rafah, Gaza and Northern governorate, which enforces the CMWU to divert the flow directly to Wadi Gaza at the middle area, whereas in other governorates the untreated flow is diverted to the sea and in some areas, where no discharge destinations are exist, the sewage accumulates in streets and usually evacuated and fixed by CMWU and municipal vacuum and suction trucks.

- The teams are working to clean sewage lines and networks from blockages that have caused severe obstructions to wastewater drainage. The focus is also on treating overflow points within residential neighborhoods and removing health hazards that pose a direct threat to the environment and public safety.
- The CMWU continues to utilize its available and recently received suction trucks to evacuate sewage from flooded areas, particularly where IDPs are concentrated. These trucks are clearly marked and visible.
- CMWU is actively seeking to enhance its operational capacity by providing additional suction trucks, which are critical for managing floods during this challenging time. These resources and heavy machinery are essential to controlling and eliminating floods especially in shelters where IDPs are vulnerable to disease and other public health risks.



2.3.2 Operation of Wastewater Treatment Plants

There were five operational wastewater treatment plants in the Gaza strip, three of them were newly constructed (Khan Younis WWTP, Al Bureij WWTP and North Gaza WWTP), whereas the other two plants are considered intermediate plants located in Rafah and Gaza city.

During the war the operation of the three central plants (KHHWTP, BWWTP and NWWTP) stopped due to the severe destruction in their main structures. Also the operation staffs could not reach safely to these plants as they are very close to the eastern border. As a result of this stoppage currently most of the generated sewage is diverted to the sea without treatment causing pollution along the coastal side.

To mitigate the hazards resulted from discharging untreated sewage to the sea and the frequent floods in Khan Younis governorate where most of IDPs concentrated, the CMWU and PWA have formed a technical committee to inspect and assess the damage of East Khan Younis WWTP (26,600m³/day). The visual inspection shows that the damages can be handled, and based on that, the CMWU has prepared a proposal for recommissioning of KHHWTP and shared it with the interested donors to be included in their plans for the coming years. In this regards UNDP has responded and assigned a consultant to assess the needs and develop all needed designs and tender documents to re-operate the plant, currently UNDP is trying to obtain the Israeli approval for a joint visit to WWTP and still waiting the response.

2.4 Providing Fuel to Operate WASH Facilities

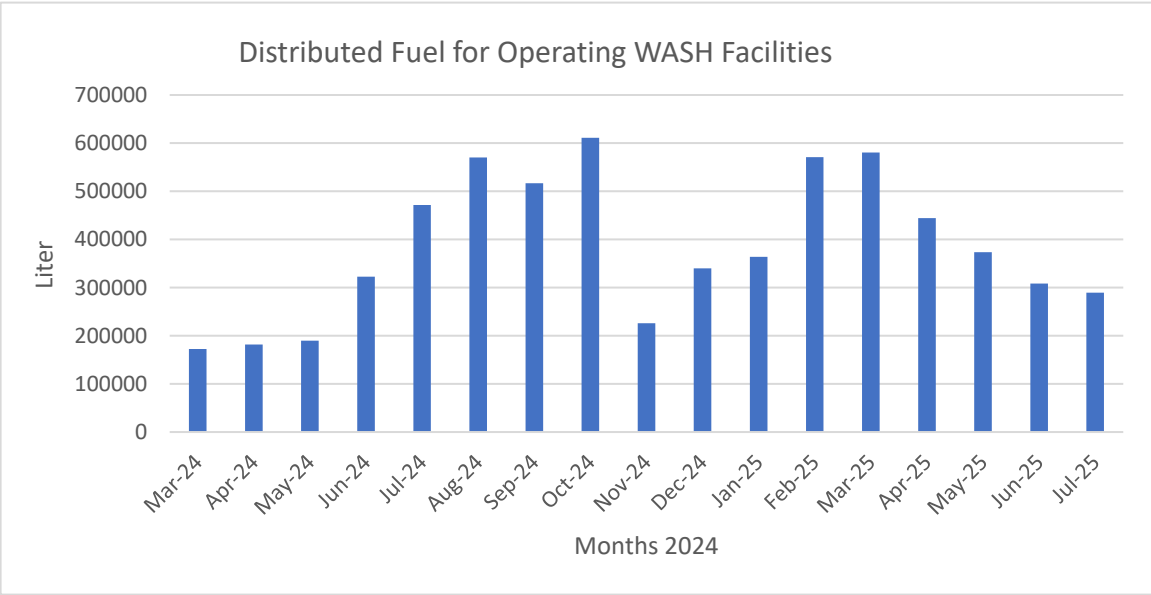
Through UNICEF fund, the CMWU in cooperation with UNRWA still provides WASH facilities in the Middle and Khan Younis Governorate with diesel, in order to ensure the operation of these facilities and provide the population with water and sanitation services, especially in light of the continuation of the Israeli war on the Gaza Strip.



The CMWU constantly strives to secure a regular supply of fuel without interruptions, as diesel generators are currently the backbone of all WASH facilities following the complete cutoff of power supplies since the onset of the war. In collaboration with PWA, the CMWU is making every effort to obtain limited quantities of fuel to maintain minimal operation of the facilities. This situation has

significantly impacted wastewater services and water supply, which have been already deteriorating over the past months.

The below figure shows the distributed fuel for WASH facilities from March 2024 to July 2025. there is a remarkable drop in fuel distribution over June and July and that refers to fuel shortage due to the ongoing crossings closure and large number of facilities were out of service during this month due to military operations and evacuation orders. The regularity of fuel supply during this crisis is highly important to meet the minimum level of water and wastewater services and to operate the recently maintained WASH facilities otherwise these services will be severely disrupted.

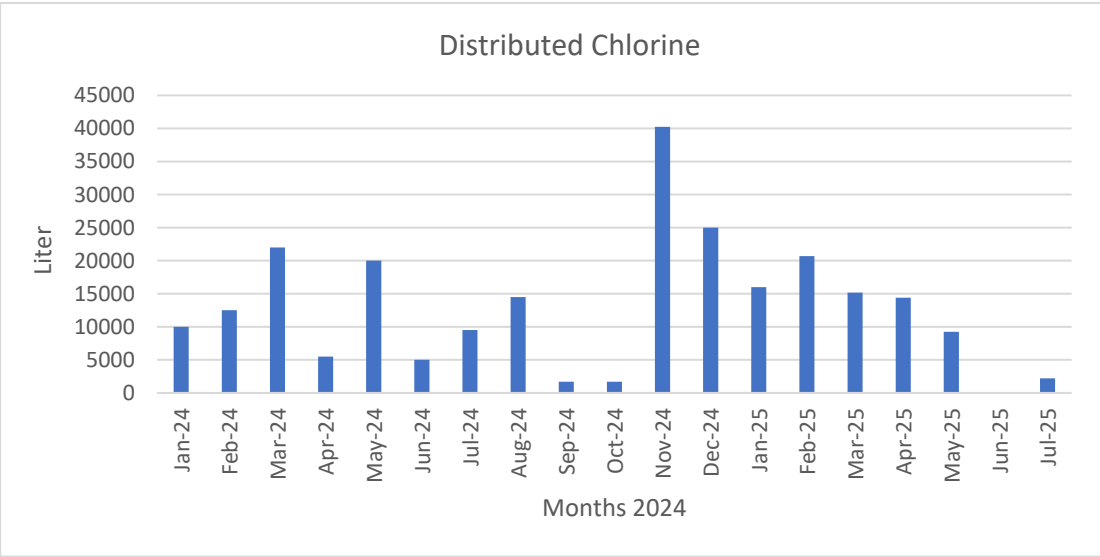


Distributed fuel for operation WASH facilities

2.5 Supply Chlorine for Water Disinfection

Through UNICEF and ICRC funds, CMWU has been providing water supply facilities with the needed chlorine solution for water disinfection. over the last months of 2024 there was a remarkable fluctuation in the distributed chlorine and that depends on materials availability, security issues and continuation of military operations in Gaza Strip which resulted in destruction of water facilities However, the CMWU has been working on repairing the affected facilities to bring them back into operation, therefore in some months the distributed chlorine increased and in others decreased, Moreover, during September and October almost there was no chlorine supply which led the CMWU to raise many appeals to UNICEF and international agencies to secure the needed quantities. UNICEF has responded to these requests and succeeded in supplying adequate quantities

of chlorine for water supply facilities since November 2024 as shown in below figure, where there was no chlorine distribution during June and only a very limited quantity secured in July 2025. This highlights the severe shortage of all essential consumables, which remain heavily restricted from entering Gaza.



Chlorine Supply during 2024-2025

Under CMWU water quality monitoring Program,

The CMWU laboratory team continues to carry out intensive field inspections to test, calibrate, and adjust chlorination and disinfection systems at various water production wells on a regular basis. This effort aims to ensure the quality and safety of the water supplied to residents and displaced people across different areas of the Gaza Strip. These efforts include close monitoring of all production facilities, contributing to the maintenance of high standards of water quality and public health safety. These efforts reflect CMWU’s ongoing commitment to protecting public health and delivering safe and sustainable water services.



2.6 Water Supply and Water Trucking

2.6.1 Providing UNRWA Schools with Drinking Water:

The CMWU is still supplying UNRWA schools' shelters with drinking water since the beginning of the war through a contract signed with UNRWA for more than 120 schools and shelters. The average water supplied to IDPs even in UNRWA or the shelters is 150 cubic meters per day.



2.5.2 Water Distribution to Various Shelters

The CMWU continues to supply shelters and residents with potable water, especially in light of the increasing need for drinking water in the continuation of the Israeli war on the Gaza Strip, in cooperation with international and local institutions. The CMWU distributes **daily** about **1.2 million liters of desalinated water to various shelters**.



2.5.3 Providing Additional Water Tankers

CMWU tankers continue to distribute drinking water to residents and IDP shelters across all Gaza Strip governorates to alleviate the suffering caused by the ongoing crisis. Water trucking services remain essential, particularly as the Mekorot supply is limited and frequently disrupted due to repeated damages. These services are especially critical in the Middle Area, where Mekorot has been completely out of service since January 2025, leaving residents and IDPs dependent on trucked water to meet their basic drinking water needs.



2.5.5 Activation of CMWU Mobile Lab:

The CMWU still monitors through its portable lab and equipments the quality of distributed water to ensure providing safe water access to IDPs. This Lab was previously provided by WHO after the destruction of the CMWU central lab in Al Zahra city in March 2024.



2.6 Repairing and Fixing The damages of Infrastructure and WASH Facilities

2.6.1 ICRC Financed Emergency Interventions:

An agreement was signed between the CMWU and ICRC to implement a group of emergency interventions and activities. Some of these activities were implemented, and others are still ongoing which include:

1- Service Works for Repairs of Water Wells, Production and Pumping Facilities

Due to evacuation orders and military operations during July there were no repairing works in water facilities.

2- Electrical Repairs for Damaged Panel Boards of Water and Wastewater Facilities -2025

Under this contract repairing works have been implemented in July 2025 in the following facilities

- El Basa PS - Dair El Balah: change power cable of electrical panel, Supply and installation of thermal and humidity protection systems for the 2 pumps and change defect indication Lamps
- El Hasaina PS - Nussirat : the electrical panel was inspected, and the inspection revealed a mechanical fault in the generator that affects the frequency
- AL Mohajereen Well – Maghazi: Maintenance of electrical panel



3- Hiring water wells in Khan Younis

Through ICRC support, CMWU has renewed the agreement to hire four private water wells in Khan Younis, increasing their production from 1,200 m³/day to 3,000 m³/day to serve the IDPs at Al Mawasi area, which is now hosting additional IDPs following the collapse of the ceasefire and the recent evacuation orders in the southern governorates.

In parallel, CMWU continues to work on repairing damaged water wells to restore them to operation. However, a shortage of materials and the impact of ongoing evacuation orders have complicated these repair efforts. As a result, only a limited number of wells in Khan Younis are currently operational.

In order to meet the growing water demand of residents and IDPs, CMWU continues to rely on the hired wells as a critical interim solution.



2.6.2 Maintenance of Al Yarmouk Water Reservoir-Gaza City

The CMWU through ICRC fund has launched the first phase of Maintenance Al Yarmouk Water Reservoir in Gaza City. This intervention comes within the efforts to strengthen the water infrastructure and improve the efficiency of water services in the city.

The first phase of the project includes civil and engineering works such as removing damaged parts, cleaning and rehabilitating the entire site, and carrying out restoration and insulation works for the existing water reservoir to ensure its readiness and operational safety.

This project represents an important step towards improving water quality and ensuring service continuity. In subsequent phases, maintenance works will be carried out on the electromechanical system of the reservoir and its associated wells, ensuring efficient operation and regular, safe water supply to citizens.

The project comes in response to the urgent need to develop water facilities in Gaza City, particularly amid the environmental and humanitarian challenges facing the area. It is expected to bring a significant improvement in the performance of the water distribution network and the quality of essential services provided to the population.



2.6.3 Connecting Musabeh Well in Dair Al Balah with Water Network

As part of efforts to enhance water supply in Deir al-Balah, particularly after the eastern water wells went out of service due to the Israeli military operations and the disruption of Mekorot water supply since last January, the CMWU in cooperation with ICRC has connected a new water well, 'Abu Musabeh Well,' to the water distribution network in Deir al-Balah. This well serves around 25,000 residents in the areas of Abu Samra, Oqaila, Hamada, and Al-Bassa.



2.6.4 Maintenance of Vital Water Wells in the Middle and Southern Gaza Strip

With funding from the United Arab Emirates, the CMWU has begun maintenance works for a number of vital wells in the middle and southern Gaza Strip, in order to strengthen the water system's capacity and improving supply services for residents and displaced people.

Maintenance works are currently ongoing for Al-Rayan Well in western Khan Younis, which was completely destroyed during the war. This well is one of the main sources supplying the western areas of Khan Younis and Al-Mawasi, which are overcrowded with displaced people. It also feeds Al-Buraq water reservoir, with a production capacity of around 60 cubic meters per hour, serving nearly 30,000 residents and displaced people.

The rehabilitation works include the construction of a new well room, repair of the destroyed pump and all related electromechanical works, in addition to the supply of a new electrical control panel and connecting the well to the two main water networks: the local distribution network and the network supplying displaced people in the area.

Maintenance works are also being carried out for Ain Jalut Towers Well in Nuseirat, including rehabilitation of the room damaged by shelling and repair of all electromechanical components. The project further includes maintenance of several other wells in the area, among them Well K21 and Al-Aqsa Reservoir in Deir al-Balah, as well as Taj Al-Waqar Well and Ain Jalut Towers Well in Nuseirat, in addition to Al-Rayan Well in Khan Younis."

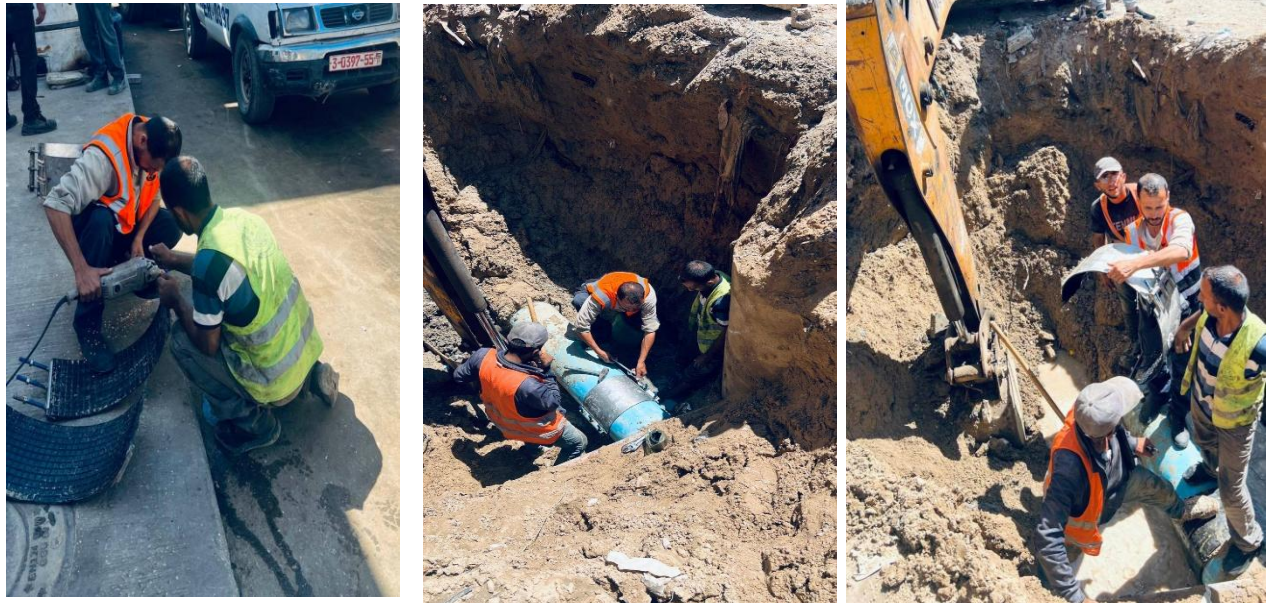


2.6.5 Maintenance of the Main Water Pipeline of USAID Reservoir- Al Nusirat

The CMWU through ICRC support has carried out emergency maintenance works on the main water line of USAID Reservoir in Nuseirat, which supplies the eastern areas of the town.

These works come as part of ongoing efforts to ensure the continuity of water services under the current emergency conditions.

This vital line serves around 60,000 residents in eastern Nuseirat. The maintenance was completed in record time to minimize the interruption period and ensure the safe and normal restoration of water supply to the benefiting residents



2.6.6 Installation of A portable Desalination Plant in Dair Al Balah

The engineering and technical teams of the CMWU have completed the maintenance and installation of a portable desalination unit at J32 reservoir in Deir al-Balah,

This intervention which financed by UICEF comes as part of ongoing efforts to provide safe drinking water to residents and displaced people in the area, particularly under the difficult humanitarian conditions.

The unit is the first of its kind in Palestine in terms of advancement, operating entirely on solar energy. It is distinguished by its high technology, portable bag-based design, and a production.

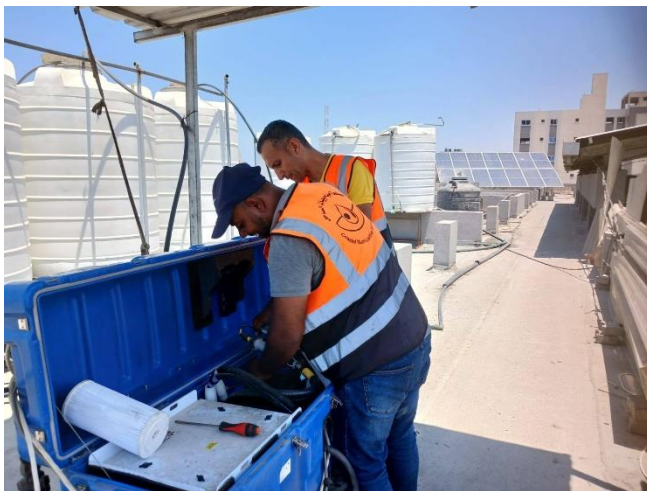
capacity of around 16 cubic meters of water per day. The unit can desalinate different types of saline water, including seawater, without the need for chemical additives



2.6.7 Maintenance of the portable Desalination plant in Al Aklouk shelter- Dair Al Balah

The technical teams of the CMWU carried out routine maintenance works for the portable desalination unit at Abdel Karim Al-Aklouk shelter in Deir al-Balah, to ensure its continued efficient operation and the provision of safe drinking water for the displaced people in the shelter.

This unit is one of several portable desalination units installed by CMWU in a number of shelter centers and hospitals across different areas of the Gaza Strip, as part of its emergency interventions to enhance access to safe water amid the ongoing humanitarian crisis.



2.6.7 Maintenance of Water pipelines in Gaza City

The CMWU in cooperation with ICRC, carried out maintenance and upgrading works on the main water line in Street 8, south of Gaza City, as part of ongoing efforts to improve water services in vital and densely populated areas.

The works included excavation and the installation of a new water network extending approximately 500 meters, serving the area from Salah Al-Din Street in the east to Al-Rasheed (Beach) Street in the west. This area is home to around 70,000 residents.

The project aims to enhance the efficiency of the network and increase the number of beneficiaries of Mekorot water in the area.

This project comes within CMWU's plan to improve water infrastructure and expand water coverage, contributing to strengthening the response to the increasing needs of citizens, especially in light of the current challenges facing the water sector in Gaza as a result of the harsh conditions imposed by the Israeli war.



2.6.8 Maintenance of Mekerot Water pipelines in Khan Younis

After being repeatedly damaged, the CMWU in cooperation with the Palestinian Water Authority and with the support of Oxfam, repaired and maintained Mekorot water line supplying Khan Younis Governorate, following severe damage caused by continuous Israeli shelling and military operations in the area.

The Mekorot line is one of the main water sources in Khan Younis and constitutes a vital lifeline for providing drinking water to residents, especially amid the worsening humanitarian crisis and the increasing number of displaced people in the western areas of the governorate.

Currently, the flow rate from Mekorot line to Al Satar reservoir is approximately 400 cubic meters per hour, contributing to improving water supply for the Al-Mawasi area of Khan Younis, which is estimated to serve around 400,000 residents.



2.6.9 Operation of CMWU Desalination plant in Khan Younis

The CMWU technical teams exert all the efforts to ensure the efficient operation of the desalination plant at the CMWU warehouse in Khan Younis to provide safe drinking water for residents and displaced people in the densely populated displacement areas west of the city.

The plant has a production capacity of approximately 1,200 cubic meters per day. It was established during the ongoing war to meet the urgent needs of citizens and has played an effective role in supplying water to areas experiencing intensive displacement.

The plant is considered one of the main sources of safe drinking water. Water tanks are filled through a designated point, in addition to points for filling jerrycans for displaced people living in nearby areas, contributing to improved access to safe water under these challenging humanitarian conditions.



2.6.10 Maintenance and Rehabilitation of SGDP pipeline-Dair Al Balah

The CMWU has started the maintenance of the main pipeline of SGDP, as part of its ongoing efforts to improve the water distribution system and enhance services for residents under the current emergency conditions.

This intervention comes after reconnecting the plant with the electrical power line which enable the it to operate at its full production capacity of 20,000 cubic meters per day.

These development and repair works are expected to improve distribution efficiency, reduce water losses, and remove encroachments on the pipeline, ensuring the widest possible coverage for residential areas and displacement camps in Khan Younis, Deir al-Balah, and surrounding areas.



2.6.11 Drilling and Operation of a New Water Well in Deir al-Balah

The CMWU in cooperation with the Palestinian Water Authority and with the support of UNICEF, has drilled and put into operation a new water well at Al-Aqsa reservoir in Deir al-Balah. This comes as part of efforts to strengthen the city's water sources amid the water crisis affecting the middle governorate, caused by the interruption of Mekorot water supplies and the shutdown of several wells supplying eastern Deir al-Balah, either due to complete destruction or their location in hazardous areas.

The new well has an estimated production capacity of 60 cubic meters per hour and is used to pump water to Al-Aqsa reservoir, which then distributes it to wide areas in northern and middle Deir al-Balah.



2.6.12 Rehabilitation of Sewage Network around Al-Shifa Hospital

The CMWU with funding from GIZ, has launched a vital project to rehabilitate the sewer network in Gaza City, near Al-Shifa Hospital. The project aims to improve infrastructure and enhance the efficiency of the health and environmental systems in one of the most densely populated and service-intensive areas.

This project is part of ongoing efforts to address the challenges facing the sewage sector and to mitigate the environmental and health risks resulting from the deterioration of old networks, especially under the difficult conditions currently affecting the city.

The project is expected to contribute to improving the quality of services provided to citizens and supporting vital facilities, foremost among them Al-Shifa Hospital, by providing safe and sustainable infrastructure.



3 Challenges:

3.1. Targeting and destroying the CMWU Central Warehouses: The CMWU communicated with governmental, international and authorities such as the Palestinian Water Authority, OCHA and UNICEF in order to coordinate with the Israeli side in order to consider the CMWU central warehouses as a de-conflicted location. All aforementioned institutions confirmed that the warehouses are de-conflicted location upon the approval of the Israeli side. materials, equipment, and trucks continued to be stored in the warehouses accordingly. However, on January 21, 2024, at 11:12 p.m., the central warehouses were bombed with a guided missile likely by a reconnaissance plane, and the next morning direct bombardment of the warehouses continued, and the warehouses caught fire with all what they containing of materials, equipment, tools, electrical and electromechanical spare parts, and heavy machinery

The damage resulted from targeting the CMWU warehouses are estimated to be at around 9 million USD, in addition to the construction value of the warehouses.

3.3. Lack of materials: As a result of the indiscriminate bombing of a large part of the infrastructure of the water and sanitation sector and the lack of materials, this led to an exacerbation of the problem and the inability to repair what was destroyed except for a small part of it. On the other hand, the

Israeli side is still preventing the entry of materials necessary to operate the water and sanitation system, especially generators, generators spare parts, and spare parts for networks and desalination plants.

3.4. Cutting off Mekorot water: frequent cut off the water supply of the three connections of Mekorot Company's water, affects severely on water supply in the three governorates especially Khan Younis which has destroyed infrastructure and water sources.

3.5. Cutting off the electricity supply: Since the beginning of the war, cutting off electricity from all lines supplying the Gaza Strip, in addition to stopping operation of the only power plant in Gaza from working, has led to damage on the water supply system, which has resulted into reducing the operation of WASH facilities in a reduced capacity by using the already overloaded diesel generators as this led to a reduction in the amount of water from 100 liters to an average of less than 18 liters per person per day.

3.6. The systematic Israeli destruction of infrastructure: Since the first day of the war, the IDF deliberately to destroy the water sector infrastructure , whereas sewage treatment plants, pumping stations, the desalination plant in northern Gaza, the main lines, machinery and equipment were destroyed, especially in Gaza, Khan Younis and the north Gaza, which led to the difficulty of supply water through networks which led to a state of thirst among many people of Gaza and the north, in addition to the sewage flooding in many areas and neighborhoods, especially areas surrounding the Sheikh Radwan rainwater basin in Gaza City and Abu Rashid pond in Jabalia.

3.7. Difficulty of coordination during the war: Despite numerous attempts by the CMWU, PWA and international institutions such as OCHA, UNICEF, and the Red Cross to coordinate with the Israeli side to enter the necessary materials, equipment, and machinery to operate and maintain water and sewage systems. All of these attempts did not succeed in convincing the Israeli side to approve the coordination requests.

3.8. Targeting crews working in the water sector: The Israeli side deliberately targeted crews working in the water sector, as 7 workers in the CMWU, including engineers and field workers, were martyred, the last of which was targeting two water distribution workers in water tankers serving the displaced population.

3.9. The deterioration of the financial situation of the CMWU: As a result of the war on Gaza, all resources of funding for the CMWU activities stopped, especially after it stopped issuing water

bills due to the inability of the population to commit to paying their water bills. This is in addition to stopping the implementation of all projects, which negatively affected the CMWU ability to finance its various expenses, such as Operating, maintaining, and paying the salaries of its employees and workers who are still performing their duties in operating and maintaining water and sanitation facilities to serve the residents of the Gaza Strip, especially in places of displacement. This is in addition to the inability of the CMWU to pay the dues of the CMWU sub-contractors from the private sector.

3.10. Fuel Shortage:

As a result of the continued Israeli ban on the entry of materials into Gaza since the collapse of the ceasefire in March 2025, a severe fuel shortage has occurred. This has directly impacted the operation of water and sanitation facilities, which rely on fuel to power their generators.

3.11. Accessibility and Security Challenges:

Evacuation orders and ongoing military operations have also severely affected access to water and wastewater facilities, hindering their operation. This has significantly disrupted service provision, particularly in light of the already limited water resources.