



Water and Sanitation, Hygiene (WaSH)
Monitoring Project
(West Bank and Gaza Strip)

Impact of the Current Crisis
Technical Report
1

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0 Report Structure

This report is organized in 5 main sections as follows:

Section 1: Background

This Section gives information regarding project background and objectives.

Section 2: Availability and Reliability of Data

This section summarizes problems associated with data collections and analysis including availability and reliability of data.

Section 3: Results of data analysis and presentation

In this section, detailed presentation and analysis of collected data is carried out, including highlighting recognized communities with clear problems that need immediate intervention.

Section 4: Proposed actions

Proposed actions to address needs from the current crisis in addition to other urgent needs related to WaSH sector are presented and summarized in two separate tables.

Section 5: APPENDIX

This section includes summary and detailed tables and maps extracted from collected data as main reference for this report.

Table Of Contents

1 BACKGROUND	4
2 AVAILABILITY AND RELIABILITY OF DATA	5
3 RESULTS OF DATA ANALYSIS AND PRESENTATION	6
3.1 General information and WaSH-activities /agencies in surveyed communities	6
3.2 General assessment of Sanitation and Hygiene Situation	7
3.3 Availability of Water Supply Sources	8
3.4 Effect of current crisis on Water Supply	9
4 PROPOSED ACTIONS	10
APPENDIX	13

1 Background

Previous surveys and assessments reveal that the 708 localities of the West Bank and Gaza Strip have been directly or indirectly affected by the current crisis. Many communities have been left vulnerable with inadequate water and/or sanitation services. Between 250 to 300 localities that rely on the purchase of water from private or municipal water tankers, have limited access to water sources because of closures and delays of tankers at checkpoints. Tankers companies are experiencing increased costs due to increased transportation time and costs; if tankers are able to get through, prices may increase as much as 80 percent. These price increases occur at the same time that incomes in the West Bank and Gaza Strip are plummeting. Tanker or tractor-pulled water tankers often risk their lives in order to get access to water sources that are located outside of their area.

Reports indicate also that lack of access to adequate water supplies, reduction in increasingly cost-intensive (and sometimes in accessible) human and solid waste evacuation, and use of often contaminated alternative water sources are already resulting in increased public health risks, including higher incidences of diarrhea and skin diseases.

However, the coverage that the information represents is low and scattered. This information is therefore incomplete and does not accurately describe the situations faced by communities. Nor does it provide a comprehensive indication of the vulnerability of the different communities, and whether communities have the capacity and coping mechanisms to solve any problems arising from the changing WaSH situation.

Accordingly, there was a strong desire among all agencies working in the WaSH sector for an increased emergency data availability to facilitate more timely and effective response to eventualities arising from the current crisis. It is felt that only through increased data availability, the international and local agencies can adequately target the most vulnerable communities and determine emergency intervention.

All of this has led to the development of the **Monitoring Project (MP)** in order to provide the tool by which responses to identified needs can be assessed and recommendation implemented. The monitoring information will not only be used by technical organizations in order to respond via practical means, but to provide information for lobbying, advocacy, and communications work to NGOs working in the protection of Human Rights.

The Monitoring Project is designed in a way such that it involves most of the local environmental NGOs. In addition, it is supervised by a steering committee comprises of PWA, PHG, PENGON, PARC, Oxfam-GB and PCBS.

The information collected from the field through a questionnaire is being checked for quality assurance with the Technical Field Monitors (TFMs) seconded by Environmental NGOs and then entered into a locally designed database, analyzed and then reports are produced on at least monthly basis. The steering committee is reviewing the results and approves the proposed actions for distribution to all interested agencies. The current report is the **first report** that covers part of the information collected from **Qalqilia, Tulkarm, Jenin and Gaza Governorates**.

2 Availability and Reliability of Data

To facilitate timely data availability, West Bank was divided into 9 main areas and Gaza Strip into 3 main areas and covered by the following NGOs:

- Five areas are being covered by PHG. These include the following Governorates: Northern part of Gaza strip, Qalqilia, Nablus, Salfet, Jerusalem, Jericho and Ramallah .
- Other environmental NGO's, members of PENGON, with part-time seconded staff, are covering the rest of the West Bank and Gaza Strip. These areas are as follows:
 1. **Northern and Southern parts of Hebron** are covered by Arab Studies Society / Land Research Center (**LRC**).
 2. **Bethlehem** is covered by Applied Research Institute/ Jerusalem (**ARIJ**)
 3. **Tulkarm** is covered by Palestinian Agriculture Relief Committee (**PARC**).
 4. **Tubas+ Jenin** is covered by The Society for Environmental Protection (**SEP**)
 5. **Central and Southern Parts of Gaza Strip** is covered by the Green Peace Association / Gaza (**GPA**).

To insure data reliability, written directions to fill in the questionnaire were provided to the TFMs. In addition, each questionnaire is being reviewed with the relevant TFM to make sure that the information gathered are appropriate and that it reflects the situation accurately. After that the information is entered into the database for further analysis and report production.

Considering all difficulties associated with the restricted access to localities and the time consuming follow up with TFMs for quality assurance of collected information, we were able to finalize only twenty seven Questionnaires. Table (1) summarizes covered localities in each Governorate and the status of data analysis.

Table (1): Results of the survey for Monitoring Project until the end of July.

	Area	# Of Questionnaires		
		Finalized	Under revision	Total
1	Hebron (north and south)		9	9
2	Bethlehem		5	5
3	Tulkarm	3	2	5
4	Tubas and Jenin	4	6	10
5	Jerusalem+Jericho+ Ramallah			
6	Qalqilia	18	4	22
7	Nablus		8	8
8	Salfet		9	9
9	Northern part of Gaza strip		4	4
10	Central Part of Gaza Strip	2		2
11	Southern part of Gaza Strip			
	Total	27	47	74

3 Results of data analysis and presentation

All collected data was stored in the Monitoring Project Database; all procedures required for quality assurance, retrieval and analysis of this data was done through ACCESS and GIS databases. Tables and maps were used to present final findings. Data collected was generally grouped into four major groups A, B, C and D as follows:

1. Group A included general information and WaSH-activities /agencies in surveyed communities.
2. Group B included data related to general assessment of Sanitation and Hygiene Situation in these communities.
3. Group C included data related to availability of Water Supply Sources in these communities.
4. Group C included data related to effect of current crisis on Water Supply to these communities.

Results of analysis of these same groups are presented in the following sections and in the same order.

All collected data for the twenty-seven surveyed communities are presented and summarized in tables available in the APPENDIX. This data will be available in the Monitoring Project Website hopefully, within two weeks from publishing this report. The following is to be taken in to consideration regarding data in this report:

- Priority was given to Qalqilia and Tulkarm in response to the recommendation given by E-WaSH group in its last meeting.
- It is important to stress here that the total number of Questionnaires available for analysis are limited; procedures for start up of the project and data collection took appreciable time.
- Quality of collected data is expected to improve in the next reports, since discussion of received Questionnaires is continuous with the TFMs, also coverage is expected to be larger.
- Grouping of the data was done in several ways in order to make extraction of needed intervention clearer and to relate different sectors in the same community.
- Whenever possible and needed, Maps are prepared to make data presentation easier.
- We tried to include as much as we can from the summery tables that we thought would be helpful for all Institutions / Organizations working in the WaSH sector.

3.1 General information and WaSH-activities /agencies in surveyed communities

Table 1 in the APPENDIX presents communities, which was surveyed until the end of July 2002 with the general data related to them. General information available in this table is based on Palestinian Central Bureau of Statistics

(PCBS) data. PCBS-Code was adopted to facilitate data link and exchange. Collected data for these communities will be updated in the next reports, and changes will be highlighted if available.

Priorities in survey were given to Qalqilia and Tulkarm in response to the recommendations given by E-WaSH group in its last meeting. But it is important to stress here that results of the Monitoring Project's survey are still limited, since the number of surveyed communities is still small (27 communities) compared to total number of communities in West Bank and Gaza Strip.

The first section of the Questionnaire (section A) included general information about the community in addition to data related to current activities of the different agencies in the WaSH related sector. Summary of this data is presented in **Table 2**. It is clear from this table that no apparent activities are currently being implemented by these agencies in Qalqilia Governorate.

3.2 General assessment of Sanitation and Hygiene Situation

In this section, general assessment of the sanitation and hygiene situation is projected. Results of analyzed data are summarized as follows:

1. Twelve out of the twenty-seven surveyed communities have WaSH-related diseases which is worth further investigations. Diseases include Ameba and Skin diseases (**Table 3**).
2. Number of persons infected with Ameba is relatively high in Tammun (900 person), where water quality is in general bad, with no chlorination of water used for domestic purposes (**Table 3**).
3. Vacuum Tankers price is noticeably high in Jenin Governorate (Siris, Al Kufer, and Al Jadida , **Table 4**); one of the recognizable reasons for this is the unavailability of vacuum tankers in the specific communities, which do not have wastewater networks. Another reason, which enlarges this problem, is the difficulty in getting vacuum tankers from neighboring communities due to closures and curfews imposed on most of these communities.
Table 5 presents communities where wastewater evacuation cost equals or exceeds 50 New Israeli Shekel (NIS) per tanker. Number of these communities is sixteen out of the twenty-seven surveyed communities.
4. Seven of the surveyed communities have difficulty in access to Public Health Centers (PHC), and specifically where these centers are outside communities as is the case in these communities (**Table 6**).

5. In **Table 7**, communities where water used is not treated are presented. This list includes twelve communities; Tammoun is at the top of this list and it is clear in this table that, again, Tammoun has the highest number in persons infected with Ameba.

3.3 Availability of Water Supply Sources

In general, there is no problem in the availability of water in Tulkarm or Qalqilia. On the contrary, in some of the communities like Habla, the price of water is relatively low, which in effect increases the quantity of water used per capita and therefore increase wastewater production (also relatively, if compared to other surrounding communities) . Such communities are in need of Public Awareness Campaigns in order to control the use of water. Data extracted from this section could be summarized as follows:

1. **Table 8** presents main source of water for the twenty-seven communities surveyed, both in winter and summer seasons. **Table 9** has more details regarding percentage of reliability and coverage of these sources of the communities needs.
2. Communities with water network (**Table 10**) could be grouped in three main groups:
 - **Old and bad network:** This includes Falamyah, Kafr Qaddum, Jayyous, 'Isla and Izbet Salman with water supply only 10 days / month and about 2-4 hours / day supply of water.
 - **Old and leaking network:** In Khirbet Sir, 'Azzun 'Atma, Al Mudawwar, and Kafr al Labad.
 - **Good network:** as in the case of the rest of the seventeen communities with available water network.
3. Community consumption in most cases includes all uses: domestic, agricultural, and livestock. This is specifically clear in the case of Qalqilia and Tulkarm Governorates, in which agriculture is a main source of income in it and where the domestic per capita water consumption was difficult to define; therefore, available numbers include all uses; these numbers should be used with care. Siris, Tammoun, Anabta and Al Jarushiyya are communities that need further investigations and details regarding this issue. (**Table 11**)
4. In general, all communities with water networks have significant problem in bill payments; it ranges between 15%-99%. In all cases, it was related directly to difficult economic situation due to the current crisis in the first place (**Table 10**).
5. Regarding communities that do not have water network, it is clear that Tammoun has the highest population, therefore priority in the need for water network. Siris and Al Jadida are also in need of water network since they have considerable population. (**Table 12**)

6. Regarding the use of cisterns, eight out of the twenty- seven communities use cistern as a main source of water for domestic use in winter. In summer, tanks become the main source of supply since most of the cisterns dry in June or July (**Table 13**).
6. From the communities that use tankers in summer and do not have cisterns are Izbet Salman and Jarushiya. Therefore, provision of cisterns could be supportive to them since on the average they consume about 25 m³/day (**Table 14**).
7. Eleven communities from the twenty-seven communities surveyed rely on tankers for provision of water; nine of them consider it as the main source of water, especially in summer. Price of water is in the range of 7-12 NIS/m³. Comparing prices before and after current crisis, a slight increase is noticed, but considering the difficult economic situation and the decrease in income, water is still consuming a large percentage of family income. Therefore, considerable number of the families is not able to pay for water. Siris and Jadida have the worst situation regarding this issue, since large number of the families is unable to pay for water. (**Table 15**).
8. Most of the communities surveyed rely on cistern for provision of considerable percentage of needed water. Most of these cisterns dry in June or July (**Table 16**).

3.4 Effect of current crisis on Water Supply

Results of analysis in this section indicated that twenty-four out of the twenty-seven communities surveyed suffer from the effect of checkpoints, curfews or both on water supply for these communities. Effect is either high or intermediate.

Results of analysis of data collected in this section are summarized in the following:

1. Kafr al Labad, Kafr Qaddum, 'Isla, Sanniria and Al Jaroshiya all suffer from closures of main valves frequently. Clear effect is noticed in Kafr al Labad and Kafr Qaddum (**Table 17**).
2. All communities are affected, directly or indirectly, by the availability of checkpoints and curfews (**Table 18**).
3. Decreasing of supply by Mekharoth is clear in Kafr Qaddum, where supply was decreased by about 70% i.e. current supply is only 30% of the regular supply (**Table 19**).

4. Well damages are recognized in Gaza Strip, and specifically in Al Mughraqa (five wells) and Wadi Al Salqa (two wells). Partial destruction of wells is recognized in Al Jarushiya and Kafr al Labad **(Table 20)**.
5. Damages to roof tanks is very clear in Al Mughraqa (300 tanks). In ‘Azzon (20), Tammoun (30), Kafr Thulth (20) and Jayyous (3) several number of tanks were also damaged. **(Table 21)**.
6. High destruction in water network is clear in ‘Azzon. Destruction to a lesser extend is presented in other communities. Details are available in **Table 22**.

4 Proposed actions

From the results of analysis of the available data, two types of needs are recognized:

1. Needs which are directly related to the current situation, and
2. Needs which reflects urgent requests of the communities even before the current crisis, but worsen under the current crisis.

To address both identified needs in the surveyed communities; the following two tables reflect actions that are thought to be required in both cases:

Table (2): Proposed actions to address emerged needs from the current crisis

Community ID	Community Name	Governorate	Recognized problems	Probable causes of the problem	Proposed actions
50755	Tammoun	Tubas	Low per capita consumption	<ol style="list-style-type: none"> 1. High effect of curfew on tankers movement 2. Reduction of Al Fara'a Spring discharge, which is the main source of water. 	Support from agencies working in WaSH sector to provide water by tankers for urgent needs. Find additional source of water (well) and construction of a network.
			Bad water quality	Different sources for water tankers since communities are in desperate need of water, without checking source that could be polluted	Provision of water with known quality and source, check of water quality and Provision of treatment.
			High number of infected persons (Ameba and bowel inflammation)	Water is thought to be the reason for infection.	Urgent medical intervention
10606 10485 10565	Siris Al Kufer Al Jadida	Jenin	High cost of wastewater evacuation.	Unavailability of vacuum tankers in the community and difficulty of getting tankers from other communities due to current crisis.	Provision of vacuum tankers for the local council.
<i>Please refer to related table</i>	Communities without water network	From the list of surveyed communities	High percentage of unpaid water bills	Low income due to current situation	Support to local councils in payments
602945	Al Mughraqa	Mid. Gaza	Large number of destructed roof tanks	Current situation	Support in replacement
200925	Kafr Qaddum	Qalqilia	Great reduction in supply by Mekharoth	Current situation	Give back normal supply and find other source of water.

Table (3): Proposed actions to address needs before the current crisis

Community ID	Community Name	Governorate	Recognized problems	Probable causes of the problem	Proposed actions
200905 200925 201210 200985	Falamya Kufr Qaddum 'Izbet Salman Jayyous	Qalqilia	Very old and very bad water network.	Very old and very bad water network.	Rehabilitation and expansion of the available network
100665 100545	Anabta Al Jarushiya	Tulkarm	Low per capita water consumption	Shares source of water with other close communities	Provision of additional source of water

APPENDIX

A- Tables:

[Table 1](#): Surveyed communities.

[Table 2](#): Current WaSH Activities / Agencies in surveyed communities.

[Table 3](#): Communities with available WaSH related diseases in it.

[Table 4](#): Availability of wastewater services in surveyed communities.

[Table 5](#): Communities where wastewater evacuation cost is greater than 50 NIS.

[Table 6](#): Communities where access to Public Health Centers (PHC) is difficult or closed.

[Table 7](#): Communities where domestic water is not treated.

[Table 7bis](#): Communities where domestic water is treated.

[Table 8](#): Main water sources in the surveyed communities

[Table 9](#): Details of main water sources in the surveyed communities.

[Table 10](#): Communities that has water network from the surveyed communities.

[Table 11](#): Per Capita water consumption in surveyed communities.

[Table 12](#): Communities that do not have water networks from surveyed communities.

[Table 13](#): Communities that use cisterns as a main source of supply.

[Table 14](#): Communities that do not have cisterns.

[Table 15](#): Communities that buy water through tankers.

[Table 16](#): Communities that have cisterns as a source of water.

[Table 17](#): Communities that suffers from valve closures.

[Table 18](#): Effect of checkpoints and curfews on surveyed communities.

[Table 19](#): communities that suffered from decrease of water supply by Mekharoth Company.

[Table 20](#): Communities where damaged wells are recorded.

[Table 21](#): Communities where damages to roof tanks and reservoirs are recorded.

[Table 22](#): Communities where water network destruction were recorded.

B- Maps:

[Map 1](#): Fieldwork areas for the Monitoring Project.

[Map 2](#): Surveyed communities until the end of July.

[Map 3](#): Communities where access to Public Health Centers (PHC) is difficult or closed.

[Map 4](#): Communities with available WaSH related diseases in it.

[Map 5](#): Water network conditions in the surveyed communities.