WASH
CHAPTER

METHODOLOGY

The sector chapters were predominantly designed to present the data that exists, and that was shared with the Multi Sector Needs Assessment (MSNA) team. Annex A provides a summary of the assessments and reports reviewed for the chapter. There is much that sector experts know from experience that is not captured in the assessment reports. To capture some of the expert views within the Sector Working Groups (SWGs), MSNA SWG workshops were facilitated by the MSNA team and sector experts. These views are taken into account throughout the document. However, due to the short notice, attendance was limited in some workshops and the views presented in the chapter cannot be considered as representative of all SWG members.

The MSNA team aimed to provide an objective overview of the available data and SWG views and therefore has not altered the data or language used in the reports and assessments.

The following target groups were used for the purposes of data analysis:

- Syrian refugees registered with UNHCR or awaiting registration
- Syrians living in Lebanon who have not been registered with UNHCR
- Palestinian refugees from Syria (PRS)
- Vulnerable local Communities including Host Communities and Palestinians (PRL)
- Lebanese returnees

Analysis was undertaken at the lowest possible geographic levels for the various target groups, depending on the type of information available. Where possible, information was aggregated to; Mount Lebanon and Beirut, South, Bekaa, Akkar, North/T+5, Palestinian Camps, and Outside Palestinian Camps.

Main Steps

- **Identifying information needs:** In order to identify the relevant research questions for collation, the Thematic Working Group (TWG) combined the indicators of the Syria Regional Response Plan (RRP6) with additional information needs from the SWG. These information needs were used to form the basis of the chapter themes.
- **Secondary data collation:** An assessment inventory was developed and shared for input from as many stakeholders as possible; to encourage sharing of assessment data. A sector focal point was assigned from the TWG and supported the MSNA team to collect data from the sectors. Within the team, analysts were assigned to sector chapters and a number of partners were approached including: INGOs, UN agencies, the Ministry of Social Affairs Lebanon (MoSA), the National NGO forum and the World Bank with requests for assessment reports.
- **Data categorisation:** To facilitate the data analysis component, all data was summarised and categorised into an excel spreadsheet.
- **Analysis and Writing:** The Sector Leads and respective analysts assessed the usefulness of the reports and used them accordingly. For example, a nationwide multi-sector report would have been used to develop broad conclusions, whilst an assessment with a small sample size in one particular location may have been used to provide examples to support/contradict the overall findings.
- **Review and Consultation:** The MSNA team reviewed a number of databases, assessments and reports that were provided by partner agencies. In order to obtain as comprehensive overview as possible a number of consultations were built in with the SWGs.

For more information on the methodology please refer to the main report.

CONTENTS

1. KEY FINDINGS

Summary of Priorities

Based on the data review and inputs from the Sector Working Group we can provide the following preliminary conclusions:

The data and perceptions of the SWG indicate the need for infrastructure rehabilitation at multiple points within the water system at the community level. Sanitation facilities, especially in schools and water storage tanks, required improvements. In light of the current water scarcity, water saving awareness is required across all target groups, including industry.

WASH assessments have not systematically identified the unique challenges of target groups. However it indicates that for Syrian refugees, especially those who live informal settlement (IS) and unfinished dwellings, the needs are high. Interviews with UNRWA highlight that the same applies to PRS and PRL, many of whom live in already overcrowded dwellings (the camps) or have limited access to services (outside camps).

Existing assessments do not cover a broad enough geographic area to deduce potential WASH priority sites.

Indications show that approximately two-thirds of the 225 vulnerable cazas (districts) in Lebanon do not have WASH programmes, however, this could be due to a lack of data to detail what the needs are for each area. What is apparent is that hygiene promotion tends to the weakest area of intervention.

Economic water scarcity is highlighted as a major challenge for the coming months, and in particular the summer, when, due to reduced access to municipal water supplies, over-pumping of wells may lead to water contamination and longer-term water shortages.

1.1 Priority Needs

Based on the data available, the MSNA team has found the following priority needs[1]:

For all target groups:

- Infrastructure rehabilitation at multiple points within the water system
- Improved quality of sanitation facilities, especially in schools and in collective shelters
- More hygienic water storage tanks and/or maintenance

For Syrian refugees:

- Improved number and access to segregated bathing facilities for Syrian refugees, particularly for persons with specific needs (PwSN)
- Improved number and access to segregated toilets and latrines, especially in IS and unfinished dwellings
- Services to provide desludging of latrines for those without access to a sewer network, with a high water table or a rocky soil conditions
- Specific hygiene items for PwSN
- Adapted facilities (showers and latrines) for PwSN

The participants of the MSNA SWG workshop identified the following priority needs[2]:

- Access to clean water for drinking and other purposes
- Desludging of waste facilities for the less urban areas
- Source water management and improvements in water distribution management to ensure clean water, as well as having clean and sufficient storage of water
- Having “safe toilets”, both in terms of clean, safe access and the ratio of people to toilets

Key informants from the WASH working group also noted a need for infrastructure projects. One person felt that projects should not just focus on rehabilitation, but upgrading systems to ensure the water supply coverage in high-need areas where missing. Additionally, water quality should be improved by treating the water on main source level to eliminate all water-related diseases, as water filters do not eliminate 100% of viruses and bacteria, for example the hepatitis A virus. Finally, as water scarcity becomes more of an issue this summer, water saving awareness needs to be raised for all target groups. The water shortage affects all populations in most of the areas, having an impact on health and household economy.

1.2 Priority Target Groups

The WASH assessment data has not systematically identified the unique challenges of each of the target populations to enable conclusions around priority groups. However, it is apparent from the data that the most vulnerable groups are those who are living in substandard dwellings, including IS and unfinished buildings.

The participants of the MSNA SWG workshop identified the following priority groups:

[1] It should be noted that the MSNA team’s analysis has been built from the data that was available and might not capture the complete situation on the ground.

[2] The MSNA held a workshop discussion with 28 people from the WASH Working Group that represented at least 15 different organisations. Although the discussion took place during a regularly scheduled work group meeting, the discussion was not designed to build consensus and not all participants provided input, therefore this meeting can in no way be interpreted a consensus or the views of the entire working group.

- WASH was highlighted by UNRWA, along with shelter, as the main need for PRS and PRL, depending on whether the refugees were living inside or outside of the Palestinian camps.
- According to key informants from the WASH working group, prioritising the ISs has meant the growing needs in unfinished buildings are under-attended.

1.3 Geographic Priorities

Existing assessments do not cover a broad enough geographic area to deduce potential WASH priorities.

The MSNA SWG workshop participants were reluctant to identify geographic priorities. They generally felt that all regions had needs, but the needs were just different:

- For the Bekaa, which is characteristically rural (though not all areas), latrines need desludging. As with other areas with a lot of agriculture, there is competition for water between agriculture and the refugees which can result in water conflicts. The water contamination in the Bekaa is more chemical than biological.
- In the North (T+5) there are community water shortages in the non-urban areas, and the water is contaminated with bacteria. There is a need for water saving at the household level. In the South, the concern is the treatment and disposal of black water in collective shelters, IS, and single units. Installation of the toilet is not a solution to the problem. Municipalities are too overstretched to address the waste management issue.
- In Akkar, water supply and contamination (mainly biological) and desludging are the key issues.
- For Palestinian camps by the sea (and outside the camps) increases of salinity in the boreholes is a great concern.

1.4 Response Gap Analysis

Based on the data available, the MSNA team have found the following response gaps:

- Approximately two-thirds of the 225 vulnerable cazas reportedly do not have WASH programmes. The number of vulnerable cazas continues to increase as more Syrian refugees come into the country.
- Hygiene programmes.
- Water and sanitation infrastructure at the community and municipal levels
- Longer-term infrastructure projects

The participants of the MSNA SWG workshop identified the following response gaps:

- Rapid response – the time it takes between the start and completion of an intervention
- Preparedness for an outbreak
- The strategy – partners do not have one focus geography, but are spread across the area
- Coordination of an exit strategy (with development projects)
- Coverage of all areas and all services
- Collective shelters
- Extra support for the municipalities
- Sewage and wastewater treatment

1.5 Future Developments with Possible Impacts on the Sector

Based on the data available, MSNA team have found the following future developments may have an impact on the sector:

- With dwindling economic resources, access to municipal water is decreasing and alternatives such as water trucking are being used, creating potential over-pumping of wells, which could lead to well

contamination and longer-term water shortages. This is likely to be a particular problem during the summer.

The participants of the MSNA SWG workshop identified the following future developments may have an impact on the sector:

- Political security
- Water scarcity over the summer months
- Expansion of IS
- Saturation of the use of the system
- Decreasing acceptance from host community

2. CONTEXT

Water is more widely available in Lebanon as compared to other Middle Eastern countries. However, water quantity, quality and access challenges that pre-date the Syrian crisis have been exacerbated by the large influx of refugees.

Lebanon's water sector is facing numerous challenges in terms of provision and management of services. As a result, Lebanon is economically water-scarce because of mismanagement, including low water storage capacity; the high amount of water lost to the sea; poor maintenance of the water distribution network (40-50% of water is lost through leaks); the lack of an effective fee-payment scheme for the water sector; and illegal connections. In addition, water supply is further interrupted by periodic power outages. The result is that some regions have an irregular supply of sufficient water, particularly in the summer months (UN Habitat 2011, World Bank September 2013). Perhaps more significantly, irrigation for agriculture—the largest water consumer—has been largely inefficient due to the high proportion of open channels in the network (WASH WG-Lebanon, February 2014).

With the large numbers of Syrian refugees, it is estimated that the demand for water has increased by 7% over the pre-crisis demand of 335 million cubic metres (m3) per year. The Bekaa valley and the North, traditionally less well-served by the public water system, are the areas with the highest influx of refugees, further exacerbating the impact of the crisis on the water sector. (World Bank, September 2013)

The quality of water in Lebanon is highly variable due to a number of factors: disposal of untreated domestic sewage and other contaminants from open dumping and direct discharge of industrial effluent into the environment (urban water supply); seawater intrusion and over-exploitation of groundwater (coastal wells); high nitrate levels from the use of fertilisers and unregulated application of pesticides (Bekaa Valley), though no quantitative data is available to specify the amount. Organisations providing health interventions to Syrian refugees are attributing high instances of diarrhoeal diseases to the consumption of poor-quality water, noting particular concern for pregnant and lactating women, and for children under the age of five. Of further concern arethe effects of diarrhoeal diseases, which can heighten vulnerability to malnutrition. (WASH WG-Lebanon, February 2014)

Pre-Syria crisis, the coverage of wastewater networks was 60%, but only 8% of wastewater was treated. Wastewater is collected in pits, holding/septic tanks or existing sewer networks. The majority of wastewater is discharged directly into the environment: mostly into the sea, streams and rivers, or direct infiltration into the subsoil. There is no tariff system for wastewater and hence no corresponding deterrent for pollution. In the areas where there is no sewer network, latrine pits/septic tanks are used to contain effluent and are periodically emptied by desludging trucks, mainly using private companies. The lack of wastewater treatment facilities and limited wastewater collection systems, particularly in poorer less serviced areas, poses a very big risk to public health. (WASH WG-Lebanon, February 2014)

According to the World Bank, Lebanon's already stressed water supply and sanitation systems must now meet an additional estimated water demand of 26.1 million m3/year, equivalent to 7% of the pre-crisis demand. This equates to a cumulative cost of approximately USD 18 million. (World Bank; September 2013).

Within the Stabilisation Road Map of October 2013, the Government of Lebanon (GoL) quantifies the impact of the Syria crisis on specific sectors and identifies three strategic objectives to ensure stability in Lebanon, namely: restore and expand economic and livelihood opportunities, and create an enabling environment for private sector investment; restore and build resiliency in access to and quality of sustainable basic public

services, and; strengthen social cohesion. This led the government to request financial USD 235 million to achieve these strategic objectives for water and sanitation infrastructure. (GoL, 2013-Oct)

The increase in population figures throughout the country has highlighted the need for a shift in response – away from the typical emergency response programmes that tend to focus on household level improvements and assistance towards more sustainable initiatives that focus on community and municipal level improvements, for both water and sanitation.

According to the MSNA SWG workshop participants, there have been a number of changes in the situation since the RRP6 was developed, including: more IS; increased insecurity issues in some areas (so partners do not have access to them); it was a particularly dry winter which will lead to water scarcity this summer, and; there have been increased tensions between refugees and local communities.

3. DATA SOURCES

At the start of the process, SWGs developed a list of information needs (i.e. those themes that they required information on within their sector). These were built from RRP6 indicators and a consultation within the working group. For the purpose of Phase 1, MSNA analysts reviewed and examined the available data on each theme. See Section 4 for results.

The table below highlights the information needs and whether or not they were met by the available data.

Table [1]: Extent to which information needs have been met through data available to the MSNA Team

Theme	Information Need
Water Supply and Access	Supply: What are the main types of water supply (for drinking, cooking, and personal/domestic hygiene), disaggregated by geographical area?
	Storage: What are the main types of water storage solutions per geographical area?
Water Quality	Quality: What water treatment solutions are utilised, if any, by the target populations?
Sanitation	Facilities: What types of sanitation facilities are utilised by the target population(s)?
	Wastewater management: What is the capacity of existing wastewater management systems to cope with increased population per geographical area?
	Drainage: Areas of Lebanon with the highest flood risk, particularly those in which target populations are resident in informal settlements
Hygiene	Hygiene items: What are the main NFI (hygiene) needs of the target populations (disaggregated by geographic area)?
	Hygiene promotion: What are the main hygiene promotion needs amongst the target populations?
Solid Waste	Solid waste management: What is the capacity of existing solid waste management systems to cope with increased population per geographical area?

Legend:

the information need has been met

there is some data, but not enough to fully address the information need

no data available to the MSNA team at the time of writing

This section aims to highlight the data sources and limitations.

General: In 2013 and 2014, five specific WASH assessments were undertaken and 22 multi-sector assessments that included WASH. These assessments do not cover all geographic areas or target groups. There is one assessment on the situation of Lebanese returnees and PwSN, and no assessments on Palestinian refugees from Syrian (PRS). No data provide information that allowed for comparisons between vulnerable host communities, Lebanese returnees, PSR, Syrian refugees, and PwSN. The vast majority of the assessments used a rapid assessment approach, and at least two were primarily based on desktop reviews. Very little of the data, in particular the regionally focused data, provided representative samples in which to generalise to the target populations. Two assessments, the Vulnerability Assessment of Syrian Refugees in Lebanon (VASyR) and UNICEF's Nutrition Assessment, provided representative samples. The VASyR did not show regional differences. Although the Nutrition Assessment did provide regional breakdowns, WASH was a small part of the overall assessment.

Where possible, we attempted to separate data regarding registered, awaiting registration, and unregistered Syrian refugees. However, because most data was collected at the household level, even surveys targeting Syria refugees registered and awaiting registration include unregistered refugees, and therefore cannot be separated. Even though the data is presented for overall Syrian refugees regardless of registration status, we should assume there are differences between these groups.

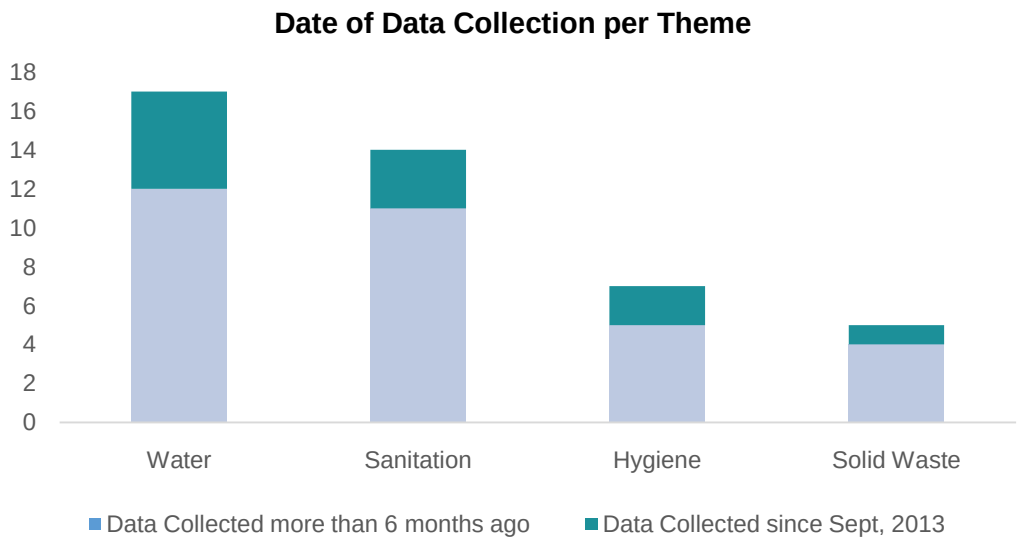
The following is a breakdown of data available by theme during the MSNA Phase 1 process:

- **Water:** There were 17 reports used to provide information on water supply, access and quality. For 12 of these, the data was collected more than six months ago and may not be relevant to the current situation. Nine specified that they were rapid assessments, and only three were in-depth. Most of the assessments covered Syrian refugees, and five of those specified registered refugees, however the data is not presented in a way that allows for a comparison between registered and unregistered refugees. Eight used only household surveys and one used an individual survey. Seven used a mixed method approach (household surveys, focus groups and/or key informant interviews), and one only used focus groups. None of the assessments specified settlement types used in the data collection or disaggregated between settlement types, except in rare occasions as indicated in the report below.

- **Sanitation:** 14 reports were used to provide information on sanitation. The data from all but two were collected more than six months ago. Nine were rapid assessments, and only two specified in-depth. Six used household surveys, one used an individual survey, five used mix methods (household surveys, focus groups and/or key informant interviews), and one only used focus groups. Again, although four of the assessments specified that the participants were registered refugees, comparisons between registered and unregistered refugees are not possible given the differences between the assessments.

- **Hygiene:** Of the seven reports used to provide information on the state of hygiene for the different target audiences, only two used data collected within the last six months. The data only looked at Syrian refugees, with one specifying registered. Three of the assessments were rapid assessments, and one was in-depth. The others did not specify and did not provide detailed information on methodologies used to gather the data.

- **Solid Waste:** There were five assessments used to discuss solid waste management in Lebanon, however only one used data collected in the last six months. Four used a rapid assessment methodology, two used household surveys, one used individual surveys, two used focus groups and two used key informant interviews. One did not specify methodology.



Given the age of the data, the lack of data that geographically provides a representative sample for each region, and significant data gaps in target audiences, it is very difficult to make any generalised statements relevant to the current situation.

The maps below highlight where assessments have taken place and where response activities have taken place. They highlight that the assessments used in this sector chapter have covered the North, most but not all of the Bekaa, and the Chouf in Mount Lebanon. Other than the VASyR and the UNICEF Nutrition Survey that were national assessments but were not disaggregated regionally, there were no assessments that covered Akkar or areas in the South, even though there have been activities from partners in both areas. From the below maps, it becomes apparent that not all areas where response activities are ongoing may have assessment data to inform operations.

Figure[1]: WASH activities compared with locations of WASH specific assessments

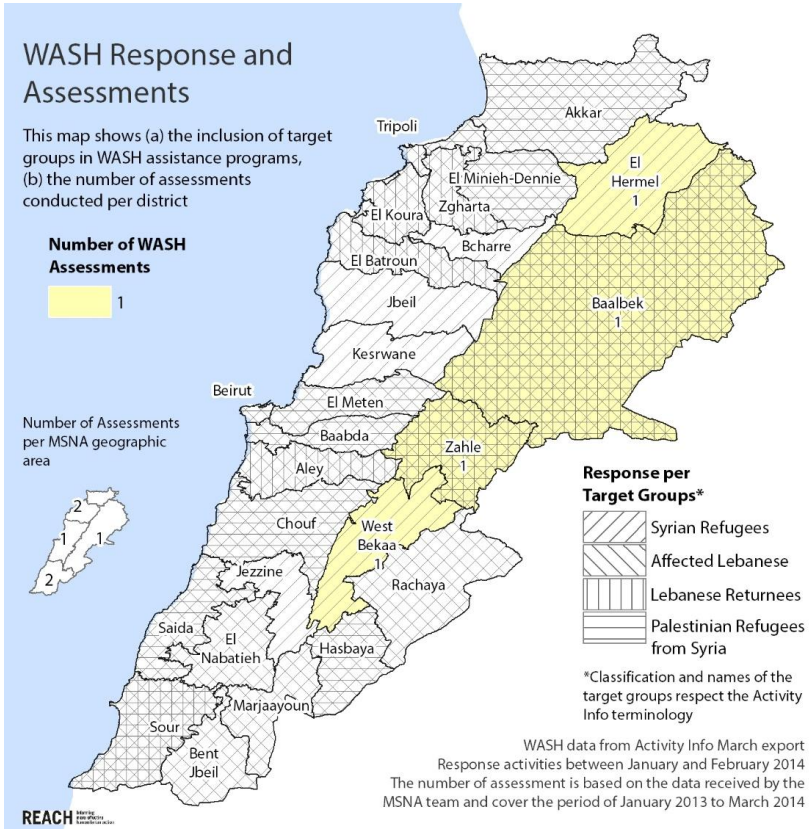
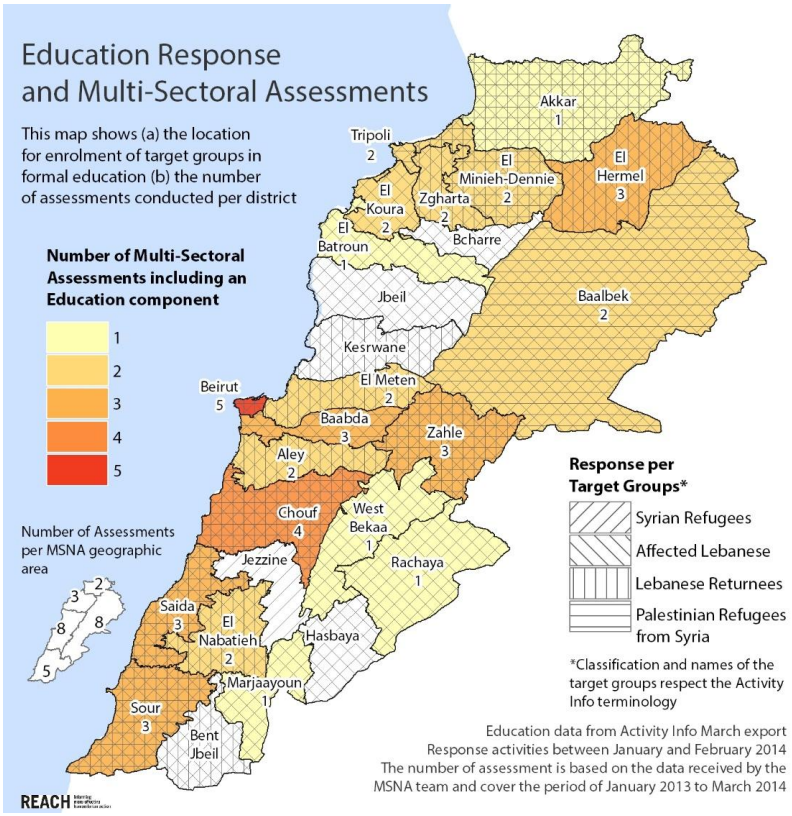


Figure [2]: WASH activities compared with locations of multi-sector assessments that include a WASH component



The following section provides an analysis of data according to theme, including a summary table of assessment coverage by target group and geographic region.

4. ANALYSIS PER THEME

4.1 Water Supply and Access

Summary of assessment findings: The available data shows that:

- Electricity outages and fuel shortages to run generators and address interruptions in the water supply is a common problem, especially in remote villages.
- A central issue to water supply and quality is the poor and aging distribution network.
- Other than the limited capacity and dubious quality of rooftop tanks, there are no additional storage solutions, which is particularly of concern in informal tented settlements (ITS), unfinished buildings, and collective shelters.
- Over 70% of households rely on the public water network, however most have to supplement this in order to meet their drinking and other water needs.
- 28% of Syrian refugees do not have access to safe water.

Water supply is a greater concern in the rural areas where water trucks do not fill household tanks as frequently

The differentiation between vulnerable local communities including Lebanese host communities and Palestinian and Syrian refugees below is somewhat misleading. The vulnerable local communities section does not focus solely on Lebanese households, but rather provides a general description on the source of the water to the community as a whole, and touches on water management issues where data and information were collected through the assessments. The Syrian refugee section, on the other hand, focuses on the supply, access, storage and quantity issues faced by the refugees.

The summary table below shows assessment coverage by geographic area and target group. In this sector, there was insufficient data of adequate quality to discern problem areas per theme.

Table [2]: Assessment coverage by geographic area and target population

	Vulnerable Local Communities (Lebanese and PRL)	Lebanese Returnees	PRS	Syrian refugees	
				Registered	Unregistered
National					
North/T+5					
Akkar					
Mt. Lebanon and Beirut					
Bekaa					
South					
Palestinian Camps					
Outside Palestinian Camps					

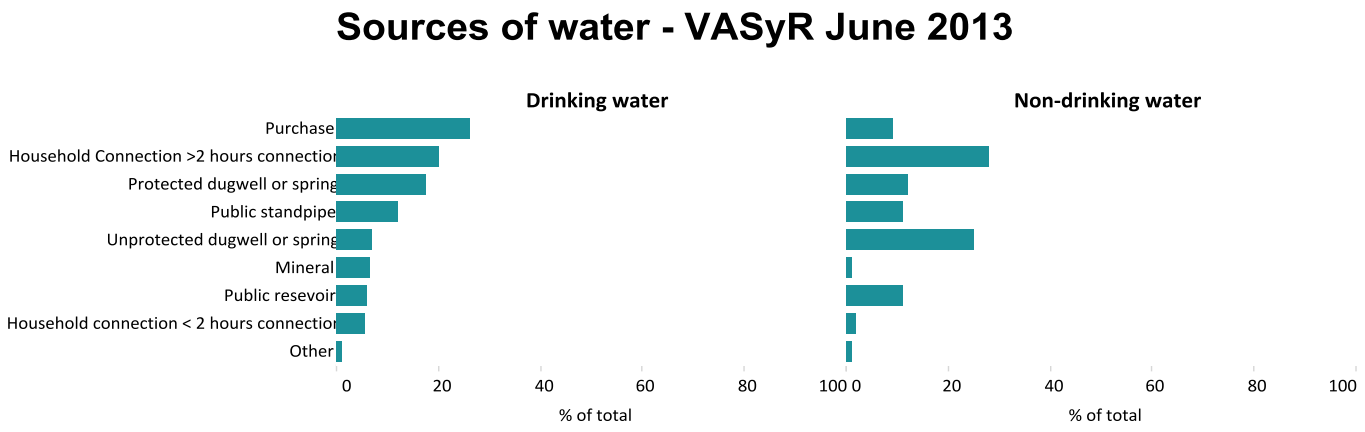
NB – Grey cells indicate that there is at least one assessment available on the specific area or target group. However, the data may not cover the situation for the entire geographic area or target group.

Syrian Refugees

National

According to the VASyR household survey of registered Syrian refugees in the Bekaa, North, Beirut, Mount Lebanon, and South Governorates, most households have access to safe drinking water. The main sources are purchased water (26% of households), household connections (20%), and public standpipes (12%). A small percentage obtains water from unprotected sources. However, 28% of all Syrian Refugee households report that access to water for all needs was reported to be insufficient. (VASyR, December 2013)

Figure [3]: Sources of water



According to the Inter-Agency Nutrition Assessment, however, only 50.48% of registered Syrian refugees in Lebanon, and only 24.31% of those in Beirut and Mount Lebanon, were using an improved drinking water supply (UNICEF, February 2014). The three main reasons for dissatisfaction about the water supply were: the bad quality of water; having to pay for water (cost), and; not enough water (quantity) for personal hygiene.(UNICEF, February 2014)

Figure [4]: Main source of water supply (UNICEF, February 2013)

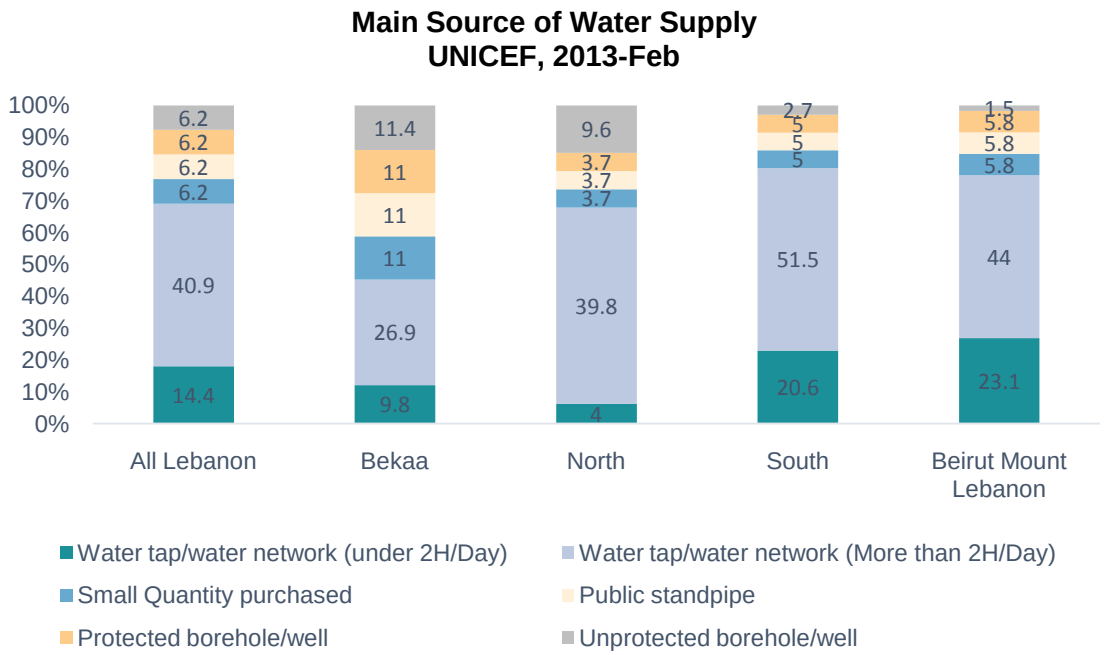
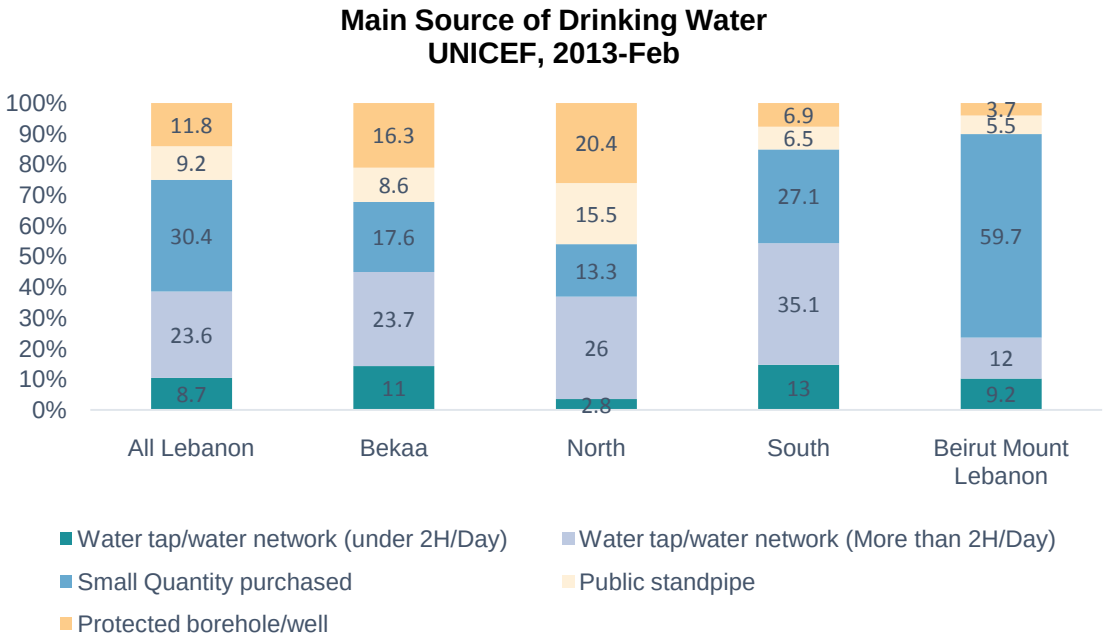


Figure [5]: Main source of drinking water (UNICEF, February 2013)



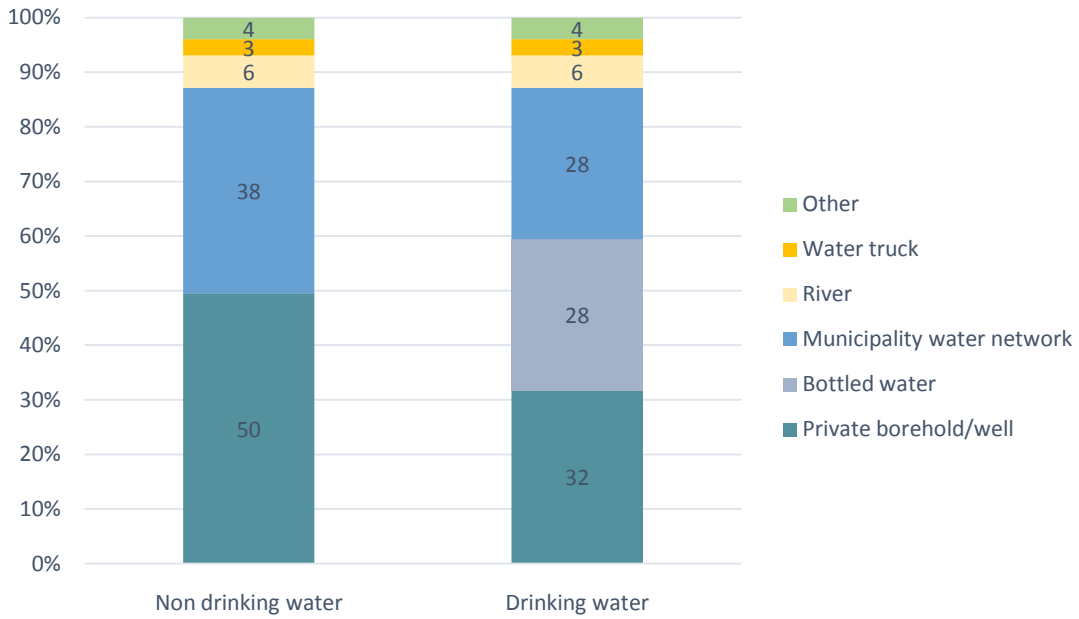
North/T+5

In the North, an assessment among 506 households by the International Committee for the Development of People (CISP) showed that the majority (55.6%) use a protected well, 44.1% use piped public networks as

their primary water source, yet 81% of households reported that their water was not suitable for drinking. (CISP, July 2013)

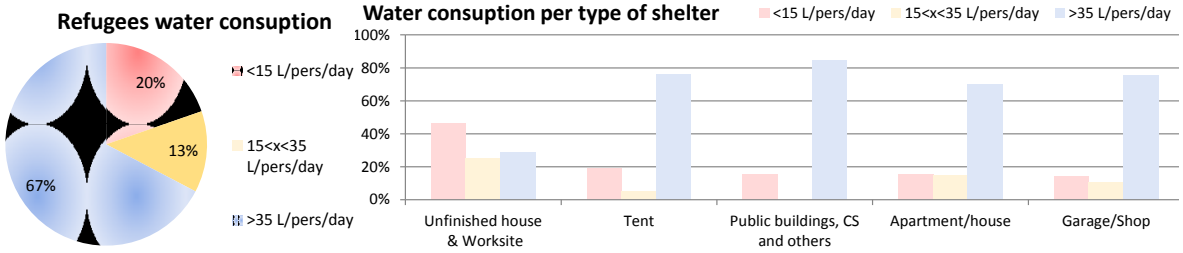
According to a May 2013 study in Minieh-Dennieh and Zgharta, 50% of households were connected to a municipality water network, 31% from private borehole, and 11% from bottled water. (Solidarités International, May 2013)

Figure [6]: Source of drinking water in T+5 area (Solidarités International, 2014-Jan)



With regard to water availability in Tripoli +5 area, Syrian refugees are consuming on average 145 litres per person per day (L/person/day). However, 33% of them consume less than 35 L/person/day (Lebanon WASH sector standards) and more importantly 20% consume less than 15 L/person/day (SPHERE standard in emergency situation).(Solidarités International, January 2014)

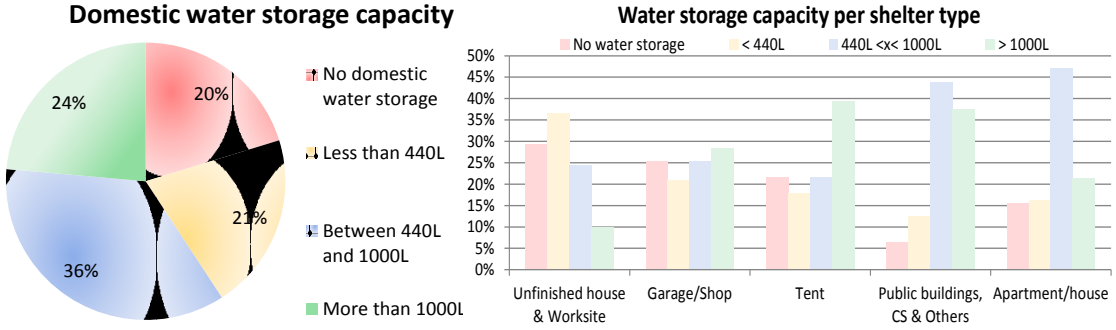
Figure [7]: Water consumption figures in T+5 area (Solidarités International, 2014-Jan)



This repartition of water consumption is not homogeneous in terms of shelter types nor in terms of geographical distribution. The most affected refugee populations are living in unfinished houses and worksites (46% consuming less than 15 L/person/day) and those living in high altitude areas such as Bcharré, Denniyeh or to a lesser extend Zgharta districts. (Solidarités International, January 2014)

In terms of water storage, even though 80% of the interviewed households had domestic water storage capacity, a total of 41% have no access to domestic water storage or to less than 440 litres per household[3].It should be noted that the refugees living in unfinished houses and worksites have the lowest access to domestic water storage, with 29% having no water storage and 37% having less than 440 litres per household. However the average household water storage container has a volume of 1150L. (Solidarités International, January 2014)

Figure [8]: Domestic water storage capacity in T+5 area (Solidarités International, January 2014)



Bekaa

According to a World Bank assessment that relied on key informant interviews from municipalities, most of the houses in Zahle-Al Maalaqa are connected to the public water network, which is periodically maintained by the Ministry of Energy and Water despite its bad condition due to age. Springs are another source of water, in addition to bottled water. (World Bank, May 2013)

Only 60% of house units in El Hermel are linked to the running water network, which is in need of maintenance asit was established in 1953. 600 artesian wells with a depth of 200 to 400 meters are being used in Hermel; each well can service 41 residents. (World Bank, May 2013)

In Qaa, only 85% of housing units are linked to the running water network, which is in need of regular maintenance. 653 artesian wells with a depth of 200 to 400 meters are being used; each well is serving nine residents. (World Bank, May 2013)

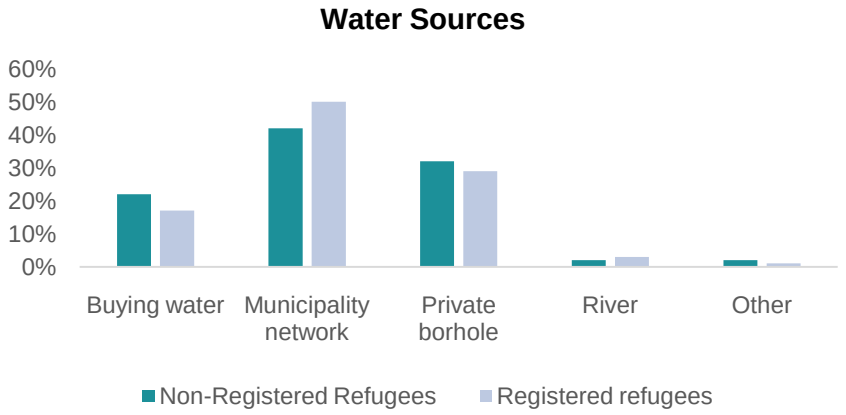
In an assessment of 431 buildings in Aarsal, the main sources of water are water trucking and communal distribution systems, both accounting for 77% of water sources. 81% of the families surveyed admitted to paying for their water, and only 45% said that the water available to them was sufficient for all personal, hygiene, and household uses. While 54% of buildings have their own water tanks, 30% of the households within those buildings reported a lack of water storage containers. Of the 46% that do not have water tanks, only 37% of them possess household water containers. (NRC, December 2013)

According to the same survey, 44% of the surveyed population uses water from water trucking, communal tanks, and wells as their drinking water source. 70% of them said that the main source was sufficient for drinking. Other sources are springs and wells, which may come from the same source as used by the communal tanks and water trucking. 78% of those surveyed perceived their water is safe to drink. A proper water chemical test should be carried out. (NRC, December 2013)

[3]440L is the storage capacity required to ensure two days autonomy to an average household of 6.3 individuals with 35 L/person/day according to Lebanon WASH Sector Standards.

A survey of 104 non-registered refugees of Tripoli and Bekaa found that all respondents have access to a water source: 23% of them are buying water and 43% are relying on the public water network if the cleanliness of this water is good. Several persons revealed being sick after drinking the water from the public water network. 32% are using private borehole where the cleanliness is not good. 2% are drinking water straight from the river.(Handicap International, August 2013)

Figure [9]: Water source (Handicap International, August 2013)



South

In El Nabatieh and Jezzine, the sources of drinking water mainly include: tap water (41%); bought mineral water (40%); and spring water (17%). Water purification is not conducted in any of the households (Swiss Solidar, September 2013). The main issue is water scarcity. All municipalities have water scarcity issues except Jbaa, Kfar Tebnit and Kfar Roummane. Refugees have to buy water for drinking to supplement other water sources, spending around USD 30 a month (LBP 45,000). This is a common problem shared by Lebanese households. 74% of households relied on the public water supply for the majority of their water needs. In urban areas, tanks are filled regularly, at least every two days, but in more remote areas the water supply is less frequent and they are able to fill their tanks only every 3-4 days, creating water scarcity. (Swiss Solidar, September 2013)

In a separate study of 713 households in Nabatyeh and Tyre, the majority (73%) of the surveyed households relied on the public water network as a source of water. However, the water network was available less than twohours per day for 63% of the households and only 10 % of the households benefited from more than two hours of water supply a day. Furthermore, very few households (4.3%) relied on private wells, 17.8% relied on water trucks and 16.6% relied on small quantities purchased. 55% of the sample reported that they do not treat the water before drinking it. (CISP, March 2013)

A similar study conducted four months later showed that in Nabatyeh, Tyre, Marjayoun and Hasbaya, 85.1% households rely on public water network. For half of the households, water is available for less than 2 hours per day. 35.1% households got more than 2 hours of waters supply. 13.1% rely on private wells, 7.3% on water trucks and 6.3% on purchasing small quantities of water. When asked, 81.4% of the sample reported that they do not treat the water before drinking it. (CISP, July 2013)

According to a January 2013 assessment, families in Tyre depend more on purchased water (57%) as a source for drinking water, while 32% of them use city water for drinking purposes. 27% of families in Tyre face obstacles for collecting sufficient safe water, which is a result of city water being shut off (11%), and at times high prices (2%) (World Vision, January 2013). For domestic use, 71% of the families use city water, 15% used well water, and 9% purchase it. (World Vision, January 2013)

The same study stated that in Saida, the main source of drinking water (95%) and water for domestic use (98%) is city water. However, 91% reported obstacles to safe water collection due to the high dependence on city water and the unreliability of the system (regular shutdowns). (World Vision, January 2013)

Mount Lebanon and Beirut

According to one survey covering Chouf, Aley, and Baabda, 59% of registered Syrian refugee respondents report no access to public water, or a supply of less than three times per week. The same report stated that UNHCR reports that 75% have access to water from a well or from the public water system. However, nearly 90% of all survey respondents purchase water.(Global Communities, November 2013)

Another assessment of registered Syrian refugees specified that in Chouf, among the 240 households interviewed, 38% are not satisfied with the quantity of water received. In this assessment, however, only 37% of the interviewed households stated that they have to buy water from trucks or purchase bottled water, mainly because they do not receive enough water through the public water systems (local boreholes and Barouk spring sources), adding an important burden on families with very limited cash resources. Those buying water from trucks spend an average of LBP 60,000 per month. Families staying in rented houses have to pay a yearly fee of LBP 235,000 (approx. LBP 90,000 per month) to be connected to the public water network. Around 69% of the interviewed families live in a rented house in the assessed areas. (CARE International-DPNA-ACA, October 2013)

The same assessment found that a full quarter (25%) of the families living in the collective centres and/or informal settlements face a storage problem. Families staying in rented houses can be considered to have a sufficient storage capacity (they use mainly 1000-2000 liter PVC tanks). **(**CARE International-DPNA-ACA, October 2013)

There was no specific data available during the MSNA process for Akkar.

<u>Vulnerable local communities including Lebanese host communities and Palestinians:</u>

National

For children, the majority of Lebanese schools have functioning water facilities readily accessible to students. According to the Joint Education Needs Assessment (JENA) survey, 93% of Lebanese schools have safe access to tap water reachable within less than tenminutes. Schools that did not possess a suitable water source were all found in overcrowded neighbourhoods outside the main cities (such as Halba-Akkar and Chouiefat-Mount Lebanon). Water was deemed drinkable at 91% of schools investigated; however, further investigation is required to test water for pollutants and waste. Many students bring their own bottles from home. The issue of water accessibility pales in comparison with more sensitive issues facing the Lebanese Education System (LES), particularly unhygienic latrines and washing facilities, which require urgent attention from the Ministry of Education and Higher Education (MEHE) and civil society (JENA, May 2013). The Norwegian Refugee Council (NRC)/UNHCR assessment also found the vast majority of schools had access to drinking water. However, it differed in its assessments of sanitation facilities, as it found working toilets for students are available in all the assessed schools and most of them are suitable for the student capacity.(NRC/UNHCR, June 2013)

North/T+5

According to an August 2013 assessment done by Solidarités International, Minieh and Dennieh, despite constituting a single district, are very different zones. Minieh is a coastal area with on average a very high water table and numerous shallow boreholes that tend to dry or have their flow reduced in the summer. Dennieh is a mountainous area, with an average deep water table requiring boreholes to reach a depth of

400metres in some cases, but with low impact of the summer season on water production. (Solidarités International, August 2013)

The use of underground tanks has been seen to be less common than initially anticipated by Solidarités International. Usually boosting pumps are directly tapped on the municipal network to feed the elevated tanks, generating pressure and flow issues in the network. More than the fuel shortage, the mismanagement of the submersible pumps in the municipal boreholes lead to systems breakdown and lack of water (typically electrical, run-dry, overflowing protections being by-passed leading to pumps being damaged). (Solidarités International, August 2013)

Water for the Tripoli, El Khoura, and El Batroun Districts is provided by the North Lebanon Water Establishment. According to an Oxfam assessment that included meetings with municipal officials, aid organisations, household interviews, focus group discussions and observations, water in the North is in most cases potable due to their fully functioning and sophisticated treatment plant. Water is delivered via pressurised distribution network after it has undergone full treatment and final chlorination. Issues were linked with shortage of electricity supply to pump water from the basement tanks to the roof tanks (Oxfam, February 2013). However, WASH Working Group members have observed that not all water is fully treated, and not all water is delivered via pressurised distribution. Disruptions in electrical supply will depressurise pipes, which can cause contamination through the distribution network.

Mount Lebanon and Beirut

In Chouf, 100% of the six municipalities interviewed by CARE International in September 2013 rely on the public water supply system (Barouk spring). Each municipality has at least one functional borehole at approximately 300 meters depth. Boreholes are used when the public water system does not provide enough water. Water distribution is ensured through a piped network connected to houses. At the house level, water is commonly stored in roof tanks (one tank of 1000-2000 Lin each house) and then distributed inside the house by gravity. (CARE International-DPNA-ACA, October 2013)

There is not a single village/town in the assessed areas of Chouf that receives an uninterrupted residential supply of water, especially in summer when water from the Barouk spring is mainly used for irrigation of apple trees. Most municipalities receive public water on an average of two-three days per week, six hours per day in the summer, while this is better during winter (CARE International-DPNA-ACA, October 2013). In a separate study of Chouf, Aley, and Baabda, 57% of Lebanese respondents to the Global Communities' survey report that the government's water supply varies between 1-12 hours per day. (Global Communities, November 2013)

In Chouf, all municipalities identified water as one of their urgent needs. Due to limited municipality capacity, very few measures were taken to deal with the substantial population increase and new pressure on water supply and usage. When asked about the measures taken to cope with the rapid increase in the population numbers, most of the interviewed municipalities answered that they were not able to take substantial measures due to their limited capacities, mainly financial. The six municipalities need: new boreholes; the means to equip and connect the existing non-functional boreholes to the water network; resources to upgrade the existing boreholes; generators, and; support for fuel provision. However, municipal response may have been limited based on who they perceived was the audience for the assessment. Depending on the perceived funding potential of the organisation conducting the interview, the municipality may provide a shortlist of needs to match what they think the organisation may be able to provide. Consequently, there may be additional capacity constraints. For example, it is surprising that aging distribution networks was not included in the list of municipal needs, as cracks in distribution pipes can cause problems with supply and water contamination.

In addition, regular public electricity shortages and the limited resources/capacities of the municipalities make it very difficult to meet the water demand for both refugees and host communities. According to the municipalities, with the presence of Syrian refugees (18% average population increase in the assessed areas), five communities are still not fully satisfied with the quantity of water received (CARE International-DPNA-ACA, October 2013). However, this data raises questions regarding what the refugees' expectation is regarding

water quantity. It is not clear whether they were receiving less than the UNHCR 35 L/person/day standard, or if they were receiving the standard amount or more but did not feel that the standard was sufficient.

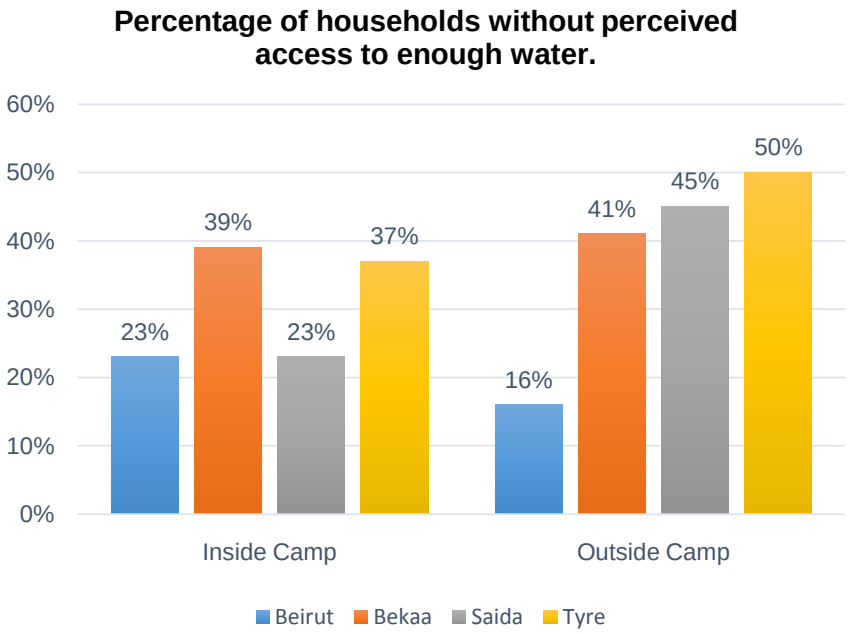
There was no specific data available during the MSNA process for Akkar, Bekaa, and the South.

Palestinian refugees from Syria:

National

According to an UNWRA multi-sectoral household survey of registered PRS in Lebanon, about one third of 848 surveyed households (34%) did not have access to sufficient water for drinking, cooking, washing and toilet purposes. The worst conditions were found in households in Tyre (outside the camps),where half of the surveyed households reported not having access to enough water. Comparatively, of the households outside of the camps in Beirut, 16% reported inadequate access to water. The survey did not include information, however, on the volume of water each household used. (UNRWA, March 2014)

Figure [10]: Percentage of households who responded that they did not have access to enough water. (UNRWA, 2014-March)



The same survey also identified that the main sources of drinking and cooking water were either purchased water or household tap water (with more than two hours supply per day). Note that in the Beirut area (inside and outside of the camps) and in Bekaa inside the camp, households were not using the local water network for drinking or cooking. Households inside the camps in Saida had the lowest reliance on purchased water (22%). (UNRWA, March 2014)

Overall, more than half of the surveyed households (56%) were purchasing drinking water (bottled water) and 50% were purchasing cooking water (from the municipality or other sources). (UNRWA, March 2014)

There was no specific data available during the MSNA process for any of the regions: North/T+5, Akkar, Bekaa, the South, and Mount Lebanon and Beirut.

Lebanese returnees

National

Only one study specifically looked at Lebanese returnees. That study, which looked at 3,206 households, aggregated nationwide and stated that 22% of households across the country said they had insufficient access to water, for either personal or business use (IOM-HRC, November 2013).It is unclear how much water they would have perceived as adequate.

There was no specific data available during the MSNA process for any of the regions: North/T+5, Akkar, Bekaa, the South, and Mount Lebanon and Beirut.

4.2 Water Quality

Summary of assessment findings:

Water contamination happens at multiple levels:

- Agricultural runoff and sewage are contaminating the water supply. The extent and type of contamination varies depending on rural (agricultural) versus urban (sewage) areas.
- Further contamination is occurring within the reservoirs due to lack of maintenance and contamination protection procedures.
- The cracks in aging water distribution networks and old storage tanks are further points of contamination.
-

Water treatment occurs at a municipal level, and is generally unable to deal with the source contamination issues.

Despite the multitude of ways water is contaminated within the water system supply chain, very few Syrian refugees filter or treat the water before drinking it. This is could be due to a lack of resources and/or knowledge of households to apply their own in-home water treatment.

The summary table below shows assessment coverage by geographic area and target group. In this sector, there was insufficient data of adequate quality to discern problem areas per theme.

Table [3]: Assessment coverage by geographic area and target population

	Vulnerable Local Communities (Lebanese and PRL)	Lebanese Returnees	PRS	Syrian refugees	
				Registered	Unregistered
National					
North/T+5					
Akkar					
Mt. Lebanon and Beirut					
Bekaa					
South					
Palestinian Camps					
Outside Palestinian Camps					

Legend

	Section not applicable		**Data available**

NB – Grey cells indicate that there is at least one assessment available on the specific area or target group. However, the data may not cover the situation for the entire geographic area or target group.

Syrian Refugees:

North/T+5

In Minieh Dennieh and Zgharta districts, an average of 63% of the boreholes and municipality network outlets tested by Solidarités International proved to be contaminated with faecal coliforms. The main issue affecting

water quality was the low quality and poor cleanliness of the reservoirs. They are not maintained regularly and most of them are not properly covered and protected from external sources of contamination. (Solidarités International, January 2014)

With regard to water treatment, 16% of the refugee population is treating their drinking water, 8% by boiling it and 7% by ceramic filtration. The reason reported for treating the water is disease prevention in 70% of the cases. Water treatment is particularly observed in informal tented settlements (ITS)[4] and public buildings and collective shelters (CS), where respectively 32% and 31% of their occupants treat their water, mainly using ceramic filters. This can be explained as an impact of the massive water filter distributions carried out in ITS and CS during the 2013 humanitarian response. However, in unfinished houses, worksites, garages and shops less than 10% of the refugee population is treating their drinking water. (Solidarités International, January 2014)

The majority of households assessed in a February 2013 report of Tripoli and El Khoura Districts drank the tap water without further treatment. As mentioned previously, water for the Tripoli and El Khoura Districts is potable due to the treatment plant used by the North Lebanon Water Establishment. All water has undergone full treatment and final chlorination (Oxfam, February 2013). However, water quality may still be compromised without a clear understanding of the status of the distribution network or water samples at the tap to verify water quality.

Mount Lebanon and Beirut

In Chouf, Aley, and Baabda, the majority of Lebanese and Syrians surveyed in October 2013 reported poor water taste and quality. 40% of 209 Syrian refugee survey respondents reported an increase of stomach ailments in their family over the past six months. Nearly all Syrian refugees interviewed at ITS and collective centres reported limited opportunities to purify water prior to using it, and at least one family member was suffering from stomach ailments. The majority boil water or use water cloths to purify water. When people who do not purify their water were asked why, they stated that they had no other option. (Global Communities, November 2013)

There was no specific data available during the MSNA process for Akkar, Bekaa, and the South.

<u>Vulnerable local communities including Lebanese host communities and Palestinians</u>

National

For a handful of assessed Lebanese communities, water quality is poor due to increased demand and lack of waste management. A World Bank report on Zahle-Al Maalaqa (Bekaa Governorate) stated, “The presence of the Syrian Refugees around the agricultural lands has been causing pollution of potable and irrigation water.” (World Bank, May 2013) There seems to be a biased perception that the Syrian refugees are a major contributor to water quality issues. Syrian refugees are blamed for adding problems to the sewage network by disposing waste and causing pipe blockages, resulting in the breakdown of filters and generators. They have also been blamed for increasing environmental pollution because of the random disposal of solid wastes in the springs, river canals and roads, in addition to the random disposal of sewage. Drinking water and other water systems (the Bardawni River and natural springs) are being polluted, creating a huge risk for diseases, insects, mosquitoes and bad odours (World Bank, May 2013). However, given the aging distribution networks and

[4]The term currently used is informal settlement (IS), however where the data source report uses the term “ITS” we have kept the terminology consistent.

sanitation infrastructures outlined below, and multiple sources of water contamination, poor water quality cannot be blamed on any one group within Lebanon.

There was no additional specific data available during the MSNA process for the North/T+5, Akkar, Bekaa, South and Mount Lebanon and Beirut.

There was no specific data available during the MSNA process for PRS or Lebanese returnees

4.3 Sanitation

Summary of assessment findings:

Vulnerable Local Communities

- Municipalities rely mainly on a public sewerage system, although some still have pit latrines. The percentage of host communities that rely on the public system versus pit latrines varies by municipality. A cross-governorate comparison is not possible, due to a lack of data.
- The cost of emptying a pit for the households is 80 USD, though this cost can be reduced to 20 USD if the municipality has the specialised equipment to provide this service.

Syrian Refugees

- The majority of households (61%) had access to improved latrines. A third of Syrian refugee households use traditional pit latrines and 7% did not have access to toilet facilities and used the open field or springs.
- The lack of adequate sanitation facilities is a concern, especially in buildings and settlements that were not originally intended for living spaces, such as public school buildings and farms.
- In 'informal' structures, wastewater is not properly evacuated: some people dig holes in the walls to facilitate water evacuation, and holes at the entrance of the building, thereby creating pools of stagnant wastewater.
- Poor sewage disposal has resulted in water source pollution, agricultural pollution, and vector control problems. Additional public health issues are a likely consequence (see Health chapter for details).

The summary table below shows assessment coverage by geographic area and target group. In this sector, there was insufficient data of adequate quality to discern problem areas per theme.

Table [4]: Assessment coverage by geographic area and target population

	Vulnerable Local Communities (Lebanese and PRL)	Lebanese Returnees	PRS	Syrian refugees	
				Registered	Unregistered
National					
North/T+5					
Akkar					
Mt. Lebanon and Beirut					
Bekaa					
South					
Palestinian Camps					
Outside Palestinian Camps					

Legend

	Section not applicable		**Data available**

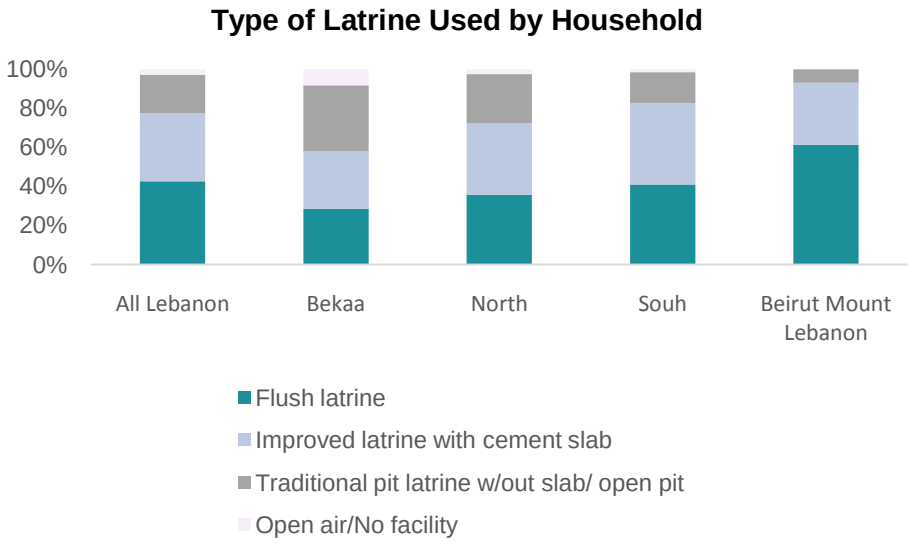
NB – Grey cells indicate that there is at least one assessment available on the specific area or target group. However, the data may not cover the situation for the entire geographic area or target group.

Syrian refugees registered or awaiting registration

National

The VASyR survey of registered Syrian refugees stated that the majority of households (61%) had access to improved latrines (though type was not specified). A third of households used traditional pit latrines and 7% did not have access to toilet facilities and used the open field or springs. Just over 10% of interviewees reported sharing bathroom and/or toilet facilities with more than 15 people (VASyR, December 2013). However, the Interagency Nutrition Survey shows that 77.5% of households used an improved excreta disposal facility (34.9% using an improved latrine with cement slab, and 42.6% having a flush toilet); 14% of the households used a shared family toilet; and 16.4% of the households used a communal toilet. (UNICEF, February 2014)

Figure [11]: Type of latrine used by household (UNICEF, February 2014)



Syrian refugees (not specified whether registered or unregistered)

North/T+5

In Minieh-Dennieh and Zgharta, the majority of families living in houses usually have access to latrines in their dwelling, but these are not always connected to the sewage system. Latrines are often connected to a simple pit that needs to be emptied on a regular basis, which is costly. Although more than 94.6% of the households interviewed stated that they were using toilets as opposed to open defecation, access to sanitation facilities is inadequate, with more than 47% of the households reporting having to share the same toilet with more than 20 people.[5] In addition to the number of people per toilet, according to the surveyors' observations half of the toilets assessed were not functioning properly and many of them were not cleaned, smelled and attracted flies. Around 54% of the toilets visited were lacking privacy (absence of lock or doors), especially in collective shelters and tented settlements. (Solidarités International, May 2013)

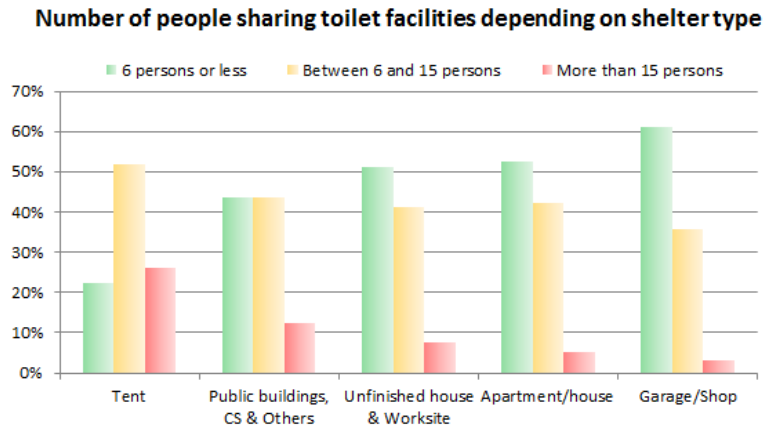
In Tripoli+5 area, over the whole surveyed population, 58% of the households had access to functional and clean toilet facilities. However, this percentage varies a lot depending on the type of shelter, the worst ones being the tents (25%) and unfinished houses and worksites (29%). In terms of showering facilities, only 23% of the households surveyed had access to a bathroom, the remaining using toilets, kitchens or "other" for bathing. With regard to the number of people sharing sanitation facilities, 8% of toilet facilities are used by more than 15

[5] Inadequacy was determined by the original assessment based on SPHERE standards

persons, and 41% by 6-15 persons. 6% of shower facilities (if any) are used by more than 15 persons, and 42% by 6-15 persons. It should be noted that the Lebanon WASH Sector standard is 15 persons per sanitation facility. (Solidarités International, January 2014)

The worst case is in ITS, where 26% of the facilities are shared by more than 15 individuals.

Figure [12]: People sharing toilet facilities in T+5 area (Solidarités International, January 2014)



The vast majority of shelters in Tripoli and El Khoura districts had toilets within easy access of the accommodation and these were connected to the mains sewerage system. In many instances the toilet doubled as a bathing room, and while many families were not used to this in Syria they felt it was not an issue for them in Lebanon. (Oxfam, February 2013)

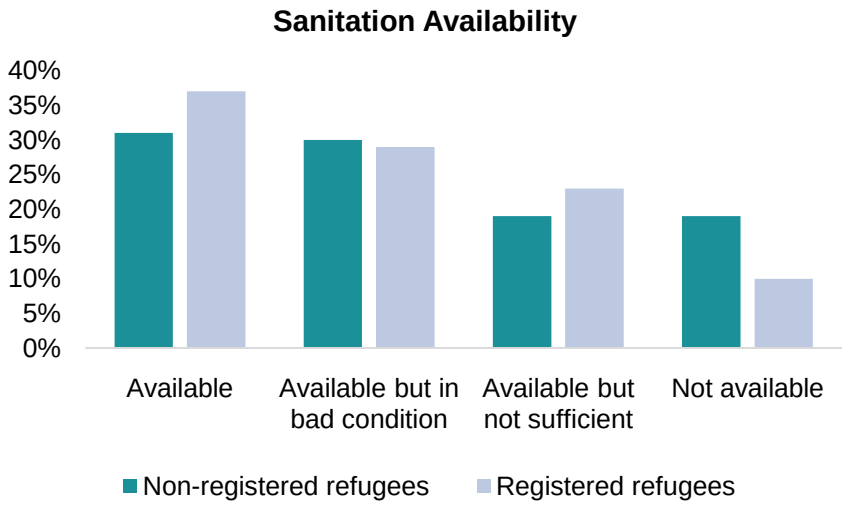
Bekaa

Around 90% of the houses in the Municipality of Zahle–Al Maalaqa are connected to the sewage network, which is periodically maintained by the Municipal Council. Sewage is discharged into the Bardawni River, causing severe pollution. Houses that are not connected to the sewage network dispose of sewage in primitive sewage holes, which are later cleaned by special tanks. As a result of the uncontrolled sewage disposal, the community is witnessing an increase in skin diseases and pollution, besides the spread of bad odours and mosquitoes. (World Bank, May 2013)

Of the 431 buildings assessed in Aarsal, 74% of residents indicated they had access to a toilet, however 37% of those access toilets by sharing with another building. Only 10% have private functional toilets. An additional 28% of the buildings have shared functional toilets, bringing the total of surveyed buildings with functional toilets to 38%. A further 16% indicated that the buildings they lived in had toilets, but were not functional(NRC, December 2013).Most interviewees stated that there is one toilet per building, meaning more than 20 people share each toilet. Of the buildings that had toilets, the majority were connected to septic tanks. Surprisingly, however, it was indicated by the interviewees that two-thirds of the buildings were not connected to drainage systems, and 82% of them are functional. (NRC, 2013-Dec)

According to the survey of non-registered refugees in Tripoli and Bekaa, the majority of the households renting or hosted have access to toilets, while there is a current lack of sanitation for households living in tented settlements. As most of the time the shelter is shared with several families, sanitation facilities are shared between a large number of people. (Handicap International, August 2013)

Figure [13]: Sanitation availability and condition (Handicap International, August 2013)



South

In a separate assessment of El Nabatieh and Jezzine, the majority of households were using private latrines in their houses (75%), however 25% of private latrines were damaged. Of those not using private latrines, 12% were sharing latrine facilities and 13% used open defecation (mainly those in tented shelters). The average number of people sharing a toilet was eight, and 7% of the sample (three households) had more than 15 people using the same latrine. Human waste is evacuated through septic tank or public sewage system. (Swiss Solidar, September 2013)

Table [5]: Bathroom facilities in surveyed households in El Nabatieh and Jezzine (Swiss Solidar, August 2013)

Bathroom facilities	**No of HHs - YES**	**% of HHs - YES**
Is there a water tap in service beside the WC?	31	74%
Is there a wash basin in service?	23	55%
Is there a shower mixer in service?	31	74%
Tiles on the floor in bathroom?	27	64%
Door in the bathroom?	31	74%
Window in the bathroom?	28	67%
Water heater	24	57%

In Nabatyeh and Tyre, when asked about the place of defecation, 62.8% of households reported owning a private toilet which is in a good state, 27% reported owning a private toilet thatwas in a bad state, 10.5% reported using a common toilet and the remaining 1.2% reported using open defecation space(CISP, March 2013). Four months later, in an assessment of Nabatyeh, Tyre, Marjayoun and Hasbaya, the access and quality of toilets had decreased: 58.3% of households reported owning a private toilet which is in good state, 31.6% reported owning a private toilet but was in a bad state, 10.4% reported using a common toilet and the remaining 1.3% use open defecation. (CISP, July 2013)

In June, the International Organization for Migration (IOM) conducted site visits to five locations in the Saida and Sarafand region of Southern Lebanon. Based on their assessment, WASH facilities in three of the five assessed areas were inadequate for the number of residents of the settlement. Between 70 and 400 people were using a single latrine/toilet block, however the assessment report does not specify how many latrines are in a toilet block in order to accurately determine the number of users per latrine. Latrines in two locations were

dug by residents and were structurally unsound. Residents in two locations were afraid of using the latrines after dark due to inadequate lighting, protection concerns, and the presence of snakes. (IOM, June 2013)

Mount Lebanon and Beirut

In Chouf, Aley, and Baabda, collective centres and ITS are particularly vulnerable to poor sanitation and infrastructure. The lack of adequate sanitation facilities is a concern for buildings and settlements that were not originally intended for living spaces, such as public school buildings and farms. Collective centres that once served as schools now host multiple families, requiring greater use of sanitation and washing facilities. ITS lack latrines and electricity, so women in shared facilities are particularly vulnerable. Collective centres also present risks, with shared toilet and shower facilities that are unmonitored by security. Open sewage and water drain onto floors. In some case, open urination occurs in the hallways.(Global Communities, November 2013)

In Chouf, at least 30% of the interviewed households are not satisfied with the latrine facilities they have, mostly because the number of latrines is insufficient for the number of people living in the household, and/or due to the relative cost of emptying a pit latrine. For an average of two families found to be living in one apartment, there is one latrine, which follows the standard of one latrine to 15 people. In addition, 21% of the households have to pay to empty their pit latrine (CARE International-DPNA-ACA, October 2013). Some of the assessments identified a cost, but based on key informant interviews these identified costs are unrealistic and need greater investigation.

There was no specific data available during the MSNA process for Akkar.

<u>Vulnerable local communities including Lebanese Host communities and Palestinians:</u>

North/T+5

A common feature in the North is the collection, but not treatment, of sewage that is then discharged into the environment. In Tripoli and El Khoura the districts have sewerage systems. However, in the absence of a proper sewage treatment plant the raw sewage is discharged into the sea (Oxfam, February 2013). In Qaa and El Hermel, the existing sewage system relies on sewage tanks with no additional treatment plant, and the municipal councils in the communities are unable to discharge the total amount of sewage produced in the communities, especially given the increased numbers of refugees. In El Hermel, the influx of Syrian refugees is considered responsible for an increase of 13% in the levels of black water produced (World Bank, May 2013). In Qaa, the absence of a treatment network and plant aggravates the situation especially in agricultural fields (100 metres to 10 kilometres away from the town) where 92.5 % of Syrian refugees are living in tents. In this case the influx of Syrian refugees is considered responsible for a 50% rise in the amount of black water produced. 1,200 tanks are being filled regularly in the town in addition to 450 primitive tanks in agricultural fields. (World Bank, May 2013)

Mount Lebanon and Beirut

In the districts of Chouf, Aley, and Baabda, the assessed municipalities rely mainly on a public sewerage system, although in some areas latrines are still connected to a simple single pit. In Chouf, approximately 65% of the houses are connected to the public sewerage system while 35% are connected to small single pits, which need to be emptied on a regular basis. In the districts of Chouf, Aley, and Baabda the cost of emptying a pit for the households is 80 USD (Global Communities, November 2013; CARE International-DPNA-ACA, October 2013). In Chouf, two of the assessed municipalities own a special tanker; this decreases the cost of empting one pit to 20 USD. (CARE International-DPNA-ACA, October 2013)

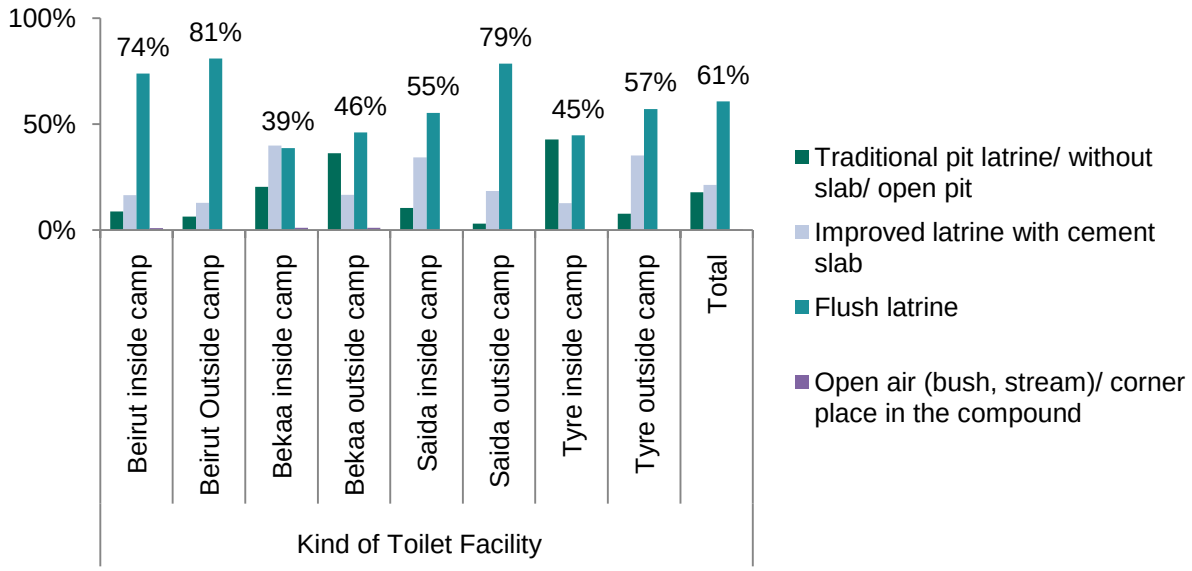
There was no specific data available during the MSNA process for the Akkar, Bekaa, and the South.

Palestinian Refugees from Syria:

National

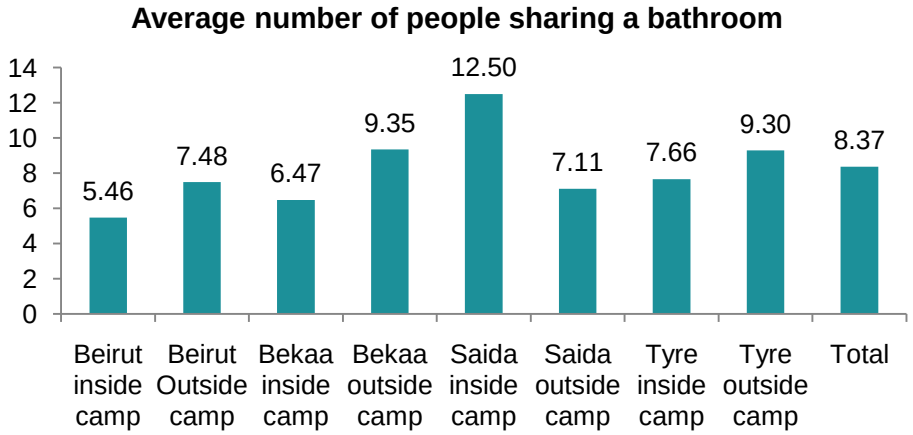
According to the UNWRA survey of 848 households, 82% of households had access to improved latrines either with a flushing system or with a cement slab, while the worst bathroom facilities were found in Tyre, where a sizeable 43% of households inside the camps relied on traditional pit latrines without a slab.(UNRWA, March 2014)

Figure [14]: Percentage of PRS with access to improved latrines (UNRWA, 2014-March)



The UNRWA survey also noted that an average of eight people shared one bathroom, and close to 10% of surveyed households reported sharing bathroom and/or toilet facilities with more than 15 people. The number of people sharing a bathroom inside the camps in Saida was the highest with an average of 12.5 people sharing one bathroom.(UNRWA, March 2014)

Figure [15}: Average number of people sharing a bathroom (UNRWA, 2014-March)



There was no specific data available during the MSNA process for the North/T+5, Akkar, Bekaa, South and Mount Lebanon and Beirut or broken down by Palestinian camps versus outside Palestinian camps.

There was no specific data available during the MSNA process for Lebanese returnees

4.4 Hygiene

Summary of assessment findings:

- Syrian refugees generally are knowledgeable of and practice good hygiene when they have access to water and hygiene products. They may be less knowledgeable about the causes of diarrhoea and other disease spread through poor hygiene.
- Generally, the refugees have insufficient access to hygiene products, lack of access to bathing areas, and limited access to water, leading to inadequate hygiene practices.
- Overcrowding, substandard housing, and housing located near open waste disposal sites has led to the presence of rodents and insects.
- Many refugees suffer from poor-hygiene related illnesses.

The summary table below shows assessment coverage by geographic area and target group. In this sector, there was insufficient data of adequate quality to discern problem areas per theme.

Table [6]: Assessment coverage by geographic area and target population

	Vulnerable Local Communities (Lebanese and PRL)	Lebanese Returnees	PRS	Syrian refugees	
				Registered	Unregistered
National					
North/T+5					
Akkar					
Mt. Lebanon and Beirut					
Bekaa					
South					
Palestinian Camps					
Outside Palestinian Camps					

Legend

	Section not applicable		**Data available**

NB – Grey cells indicate that there is at least one assessment available on the specific area or target group. However, the data may not cover the situation for the entire geographic area or target group.

Syrian Refugees:

National

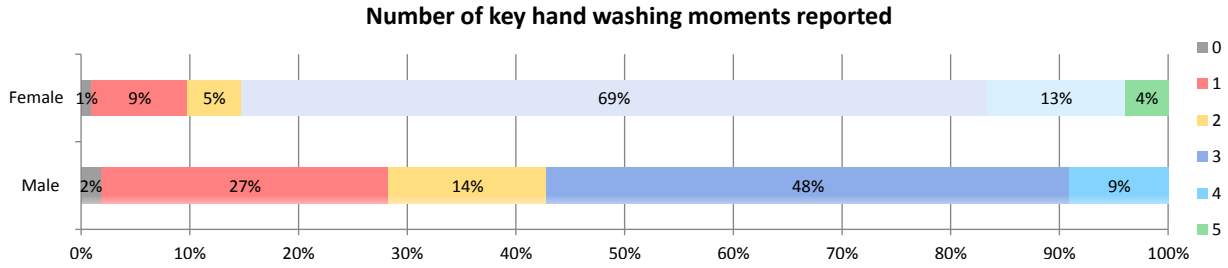
Unsurprisingly, the results of a national study of Syrian refugees noted that families awaiting registration generally had less access to hygiene facilities than those who had been registered for over six months. (VASyR, December 2013)

North/T+5

According to a May 2013 report, households of registered refugees interviewed in Zgharta and Minieh-Dennieh generally had a good knowledge of hygiene practices and more than 85% of them stated that they were using soap to wash their hands (Solidarités International, May 2013).In a later assessment carried in January 2014 in

the Tripoli +5 districts, when asked about hand-washing practices with an open question, 85% of the women mentioned at least three of the five key moments[6] and 72% of the men mentioned at least two of the four key moments[7]. (Solidarités International, January 2014)

Figure [16]: Hand washing practices in T+5 area (Solidarités International, January 2014)



Although many of the households interviewed in the February 2013 assessment of Tripoli and El Khoura had yet to receive substantial assistance, there was soap for hand washing and laundry purposes. Due to the limited assistance given in these areas and the lack of income generation opportunities, refugees identified a need for some WASH and gender-related non-food items (NFI) to maintain basic personal hygiene and dignity (Oxfam, February 2013). Nevertheless, the level of hygiene in most shelters was high, even for those living in poor shelter conditions. In general, there are no WASH-related diseases within the selected locations. (Oxfam, February 2013)

Bekaa

The Aarsal assessment found that 79% of buildings do not have hand-washing facilities near toilets and 86% do not have showers. (NRC, December 2013)

South

In a July 2013 study of Nabatyeh and Tyre households, around 87% of houses were deemed to have a satisfactory hygienic situation, including bathing facilities and overall home cleanliness. However, around 40% of households reported having problems with the presence of rodents and insects, which is most likely due to the fact that nearly 50.5% of the houses were located near an open waste disposal site. The majority of respondents (97%) have soap at home and used it to wash their hands before handling food and after defecation (CISP, March 2013). However, four months later in a similar assessment of Nabatyeh, Tyre, Marjayoun and Hasbaya, only 68.6% had soap and home, though they did use it to wash their hands before handling food and after defecation. (CISP, July 2013)

The IOM assessments in Saida and Sarafand found that washing facilities were non-existent in four of the five assessed locations where residents were washing in their rooms for privacy. Few families had buckets/containers for water storage. Refugees urgently need soap and cleaning products. In one location, each room had a built-in latrine, however it was located in close proximity to the washing skinks and cooking facilities. Poor personal hygiene has resulted in scabies outbreaks in two locations. Residents of all sites require improved access to water. (IOM, June 2013)

[6] The five hand washing key moments are: after defecating, before cooking, before eating, after cleaning child's bottom and before breastfeeding.
[7] For men washing hands before breastfeeding is disregarded.

Mount Lebanon and Beirut

According to an ACTED hygiene program evaluation, 63% of the beneficiaries who received a hygiene kit stated not having attended a hygiene promotion session, and 81% of the respondents showed no interest in attending any additional session. This reflects the fact that the objective/content of the hygiene promotion session was not clear for the majority of beneficiaries, as all recipients of NFIs had sat for an HP session. However, of those who showed an interest in attending additional hygiene promotion sessions, the majority showed interest in child hygiene and personal hygiene issues. The majority of the beneficiaries still believe that germs or unclean food are the main causes of diarrhoea. A slightly larger percentage (3% more) of beneficiaries acknowledge the fact that open defecation and unclean objects cause diarrhoea after the hygiene promotion sessions were held. The percentage of respondants who found that access to clean water was the hardest hygiene practice to adopt has increased by 11%, coupled with a decrease of 18% in the percentage of respondents who found the use of latrines to be the hardest hygiene practice to adopt.The same percentage of respondants stated that the lack of means/resources is the main obstacle of adopting better hygiene practices. (ACTED, January 2014)

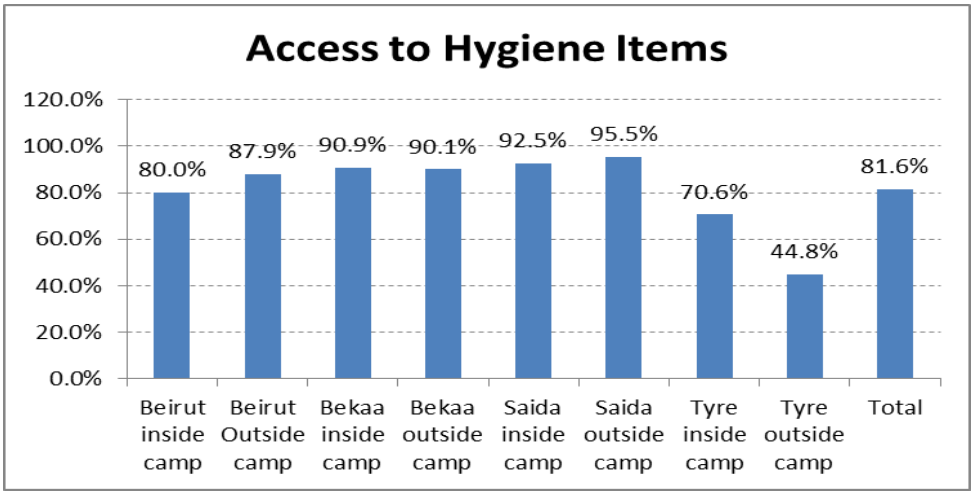
There was no specific data available during the MSNA process for Akkar.

<u>Palestinian Refugees from Syria:</u>

National

On average, 82% of 848 households surveyed by UNRWA reported having access to hygiene items. The lowest percentage of access was reported outside the Tyre camps (nearly 45%), while the highest was outside the Saida camps (96%).(UNRWA, March 2014)

Figure [17]: Percentage of households with access to hygiene items. (UNRWA, March 2014)



There was no specific data available during the MSNA process for the North/T+5, Akkar, Bekaa, South and Mount Lebanon and Beirut or broken down by Palestinian camps versus outside Palestinian camps.

There was no specific data available during the MSNA process for vulnerable local communities including Lebanese Host communities and Palestinians or Lebanese returnees

4.5 Solid Waste Management

Summary of assessment findings:

- Municipalities are responsible for collecting solid waste, and most villages have municipal waste management that is collected at most daily, at least weekly.
- A small percentage of municipalities use a contractor for collection.
- The majority of municipalities do not have a recycling system, nor do they take fees.
- Waste "treatment" frequently involves burning the waste.
- Illegal dumping and open burning of solid waste are common where most towns or cities operate open dumps within their jurisdictions.
- Lebanon's municipalities are highly dependent on central government transfers, have a weak local revenue base, and have a backlog of investment needs that far exceed available resources.
- The presence of the refugees increases the amount of solid waste needing to be collected and is negatively impacting the municipal budgets, however it is also creating more jobs.
- The cost to remove waste varies greatly (from USD13 to USD100 per tonne)
- Data collected did not show a significant difference between solid waste collection between refugees and Lebanese. However, based on information regarding resources in the informal settlements, it seems likely that solid waste management would also be an issue.

The summary table below shows assessment coverage by geographic area and target group. In this sector, there was insufficient data of adequate quality to discern problem areas per theme.

Table [6]: Assessment coverage by geographic area and target population

	Vulnerable Local Communities (Lebanese and PRL)	Lebanese Returnees	PRS	Syrian refugees	
				Registered	Unregistered
National					
North/T+5					
Akkar					
Mt. Lebanon and Beirut					
Bekaa					
South					
Palestinian Camps					
Outside Palestinian Camps					

Legend

	Section not applicable		**Data available**

NB – Grey cells indicate that there is at least one assessment available on the specific area or target group. However, the data may not cover the situation for the entire geographic area or target group.

Syrian refugees

National

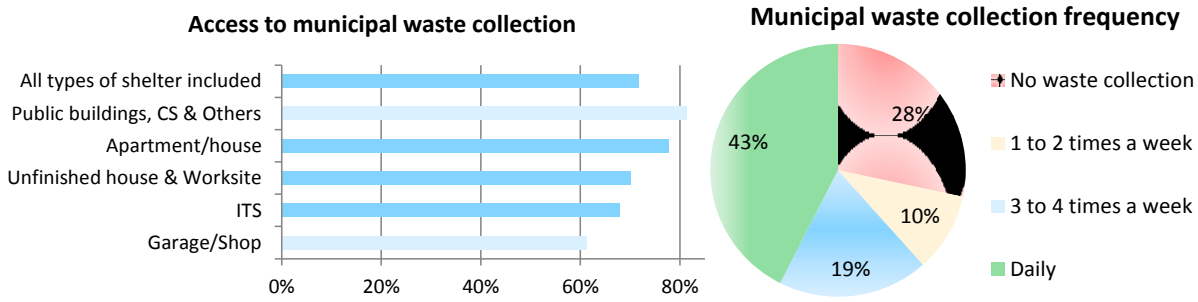
In settlements, collective shelters and other locations, due to the increased number of refugees and limited capacity of municipalities, solid waste is often piled up or collected less frequently creating a health hazard, as

well as a public nuisance and therefore increasing complaints. The main gaps in terms of solid waste collection are a lack of solid waste bins, garbage trucks, fuel to run trucks and proper final disposal/treatment sites. (WASH WG-Lebanon, February 2014)

North/T+5

In an assessment carried in January 2014 in the Tripoli +5 districts, 72% of the Syrian refugees households interviewed have reported benefitting from municipal waste collection with little variations depending on the type of shelter.

Figure [18]: Solid waste collection in T+5 area (Solidarités International, January 2014)



Bekaa

In an assessment of the Bekaa Valley (including North, Central and West Bekaa), 70% of households had waste collected by the municipality, 24% threw it into an open space, 4% burnt it and 1% threw it into a river. 59% disposed of waste daily, 38% between twice and seven times a week, and 3% more than once per day (ACF, February 2013). There has been a 218% increase in refugees in the Bekaa valley since this assessment was completed, magnifying the impact of illegal dumping on the environment and community health.

South

In El Nabatieh and Jezzine, waste management did not feature as a major problem as has been experienced in other areas. Waste is removed by the municipality and transferred to rubbish collection centres. All of the refugees and municipalities said no intervention was necessary on waste management at the current time. However, in 72% of the households visited, teams did see waste in the open near to the accommodation, which would appear to contradict these results. It may have been that bags of waste were put out for collection as the households are lacking bins. (Swiss Solidar, September 2013)

Mount Lebanon and Beirut

In Chouf, at the household level, 22% of the interviewed households are responsible for gathering/transporting their garbage to the collection point. This might be due to the lack of staffing or equipment capacity at the municipality level (CARE International-DPNA-ACA, October 2013). No data was reported for the distance between the household and the collection point, however.

In Chouf, Aley, and Baabda, Sukleen is contracted to collect garbage from bins set up in residential areas, but not from inaccessible communities (narrow streets and villages at high altitude), nor do they collect from manufacturing areas, where increased numbers of Syrian refugees now live. In such areas, large amounts of

garbage are seen on sides of roads, dried riverbeds and valleys. Nearly all ITS visited throughout the assessment have a dumpsite next to the camp. Some reports (e.g. from Aley) indicate that garbage is thrown off balconies from collective centres onto the hillside. (Global Communities, November 2013)

There was no specific data available during the MSNA process for Akkar.

Vulnerable local communities including Lebanese host communities and Palestinians

National

A markedly visible decline in the level and quality of solid waste management and municipal services has resulted from the sudden and sharp increase in demand and utilisation by Syrian refugees. Lebanon's local governments and municipalities are highly dependent on central government transfers, have a weak local revenue base, and have a backlog of investment needs that far exceed available resources. (World Bank, September 2013)

North/T+5

In Qaa and El Hermel, the solid waste activities are collection and disposal. In Qaa, a 5,000square meter (m2) piece of land is used as a dumping site to burn 125 tonnes of waste collected on a weekly basis, 1 kilometre (km) away from the village (World Bank, May 2013). In El Hermel, arid land of 10,000 m2 is used as a dumping site to burn 60 tonnes of waste on a weekly basis, 6 km away from the village. (World Bank, May 2013-May)

Bekaa

In the Bekaa Valley (including North, Central and West Bekaa) differences exist between the level of service reported by municipalities and the accessibility reported by refugees. At a village/municipality level, 96% of villages had public waste management. Most municipalities report daily collections, sometimes twice-daily collections and in some cases a weekly collection system. The collection is implemented mainly by truck (72%); 3% of the municipalities interviewed use a contractor; 16% use a shopping trolley and 9% have a mix system. 75% of municipalities do not have recycling companies. 67% do not take fees for waste collection. 69% of municipalities reported having a treatment system. Out of those treating the waste, 38 % burn the waste, 22 % use landfilling systems and only 9 % recycle waste. Those who recycle are located mainly in central Bekaa, where they can benefit from a treatment centre in Zahle municipality. Municipalities also mentioned having employed extra workers to face the increasing workload related to the increased amount of waste produced. The average increase reported is about 30%. Municipalities have very good knowledge of waste management, waste reduction measures and recycling. Unfortunately, most of them report lack of infrastructures and funding to put that into practice. (ACF, February 2013)

The Municipality of Zahle-Al Maalaqa is in charge of collecting solid waste from the community before disposing the waste into Zahle dumpsite, bearing in mind that other neighbouring villages are also benefiting from the dumpsite, namely Taalabaya, Saadnayel, Chtoura, Jdita, Al Mrayjat, Turbol, Ablah, Al Fourzol and Riyaq. The municipality pays USD 13 per tonne to remove waste. As a result of the Syrian refugee influx, the municipality is not able to regularly remove waste with the available resources. As a result of the increase of solid waste in Zahle and the communities using its dumpsite, costs are rising and pollution levels are increasing. (World Bank, May 2013-May)

Mount Lebanon and Beirut

In Chouf, Aley, and Baabda, municipalities pay approximately USD 100-110 per tonne for solid waste removal. All municipalities surveyed face an increase of 30 to 40% in their waste due to the presence of the refugees,

which imposes a heavy burden on their budget (Global Communities, November 2013; CARE International-DPNA-ACA, October 2013). In Chouf, a solid waste management system is in place at the municipality level; the system is managed by Sukleen, a private company contracted by the municipalities to collect waste, and paid from the municipalities' budget based on the quantity collected. Each of the assessed municipalities has its own team which is responsible for gathering the garbage from the narrow roads or nearby the houses and for transporting it to the collection point. (CARE International-DPNA-ACA, October 2013)

There was no specific data available during the MSNA process for Akkar and the South.

Palestinian refugees from Syria:

The majority of solid waste inside the camps is collected by UNRWA. Outside the camps, waste is collected by the local municipalities. (UNRWA, March 2014)

There was no specific data available during the MSNA process for Lebanese returnees

5. PERSONS WITH SPECIFIC NEEDS (PwSN)

Summary of assessment and findings for PwSN

- Women and girls face unique WASH-related challenges because of their special needs, threat of violence and gender roles. They are in need of specific and costly hygiene products, have security concerns when toilet and bathing facilities are not segregated, and women specifically are more likely to give up water and hygiene kits to family members.
- 4% of the assessed households in Aarsal are female-headed households.
- For PwSN, even when toilets and bathing facilities are readily available, 27% cannot use the toilet and 43.6% cannot use the bath/shower without assistance or at all due to their condition, the facility design, or the pathway to the facility. These challenges are unique to PwSN, and special considerations should be adapted.
- 12% of households say they are in need of specific hygiene materials for the PwSN. It is also underlined that these items are especially expensive.
- For those living in IS, outside toilet/shower facilities are a particular barrier to good hygiene for PwSN.

General

For the purposes of the MNSA, persons with specific needs are as defined by RRP6[8]. For these groups, there are particular WASH needs relating to protection that should be considered such as: separate washing facilities/latrines for women/children where necessary; lighting, security and privacy particularly for women and girls; WASH committee representation for women, girls, elderly and disabled; access to WASH facilities for people with pre-existing, severe physical, neurological or mental disabilities or disorders, as well as persons suffering from chronic illness (WASH WG-Lebanon, February 2014). However, the majority of needs assessments reviewed for this MNSA do not identify the unique WASH needs of, or challenges experienced by, vulnerable groups in Lebanon.

Syrian refugees

Assessments have highlighted the unique concerns and challenges women and children face in terms of hygiene. A Lack of access to WASH facilities may affect women's reproductive health; some focus group participants spoke about experiencing menstrual problems and infections as a result of not being able to wash properly,though this was not supported with medical data(ABAAD-OXFAM, September 2013).Although the issue of water accessibility is not an issue for schools, critical issues are the unhygienic latrines and washing facilities, which require urgent attention from the MEHE and civil society. (Education Working Group, August 2013)

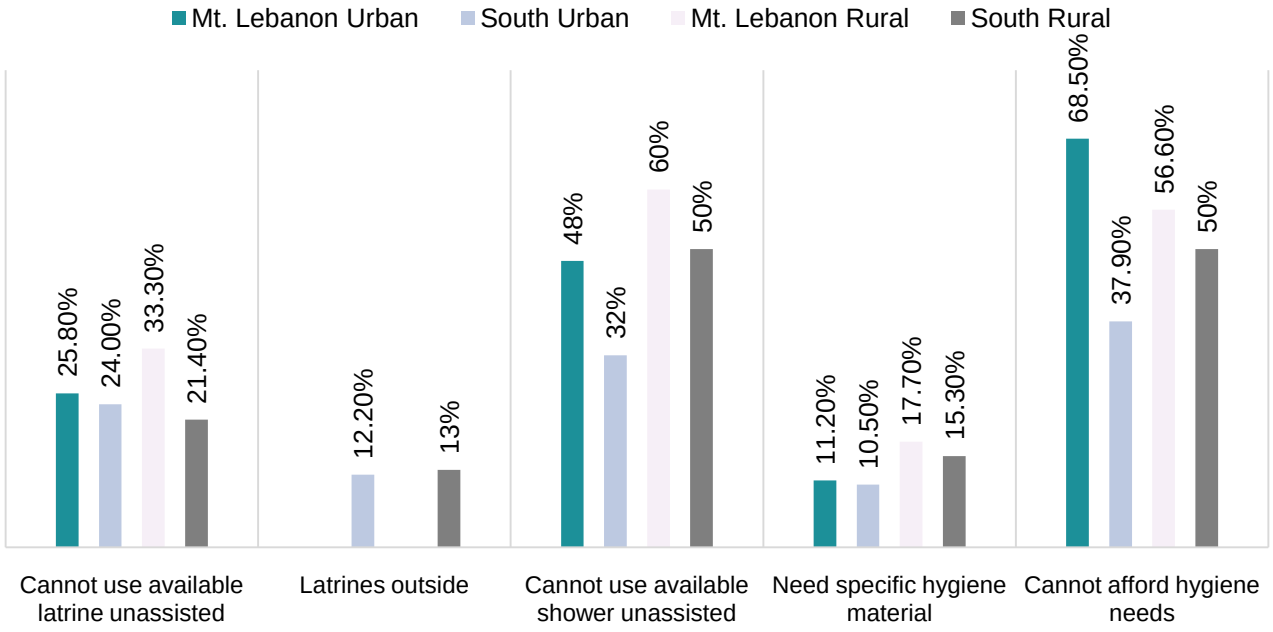
Mount Lebanon and South

PwSN have unique WASH challenges. The term PwSN includes persons with disabilities (those with mobility problems, hearing and visual impairments, intellectual impairments, and mental/psychological impairments), chronic diseases (those needing regular medication and/or treatment at a healthcare centre), and older persons (those over 60). In an assessment that focused on Mount Lebanon (including Beirut) and the South Governorates, 72.8% of respondents after some prompting stated that they have concerns about WASH related issues for PwSN, specifically:

[8]Persons with specific needs include but are not limited to persons with disabilities, single-headed households, older persons at risk, unaccompanied and separated children, other children at risk, survivors of torture and sexual and gender-based violence (SGBV), persons with serious medical conditions.(RRP6)

- In 27% of households, PwSN cannot use the toilet without the support of someone else, even though 91% have a toilet inside. In 55% of the cases the conditions of PwSN does not allow, 35% assistive devices are needed, 9.1% construction of the toilet was not appropriate for the PwSN's use.
- In 43.6% of the households the PwSN cannot use the shower/bathing facility by themselves. 40.8% say their health condition is the limiting factor, 31% the construction/system of shower is not appropriate, 20.6% the path to the shower is not appropriate, and 6.8% say assistive devices are needed.
- 12% of households say they are in need of specific hygiene materials for the PwSN. It is also underlined that these items are especially expensive.
- Outside toilet and shower facilities are particularly difficult, such as those provided in tented settlements.
- 49.4% say they are not able to cover hygiene and water related costs and 99% of those say this is due to financial issues. (MPDL, December 2013)

Figure [19]: Availability of latrines for PwSN (Adapted from MPDL report, December 2013. Note: the percentage of PwSN who have "latrine outside" is taken from those who responded that they cannot use the available latrine unassisted.)



According to this report, PwSN who do not have a toilet/shower inside should be regarded as a priority group. Outside sanitation facilities also raise protection concerns for those living in ITS. (MPDL, December 2013)

Sector Specific

The available data and MSNA SWG workshop feedback showed that the following groups are particularly vulnerable with regards to the WASH sector:

- For women and children, the remoteness of the location of the water collection points can cause vulnerability.
- Some people (elderly, children under five, people who are immune compromised) are more susceptible to water borne diseases.
- People living in unfinished houses have less access to water supply and storage.
- New arrivals from Syria have a diminishing coping ability; they are poorer and increasingly vulnerable.
- Other groups identified included minority groups, female-headed households in single units, and the disabled.

6. INFORMATION GAPS

In March 2013, the WASH Interagency Rapid Assessment Team (iRAT) stated that, “to date the WASH sector has yet to define a set of common needs indictors and data sets to be collected and reported as part of the continuous needs assessment which has been on-going for several months.” (iRAT, March 2013) In response, a group of 19 NGOs and nine UN representatives developed a recommended set of needs indicators and other tools to support WASH-related needs assessments. Based on the assessments reviewed for this report, these tools have yet to be widely adopted and utilised.

6.1 Target Groups

There is both a need to widen target audience definitions as well disaggregate target audiences. Generally, data is missing that looks more generally at vulnerable local communities, including host communities and Palestinians, and not just Lebanese host Communities. Additionally, assessments should target Lebanese living in Lebanon before the crisis and returnees. Assessments are not specifying whether their target audience of Syrian refugees includes both non-registered and registered/awaiting registration refugees. Assessments are also not reporting the unique needs of women, orphaned or dislocated children, the elderly, the disabled, the extreme poor and other vulnerable populations.

6.2 Geographical Focus

There was at least basic data regarding all the themes for the North Governorate. Data was missing for Bekaa and Mount Lebanon regarding hygiene, and the South and El Nabatieh Governorates for solid waste management. Generally, however, there were only a few municipalities assessed within each governorate. A greater diversity of locations within the Governorates would provide a more valid picture of the needs within the govenorate. Nevertheless, regional breakdowns may not be the most relevant disaggregation for the sector. More important than regional breakdowns is shelter type, rural versus urban and semi-urban, and topography.

6.3 Themes

Water:
There were several important gaps pertaining to water access and quality. First, as mentioned above, existing data needs additional quantitative measures in order to be validated and used for assessing need in the areas of quality, quantity and cost for both drinking and other purposes. Second, there was very limited information regarding different types of water storage being used, and the adequacy of each type. Third, to determine the danger of over-pumping wells, future assessments should include measures of whether safe yields of boreholes are being respected. Fourth, further studies are needed that explore the reasons why refugees do not treat their water.

For planning, a WASH-focused needs assessment of the prioritised 225 cazas that do not have WASH activities is necessary in order to geographically prioritise WASH programming. Related, there was no data that shed light on what impact this year’s rainfall level would have on the water source supply. This will be critical information for summer programme planning and prioritisation. Additionally, one of the reviewed data sets provided geographical information regarding locations of possible flood risk in relation to the target populations, and most notably the most vulnerable (e.g. those in the tented settlements).

Sanitation:
Although there is a general sense of the wastewater management situation, there is a gap in specific quantitative information regarding the capacity of the system, and the cost needed to provide wastewater treatment for municipalities in each of the governorates.

Data is needed regarding the comparative access, cost, and quality of sanitation facilities for Syrian refugees. There is not a clear sense from the data of how Syrian refugees fare in terms of sanitation facility access and quality as compared to Lebanese. In relation to this, there is no data on the cost of providing sanitation facilities to all Syrian refugees in need. Third, the quality of the sanitation facilities was not consistently addressed when the issue of access was discussed.

Hygiene:
There was no specific data that provided information regarding access to hand-washing, bathing or laundry facilities, the quality of those facilities, and the cost of providing access to facilities for all Syrian refugees in need. Additionally, vector-control challenges have been identified, but no detailed analysis of the vector-control issues have been provided nor quantified. Related, there is no information regarding the number of sites with stagnant water.

Solid Waste Management:
Although there is a general sense of the solid waste management situation, there is a gap in specific quantitative information regarding the capacity of the system (e.g. how many of the municipal dumps are at full capacity?). There are also gaps regarding the percentage of Syrian refugees that do not have access to municipal trash collection as compared with Lebanese.

Oddly, the assessments did not show a significant difference between solid waste collection between refugees and Lebanese. More information regarding how solid waste is collected among Syrian refugees not living in standard living spaces (e.g. rented apartments) may be necessary.

MSNA SWG workshop participants identified only a few of the data gaps that supported the MSNA team's analysis. These include: systemise data collecting for cross-assessment analysis, post distribution monitoring and ongoing monitoring, and indicators on whether people are getting the minimum WASH standards (how much water is being distributed). However, they identified the following additional gaps that were not revealed through the data analysis:

- Tracking vouchers
- Reliable data on cases of water borne diseases (centres)
- Water quality and supply mapping
- CAPS studies
- Water market assessment
- How much water can we increase per household
- Spikes in health outbreaks

6.4 Persons With Specific Needs

Generally, there was very little data that provided insights into the unique WASH challenges faced by vulnerable groups. For example, regarding SGBV specifically, limited data was collected pertaining to protection issues, such as proximity of water sources, existence of doors (if outside the home or used by multiple families), locks etc. in latrines/toilets and bathing units, as well as special needs such as access to feminine hygiene products and segregated facilities. There was some data on PwSN, however other vulnerable groups must also be included as unique subpopulations within assessments. In addition to those

covered under PwSN, these groups should include: children – separated children, unaccompanied children, and child-headed households; females – female-headed households, lactating, pregnant and girls; and the elderly (those over 60).

6.5 Planned Assessments

There are a number of planned assessments among participants of the WASH work group. There is a potential in-depth national WASH assessment, though this has not been finalised. In addition, the following are some of the assessments partners have planned:

- Mercy Corps: household level survey of the South and Baalbek and the Palestinian camp
- Oxfam: CAP survey in Tripoli +5
- World Vision: emerging market assessment in West and Central Bekaa
- Solidaritiés International: unregistered refugees in T+5
- CISP: household level survey of just water in T+5

7. RECOMMENDATIONS FOR DATA COLLECTION

- **Disaggregate for settlement type:** for example, the breakdown could be those who are in a house/apartment, IS, unfinished building or worksite, public building, warehouse, farm or factory, garage/shop. These categories should, however, be coordinated with the Shelter sector. Then to what extent the shelter is populated and therefore another data set being: individual, shared with five households or less (SSU), shared with six households or more (CS).
- **Disaggregate for geographic area:** ensure a representative sample for each geographic region. Also, specify which level of region (caza, village, etc)
- **Identification of vulnerable groups:** define the WASH vulnerable subgroups, and disaggregate the data to show access for each of the identified subgroups.
- Survey data needs to be triangulated with verifiable data, e.g. water quality based on water samples, water quantity satisfaction verified with how much water is received, etc.
- Data should include context (cost of water per volume, cost of desludging per volume, number of people with in a house with x number of toilets, or x litres water storage capacity)
- Data should be gathered in consultation with the health sector to ensure correlations between lack of clean water and hygiene access to negative health outcomes.
- The sector should identify a shortlist of standardised methodology and questionnaire for WASH assessment and multi-sector needs assessments that include WASH. The methodology should include independently verifiable quantitative measures.

ANNEX A

ASSESSMENTS/REPORTS CONSULTED AND REVIEWED

Organisation	Name of Report	Data Collection Date	Area	Methodology
Education Working Group	Joint Education Needs Assessment (JENA)	Nov 2012 - May 2013	National	The assessment used a purposive sampling method. Approximately 45 schools were selected. Respondents interviewed during school surveys included school administrators, principals, teachers and other knowledgeable education personnel. Research included observation, Key informant interviews and FGD with children, youth, adult community members and teachers.
Solidarités International	Vulnerability Assessment	22 April – 17 May, 2013	North	21 Villages, 575 registered Syrian refugee households. It was not a representative survey, as it focused on vulnerable populations. The survey was administered at the HH level plus direct observations.
IOM	Refugee Site and Shelter Assessment	Jun-13	South: Saida and Sarafand	Site visits to 5 locations. Completed rapid assessment with representatives of the local municipalities and member of NGOs, and Faith Based Organisations responsible for the management of sites.
Global Communities	Rapid Needs Assessment Mount Lebanon	Oct-13	Mount Lebanon: Chouf, Baabda and Aley	FGDs & HH assessments.
ABAAD-OXFAM	Shifting sands: Changing gender roles among refugees in Lebanon	March- April, 2013	North	Although the research provides useful insights into their experiences, the limited number of interviewees means that it not a comprehensive picture and offers only a snapshot of the situation for Syrian refugees or Palestinian refugees from Syria in Lebanon. Being a rapid impact assessment, the fieldwork was conducted in less than ten days. While this research did not address the problems faced by host communities,

World Bank	Economic And Social Impact Assessment Of The Syrian Conflict		Lebanon	Secondary data review.
Solidarités International	Informal Tented Settlements Vulnerability Assessment	April- Aug, 2013	North: Zgharta and Minieh-Dennieh	During the assessment, the outreach team visited 46 ITS and interviewed around 590 households out of the 1.098 registered in May in the settlements.
Solidarité Swiss	Needs Assessment Report South	Aug-13	South: Nabatieh and Jezzine	KII, HH questionnaire, FGD.
CARE International/DPNA/ACA	Integrated Rapid Assessment - Mount Lebanon Governorat, Chouf District	Aug-13	Mount Lebanon: Barja, Chhime, Dalhoun, Ketermay, Mazboud and Mghairiye)	Proportional random sampling; 240 households, FGDs; 6 Municipality KIs.
WFP-UNICEF-UNHCR-GoL	VASyR	May-June 2013	Countrywide	Representative random sample stratified by registration date (and pending registration). Over 1,400 households interviewed.
Croix Rouge Francaise	Syrian refugees needs rapid assessment in Iraq, Jordan and Lebanon	18-28 June, 2013	Iraq, Jordan and Lebanon (Bekaa)	French Red Cross carried on an exploratory mission on Syrian refugees assistance. Objective was to identify potential gaps in Wash and Health sectors and needs for additional support through Red Cross Red Crescent Movement. Assessment team went to Iraq (Kurdistan Region), Jordan and Lebanon. Mission consisted in meetings with involved humanitarian actors (Local authorities, RCRC Movement, UN agencies and implementing partners, NGOs) and field visits. Both camp and urban strategies were considered.

IOM	The Situation and Needs of Lebanese Returnees from Syria	Jul-13	Countrywide	Data from registration and profiling exercise conducted across all six governorates by HRC with technical support from IOM. Outreach conducted through municipalities. Questionnaire designed by HRC and IOM.
MPDL	Assessment on Persons with Specific Needs and Their Households	28 Oct – 25 Nov, 2013	Beirut, Mount Lebanon, South	465 household interviews in 8 districts; 45 FGD with 1) females with disabilities, 2) males with disabilities, 3) females older than 60 years, 4)males older than 60 years, 5) persons with chronic diseases, 6) parents of children with disabilities; 20 KIIs using snowball technique to identify interviewees
World Vision	Needs Assessment of Syrian Refugees in South Lebanon	Jan-13	South Lebanon ,Saida & Tyr Caza	A total of 511 surveys with heads of households were completed. Sampling was conducted on a random basis. In addition, key informative interviews, with targeted focal persons in the community who worked in municipalities or NGOs. Also, FGDs were conducted at schools in Saida and Tyr, and included children from ages 9 to 12 years old who came from different families.
UNHCR/UNICEF/WFP/WHO/IOCC	2013 JOINT Nutrition Assessment Syrian Refugees in LEBANON	Oct-13	All 4 districts	Nutritional analysis - children 6-59 months and WRA, SMART-UNHCR SENS.

WASH Inter-agency Rapid Assessment Team	Summary of key findings Capacity Assessment of WASH Sector in Lebanon	25 Feb – 15 March, 2013		As part of the assessment support mission, capacity assessment requested by the WASH partners to be carried out, the assessment team developed a Capacity Assessment Tool designed to collect information covering aspects, such as, profile, WASH response, WASH activities, transport and warehouse, emergency stock, contingency planning and scaling up for the agencies in the WASH Sector Working Group.
World Bank	Rapid Needs Assessment in the community of el Hermel		Bekaa: El Hermel	Semi-structured interviews with key informants based on a questionnaire which was filled in by members and consultants from the municipal councils. Focus group discussions with stakeholders, farmers and women were invited to the roundtable discussions. Direct and participatory observation including wandering around in communities, talking to people, taking photos, etc
World Bank	Rapid Needs Assessment in the community of Qaa		Bekaa: Qaa	Semi-structured interviews with key informants based on a questionnaire which was filled in by members and consultants from the municipal councils. Focus group discussions with stakeholders, farmers and women were invited to the roundtable discussions. Direct and participatory observation including wandering around in communities, talking to people, taking photos, etc

World Bank	Rapid Needs Assessment in the community of Zahle - Al Malaakal		Zahle- Al Maalaqa	Survey, meetings held with local authorities, and focus group discussions with key informants' persons from different sectors of the local community for the purpose of gaining in depth knowledge about the impact of Syrian influx on hosting communities. Direct and participatory observation was another tool used to reflect the depth of problems lived by the communities and validate the collected data.
CISP	Report of Assessment for WASH in North Lebanon		North: Tripoli and El Khoura	Survey of 506 HH with Syrian refugees Used a cross-sectional survey
CISP	Report of Assessment for Shelter and WASH in South Lebanon	Jul-13	South: Nabatyeh, Tyr, Marjayoun and Hasbaya	Third wave of rapid assessment, 713 HH in which Syrian refugees reside
CISP	Report of Assessment for Shelter and WASH	Jan to Mar 2013	South: Nabatyeh and Tyr	Survey of 759 HH with Syrian refugees. Used a cross-sectional survey
ACF	Waste management assessment		Bekaa: North, Central and West Bekaa	A face-to-face survey with 196 HH and additional interviews with municipalities. Sampling included 7 of every 100 households.
NRC	Multi-Sectorial Needs Assessment For Syrian Refugee Influx To Arsel Lebanon	Nov-13	Aarsal	The target was to identify and assess the majority of the new comers in unfinished buildings and to sample some inhabitants of finished buildings. Out of the 20 areas 16 were completed. A total of 431 surveys were conducted representing 1571 families or 7475 individuals. Each survey was done at the 'building' level. In the case where a structure consisted of several floors, than each floor was considered as a separate building/survey.

ACTED	Hygiene and Baby Kit PDM & KAP Report	6-10 January 2014	Mt Lebanon and Beirut	3 AME monitors collected data at household level using semi-structured interviews with one adult in each target households randomly selected as part of the sample in Metn, Jbeil and Keserwane districts. The PDM questionnaires were completed using ODK COLLECT through PDAs (smartphones), where then the data collected were directly downloaded into a comprehensive worksheet to be analyzed by the AMEU Officer.
Oxfam	Integrated Rapid Needs Assessment	Feb-13	North/T-5: Tripoly and El Khoura	Meetings with municipal officials, other aid organizations, household and focus group discussion and observations.
Solidarités International	Living Condition Assessment Report (not yet published)	Jan-14	North/T+5	Key informants interviews with NGOs (e.g. UNHCR, WFP, Save the Children, Handicap International and the Danish Refugee Council). 269 households representing a total of 1,689 individuals were interviewed through a household assessment. 38% were females and 62% were males. The UNHCR Registered Syrians refugee per village database was used to select randomly all villages to be assessed in each district. From this database, 28 villages were selected and visited. Then, in each village, individuals interviewed were selected using a basic random selection method.
Handicap International	Non-Registered Refugees Compared to Registered Refugees Humanitarian Conditions		Tripoli and Bekaa	104 non-registered refugees of Tripoli and Bekaa.
UNRWA/WFP	Vulnerability Assessment of Palestinian Refugees from Syria	Oct-13	8 Palestinian camps and gathering	Household assessment among 848 households.