

CISP

COMITATO INTERNAZIONALE
PER LO SVILUPPO DEI POPOLI
الجمعية الدولية من أجل تنمية الشعوب

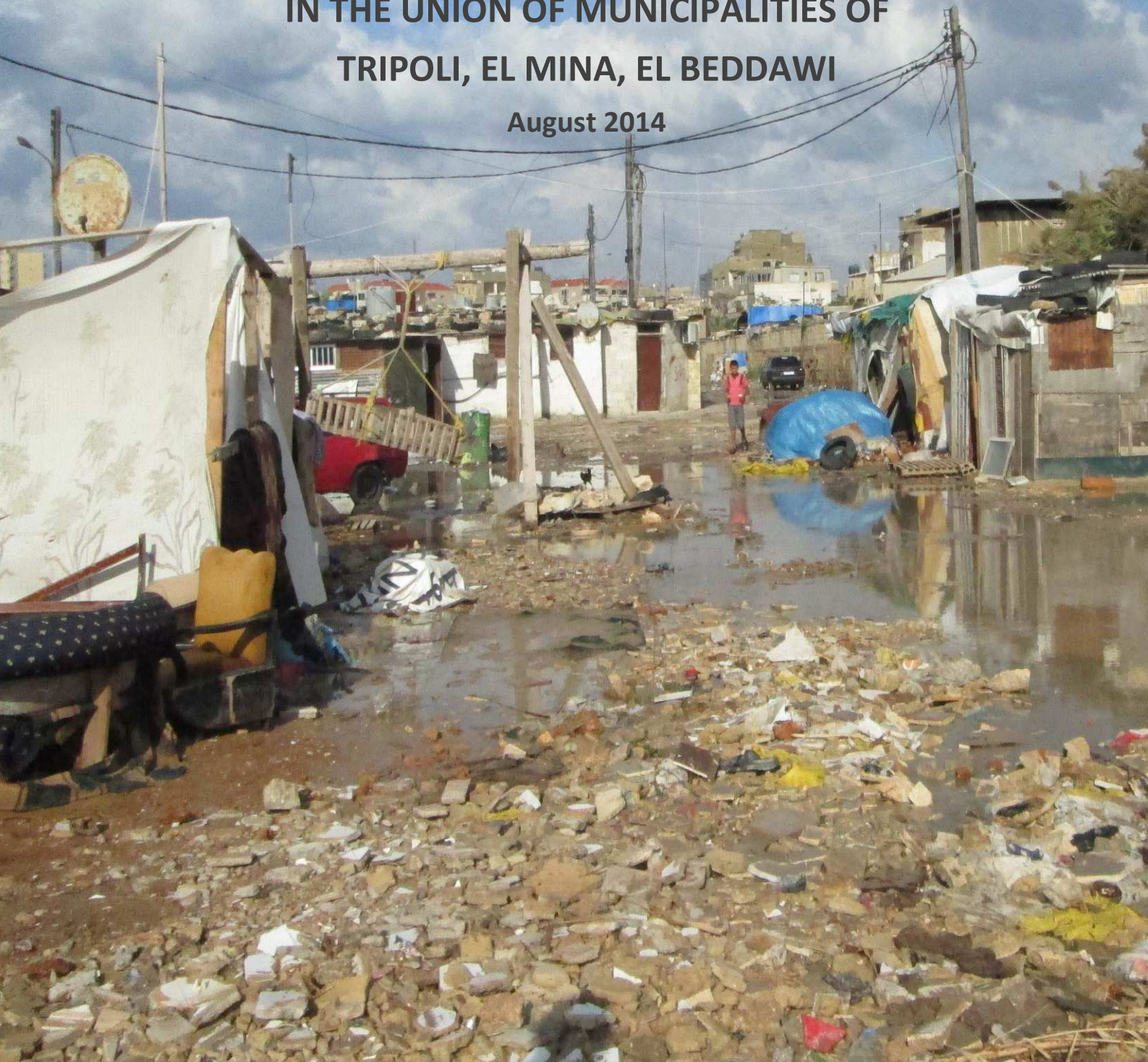


UNHCR
The UN
Refugee Agency

AN INSIGHT INTO SYRIAN REFUGEES' WASH NEEDS

IN THE UNION OF MUNICIPALITIES OF
TRIPOLI, EL MINA, EL BEDDAWI

August 2014



“EMERGENCY WASH ASSISTANCE FOR SYRIAN REFUGEES IN T5, NORTH LEBANON”

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AN INSIGHT INTO SYRIAN REFUGEES' WASH NEED

IN THE UNION OF MUNICIPALITY OF TRIPOLI, EL MINA, EL BEDDAWI

1. PURPOSE OF THE STUDY

Within its emergency response to the Syrian Crisis in Lebanon, financed by UN Agencies such as UNHCR, UNICEF, UNOCHA, by the Italian Government and other donors, since the end of 2012 CISP is implementing WASH interventions in North Lebanon, with the following objectives:

- to ensure the access to a sufficient quantity of safe drinking water and water for personal hygiene and domestic use;
- to enhance the sanitation conditions and the access to safe sanitation facilities;
- to improve the hygiene awareness and practices.

In the frame of the project "Emergency WASH assistance for Syrian refugees in T5, North Lebanon", funded by UNHCR, CISP has carried out a Rapid WASH assessment during the months of June and July 2014 with the aim of identifying needs among Syrian refugees and gaps in current WASH response in the Union of Municipalities of Tripoli, El Mina and El Beddawi.

This report summarises the main findings and recommendations from the aforementioned survey.

2. CONTEXT OVERVIEW

The increasing severity of the Syrian conflict, now into its third year, has resulted in a massive influx of refugees into Lebanon from December 2012 onwards with an average of more than 50,000 new arrivals per month (data calculated on the period June 2013 – July 2014¹). Lebanon hosts the largest number of refugees in all of the neighbouring countries (1,110,863 registered and 28,011 awaiting registration as of 31 July 2014 out of a total of 2,909,322 Syrian refugees, for an equivalent 38 per cent of the total²). This influx constitutes a major strain on existing resources and services, particularly in the poorer regions of the North Lebanon and the Bekaa where the majority of Syrian refugees are concentrated. The strain on Lebanon is such that the Government estimates at least 1.2 million Lebanese in hosting communities are being severely affected by the refugee influx in terms of competition for livelihoods and services.

The majority of Syrian refugees are currently residing in more than 1700 different locations³ in a diverse variety of shelter types: 60% in the North and Bekaa governorates and the remaining 40% in the greater Beirut area, Mount Lebanon, and the two governorates in Southern Lebanon⁴. These areas are vastly different in terms of geography, economy, confessional communities, political affiliations, local governance, infrastructure and resources.

The most vulnerable refugees, women, children, elderly and those with chronic diseases and disabilities, are the majority. Tensions have been growing since 2013 as Lebanese host communities and refugees compete for scarcer resources and jobs and Lebanese society feels

¹ Source: UNHCR "Registration Trends for Syrians in Lebanon" Statistics as of 31 July 2014.

² Ibid.

³ Ibid.

⁴ Ibid.

increasingly insecure, a situation that threatens to undermine Lebanon’s fragile cohesion and political stability.

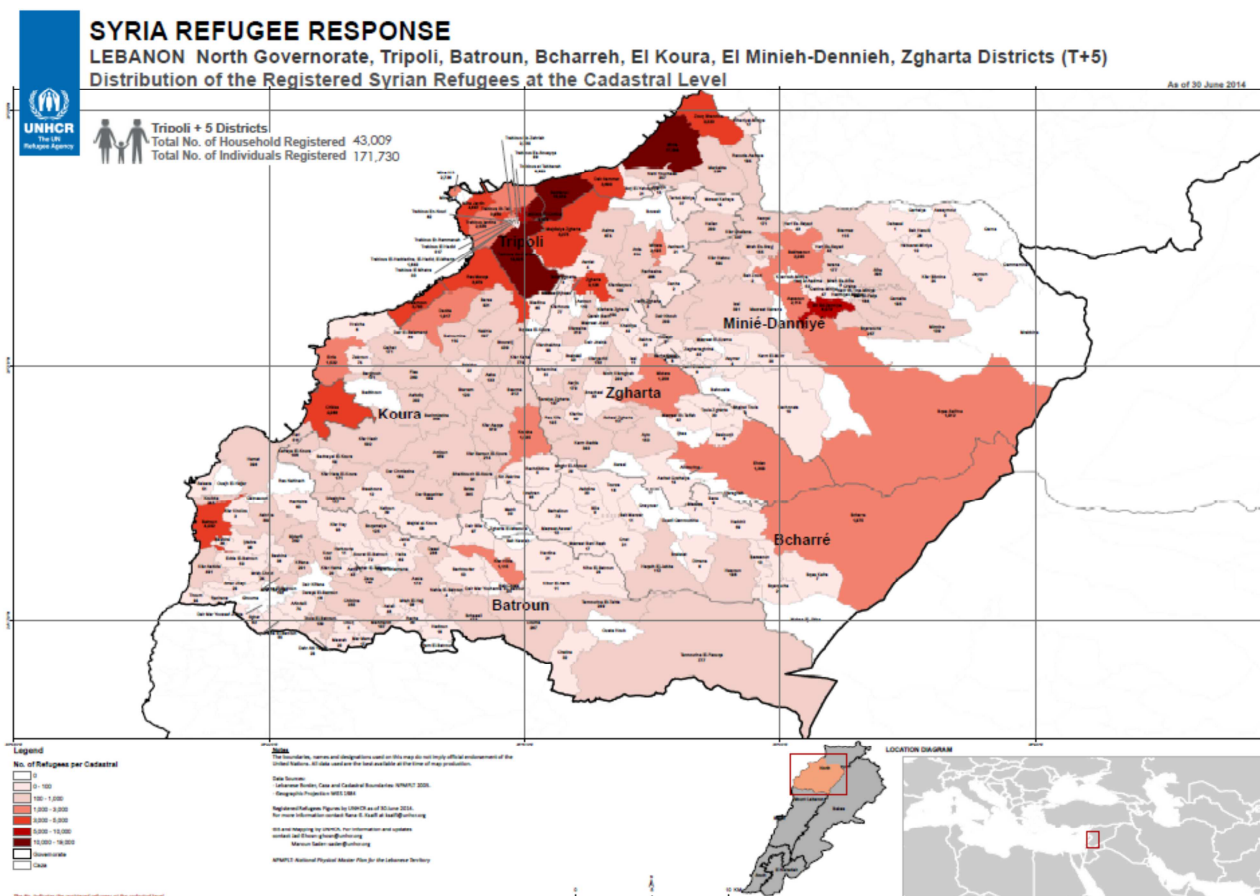
In this complex framework, the specific needs related to the WASH sector have changed over time and in the current context there is need to improve the overall WASH response in settlements (informal and formal), in large (collective centres/shelters) and small shelters and provide greater support to existing communal WASH services such as water and sewerage systems and solid waste collection and disposal.

Over time it has been recognized and highlighted the need of WASH support mainly at household level in terms of upgrading of sanitation facilities, support on water treatment and provision of storage facilities and hygiene items. However, with the increase in the number of settlements and displaced populations at community level (in some communities displaced persons have outnumbered the local population), the shift in needs has been highlighted.

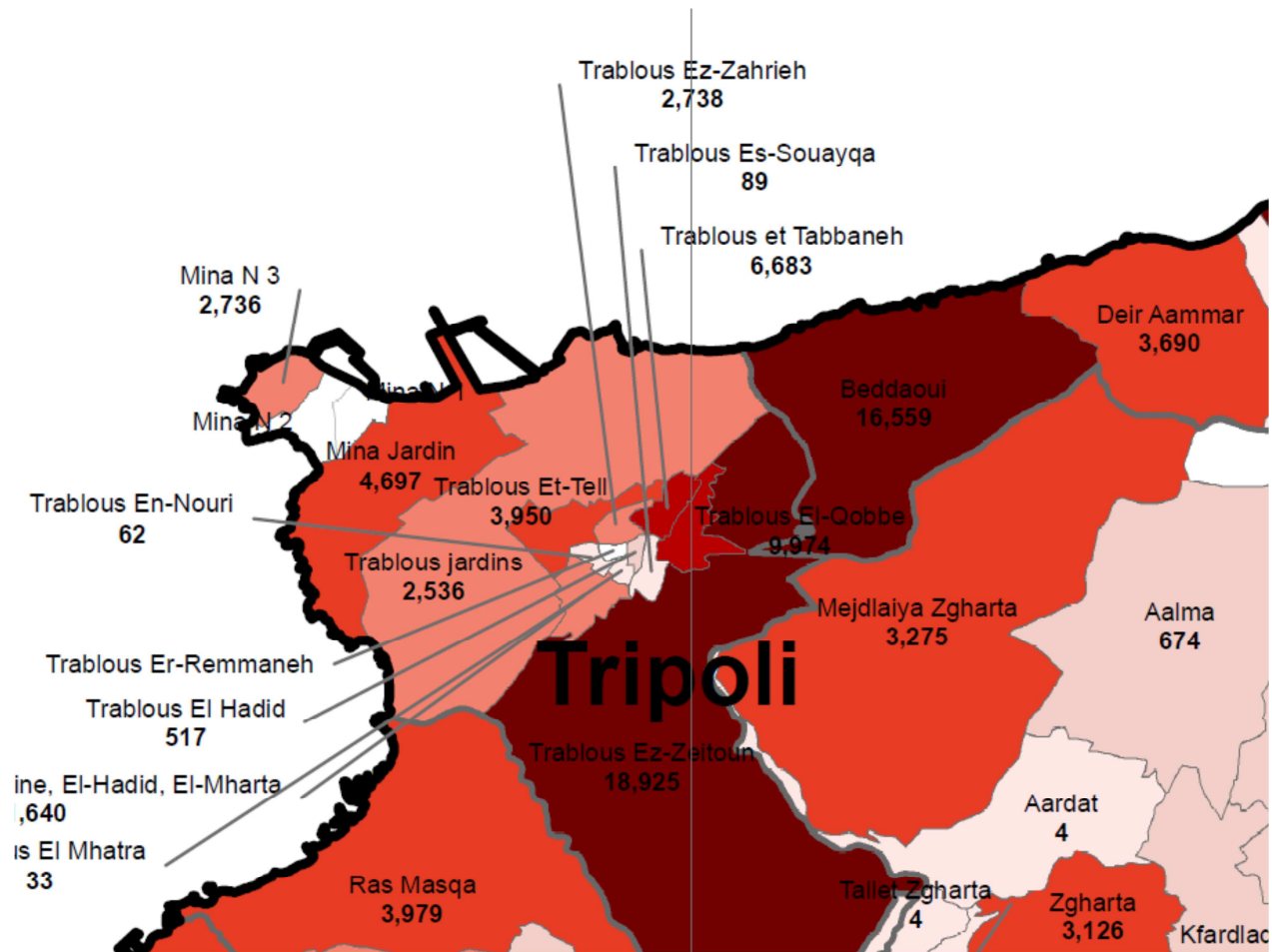
The recent Vulnerability Assessment of Syrian Refugees (VASyR) (report elaborated by WFP, UNICEF and UNHCR), which was completed in early June 2013, classified around 65-75% of households as moderately and/or severely vulnerable.

The assessment findings indicate that 30% of households reported not having access to sufficient water for domestic purpose, 40% of households do not have access to adequate latrines and 15% of households lack access to hygiene items and have low levels of hygiene awareness and practices.

3. LOCAL CONTEXT ANALYSIS



Map 1: Distribution of the Registered Syrian Refugees in North Lebanon (Source: UNHCR as of 30th June 2014)



Map 2: Detail of the previous map focusing on the Municipalities concerned by the current survey

As the affected population is distributed throughout the country in varied accommodation types, needs differ depending on the circumstances and the region analyzed.

The area interested by the current study is the city of Tripoli, capital of the North Lebanon Governorate and second largest city in the country.

Tripoli has a population of approximately 500,000 individuals and the majority is Sunni. As of 31st July 2014 it has been registered in the North Lebanon Governorate the presence of more than 71.000 refugees' households for a total of more than 285,000 Syrian refugees, with a monthly increase of about 8,000 persons (average value calculated on the period August 2013 – July 2014). Specifically, the District of Tripoli hosts more than 17,000 refugees' households, for a total of more than 65000⁵ refugees (equivalent roughly to 6% of the total refugees in the whole country). Within Tripoli District, the Syrian refugees are mainly settled in the high densely populated neighborhoods of Bab al-Tebbaneh, Abou Samra and in some areas of Mina Municipality. 867 Lebanese households⁶ have returned from Syria to Tripoli and been registered by IOM and HRC.

Furthermore, there are two established Palestinian camps in T5⁷: Naher El Bared camp, which was hosting 27,000 Palestine refugees before the crisis, and Beddawi camp that hosts more than

⁵ Source: Syria Regional Refugee Response Website – UNHCR (<https://data.unhcr.org/syrianrefugees/regional.php>).

⁶ Source: OCHA Report "Lebanon: North Governorate Profile" as of 4 March 2014.

⁷ T5 stands for Tripoli + 5 Districts and refers to the urban area of Tripoli and its surrounding Districts – El Koura, El Batroun,

16,500 registered refugees. 8,500 Palestine refugees are living outside the camps. In addition 8,200 Palestinian refugees from Syria are settled in the North both in camps and in the villages with the host community⁸.

MONTHLY INCREASE OF PERSONS OF CONCERN IN NORTHERN LEBANON

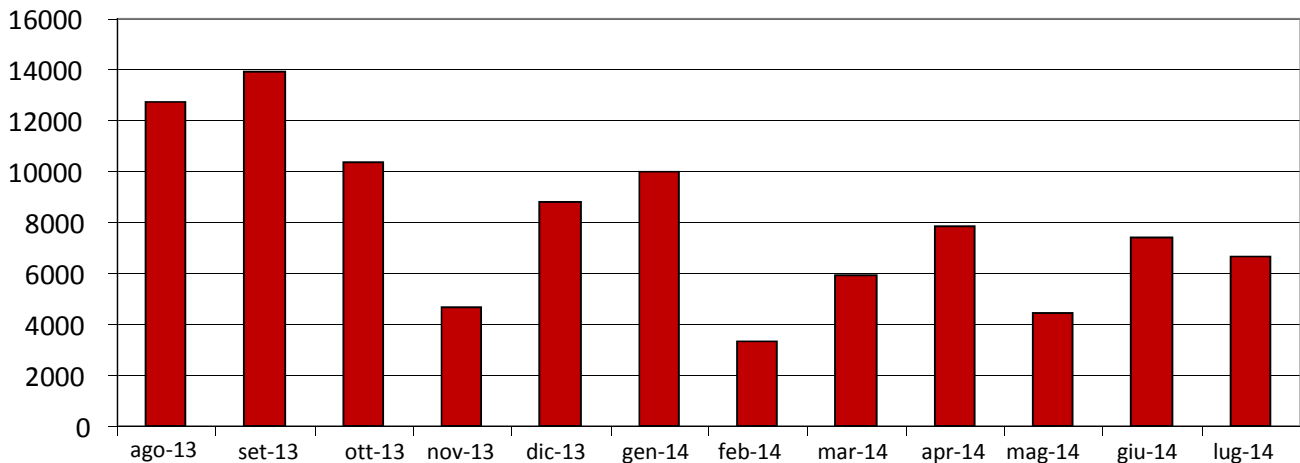


Chart 1: Monthly increase of the total number of persons of concern (PoC) in Northern Lebanon
 (Source: UNHCR as of 31st July 2014)

Tripoli is a highly urbanized context, therefore Syrian refugees have mostly found shelter inside existing buildings, constituting what are known as Collective Shelters (CSs), Small Shelter Units (SSUs) and Private Apartments (PAs).

Among these different housing options, in the context of the city of Tripoli, the SSUs have assumed an increasing importance over time: the rapid assessment reveals that at least 17% of the refugees in need of WASH improvement live in such type of shelter, percentage confirmed⁹ at a bigger scale in the territory of T5. This percentage assumes a more relevant value considering that in T5 the refugees living in disadvantaged conditions, either in ISs, CSs or Sub-Standard Shelters, represent the 48% of the total, therefore those living in SSUs are approximately one third of the most vulnerable.

Given the typical urban context of Tripoli, Syrian families have been forced to spread out all over the city which covers approximately a territory of 40 km². However, clusters of families and small communities are present in the most disadvantaged areas and outskirts due to the greater availability of vacant spaces (unfinished buildings, garages, work sites, one room structures, etc.) and the rents generally lower than those requested in other areas of the city.

This phenomenon contributed though to increase the number of families in need in areas usually already afflicted by lack of resources, and contributed to create competition between refugees'

Bcharre, Zgharta and El Minnieh-Dennieh – which are usually treated as a single entity.

⁸ Source: OCHA Report "Lebanon: North Governorate Profile" as of 4 March 2014

⁹ IAMP5 IS WASH Data - POC by District and Shelter Type

families and the poorest Lebanese hosting communities, worsening the general living standards of both Lebanese and Syrians.

A survey on a population of this type requires basically an investment in human resources: the surveyors are required to have a good knowledge of the context and cover a considerably extended territory with limited information about the exact location of refugees.

In addition, the presence of Syrian refugees undergoes a constant change, in a framework of entries or exits of Lebanon and even more relevant domestic movements within the country: this situation is unlikely to be monitored in an urban environment like Tripoli, where it is extremely complex to set and constantly update a system for the localization of the refugees.

Finally, further difficulties in analyzing the situation arise from the particular context of insecurity concerning the city of Tripoli: in May and June 2013, the conflict between Sunnis and Alawaties communities present in the city grew in intensity following the capture of the Syrian town of Qusayr by GoS forces. The LAF was deployed to contain the conflict. However, intermittent clashes have continued since, resulting in the death of at least 115 people and injury of 827 people¹⁰.

4. SURVEY METHODOLOGIES

In an urban environment housing conditions are extremely differentiated depending on the wealth of the group of refugees: it attracts in fact both wealthy classes, who see in this context the opportunity to pursue a lifestyle comparable to that previously enjoyed, and the poorest sections of the population, who are appealed by the greater chance of working and the larger housing availability.

Therefore, an overall analysis of the refugee population in Tripoli would likely mix the different needs of different classes, diluting those of the neediest families. Therefore a study investigating the most disadvantaged segments of the population has been deemed necessary.

As outlined in the introduction, the context of Tripoli is constantly changing, thus a **rapid assessment** has been considered the best strategy¹¹ to provide a snapshot or general understanding of the situation and guide decisions in areas where no assessments have been done before and where sudden changes of situation/circumstance may occur.

Given the size of the population to be analyzed, the study area has been firstly divided into 3 zones (El Mina, El Beddawi, Tripoli), each one then parted in 4 sub-zones. El Tabbaneh, Jabal Mosen and Qoubbe have been excluded from the study because already assessed by other WASH actors.

In the absence of prior knowledge about the conditions and concentration of Syrians in these areas, the divisions have been done based on a geographic approach, making the partitions dimensionally similar and easy to be identified by the assessors during the site visits.

The assessment has been conducted starting from the main roads of each sub-zone, then heading into the lateral branches and covering all the streets of the neighborhood, moving by walk and with the support of outreach workers, Lebanese, Palestinian and Syrian refugees, expert in the different areas where the survey was carried out. The localization of the Syrian families in need of WASH interventions was based also on indications collected from residents met in each area.

¹⁰ Source: OCHA Report "Lebanon: North Governorate Profile" as of 4 March 2014

¹¹ WASH Working Group – Assessment guidelines, Syria Response

The **data collection method** was based on two techniques:

- **Key Informant Interviews** (i.e. unstructured discussion, based on a series of questions on WASH related issues, focusing on essential information and concerns from the perspective of the informant) that, together with the outreach workers, were able to locate groups of refugee families and to provide information on housing conditions of refugees.
- **Structured Observation**, focused on “looking for” a specific behaviour, object or event (or its absence), i.e. whether people wash the hands with soap at critical times or if a WASH facilities respect the minimum standards to be considered safe. CISP staff in fact, after individuating refugees’ location, assessed the overall state of the dwellings. The main aspects taken into consideration were the presence of a healthy environment, with adequate water access and sanitation conditions. Practically CISP operators visually checked for the presence of water tanks, wash basins and safe toilets (proper WC and disposal system and basic cleaning tools/devices for personal and domestic hygiene). In case the facilities were deemed sub-standard, the dwelling, hence the household, was counted as "in need".

Whenever a case was recorded, the following information were collected:

- location of the dwelling of refugees (zone, sub-zone, GPS coordinates);
- number of families in the accommodation and consequently whether it was regarded as a CS, SSU or PA;
- key observations on the state and the use of WASH facilities by refugees;
- date of the survey;
- address and telephone number of a focal person in the neighborhood, in order to be able in the future to re-connect with local families "in need".

To get a **detailed analysis of the WASH needs** of the identified families, not systematically analyzed under this rapid assessment, it was decided to make use of previous surveys carried out in the same urban area.

During the implementation of several WASH interventions in Tripoli, CISP has in fact collected a great quantity of data among the concerned families, regarding the social status, hygiene practices adopted, water treatments used, diseases affecting the family members and conditions, consequently needs, of the WASH facilities.

These detailed needs assessment, carried out on a smaller population sample, have been deemed suitable to be scaled up and represent the WASH needs of the target population identified during the current rapid assessment. In fact the general conditions of the two samples are comparable with regard to the methods of sampling, the area of residence, the origin of the refugee families, the composition of the household, the housing conditions.

The combination of the findings from the 2 type of survey provides the **dimension of the gaps** in the assessed area in the current WASH response.

Analysing more in detail the sampling method adopted, since the conditions assessed during the previous surveys can be assumed homogenous with those of the current survey, it has been decided to randomly choose a sample among the broader set of 500 interviews of the previous study, falling within the so-called “cluster sampling”¹² of a larger population.

¹² *Cluster sampling* involves selecting smaller geographical areas - or clusters - from within the target population, and then using simple or systematic random sampling methods within these smaller areas

The Assessment Guidelines issued by the WASH Working Group indicate for data collection that needs to be carried out rapidly, over a short period of time, a rough calculation based on population size; for populations of over 1,000 units (which is the case of the present survey) it is suggested to use 90-100 samples.

Furthermore, as indicated for the adoption of a "cluster" sampling, it is necessary to take into account that this method does provide less precise estimates and requires larger sample sizes (approximately 50% more than that of simple or systematic random sampling). This is due to the design effect, which means that individuals living in close proximity to each other are more likely to have the same, or similar, characteristics than those not living closely together. Furthermore, there is the need to add an extra 10% to account for data that would have needed to be discarded due to improper data collection.

For the current study therefore the required sample size, duly adopted, was of about 170 units.

5. THE DETAILED NEEDS ASSESSEMENTS

The previous surveys, as stated above, were conducted during intervention for WASH facilities rehabilitation. The total number of intervention included in this study is 170. However, given the frequent cohabitation of more than one family in a single accommodation, the number of families concerned by the survey is 214. Nevertheless, this approach is consistent with the adopted method since a group of families living in the same space share the same problems as well as the same possible solutions and may be consequently defined as one "case".

The most relevant outcomes stemming from the previous surveys are related to:

- Presence of vulnerable persons within the household;
- Incidence of waterborne diseases, with special reference to children under 5 years;
- Water quality for drinking purpose perception by the respondents;
- Water treatment at Point of Use;
- Gaps in water supply/storage;
- Gaps in sanitation facilities.

The chart below shows that the share of cases in which at least one dweller was recorded as vulnerable is extremely high, especially with regard to people affected by chronic diseases (almost 40% of cases) or pregnant/lactating women (about 10%).

VULNERABILITY

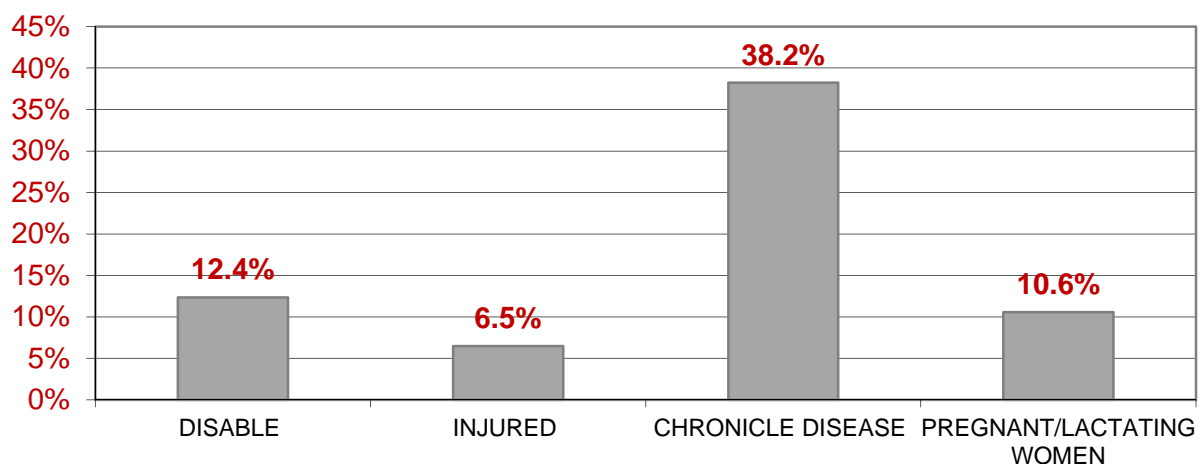


Chart 2: Share of cases in which was recorded the presence of at least one vulnerable person

These cases present needs – specific of the WASH sector - more severe than the average, with a lower capacity of the concerned families to respond to these needs mainly for economic reasons and for the lack of capability to take care of the recently occurred injuries or diseases.

Therefore, the presence of vulnerable persons should be carefully taken into consideration in any evaluation about needs of interventions, and may represent one of the main boosts for an intervention.



Picture 1: Uncovered water tanks

Among these 170 cases it was also detected a high incidence of **waterborne diseases**: almost in one third of the cases at least one person was suffering from diarrhoea (and in 13% of cases at least one child), and were reported and observed several cases of skin diseases (6.5%) and eyes diseases (11%).

The population living in the Union of Municipalities of Tripoli, El Mina and El Beddawi is mainly supply with **drinking water** by the North Lebanon Water Establishment (NLWE), which, through recently built networks in almost all the urban area, provides citizens with water that is treated (through chlorination) and regularly checked. Thus, since the water distributed through the water network is of good quality, it can be assumed that in many cases waterborne diseases are caused

by contamination that occurs during the storage/handling of the water at the PoU due to the poor conditions of the water tanks and containers, whose maintenance and cleaning is often overlooked and thus become an environment for bacteriological proliferation. In cases where buildings are not connected to the municipal network, water is supplied through private boreholes, which, in most of the cases, provide polluted water: from bacteriological analysis carried out by CISP on samples collected from three wells located in different part of these Municipalities water has resulted heavily contaminated. Finally, a relatively small percentage of the surveyed cases collects the water for drinking purposes at public taps. The analysis performed on these sources reveal a water of good quality, however its transportation and storage can expose the water to high risk of bacteriological contamination.

WATERBORNE DISEASE

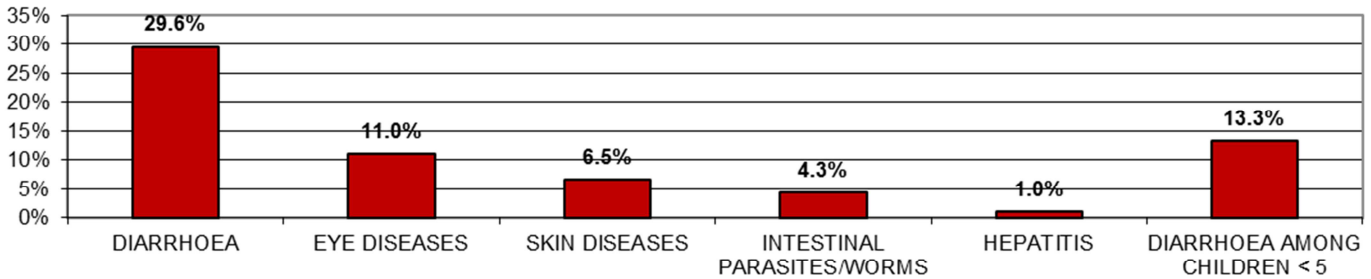


Chart 3: Share of cases in which was recorded the presence of at least one person affected by waterborne disease

From the assessment it results that the refugees themselves are aware about the link between these types of diseases and the water quality: in fact, in one out of three cases the water is not considered safe for drinking purpose by the dwellers. However, in less than one third of the cases the water is treated with methods such as boiling, chlorination or filtration in order to make it drinkable. The majority of households are therefore forced to resort to buying water for drinking purpose.

WATER QUALITY PERCEPTION

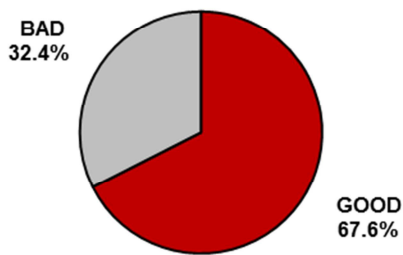


Chart 4: Water quality perception by dwellers

WATER TREATMENT AT PoU

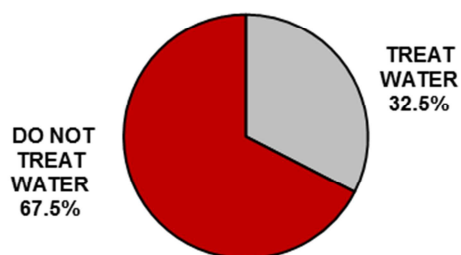


Chart 5: Occurance of water treatment in order to make it potable

Beyond the supply of water for drinking use, most of the surveyed cases are in need of interventions to enhance the sanitation conditions, starting from the water facilities. In fact, supply and storage of water presented significant shortcomings: the chart below shows that in about 7 out of 10 cases there were no adequate facilities for the cleaning of rooms, personal hygiene and washing of dishes or clothes, while in all cases was not present a sufficient number of water tanks which could guarantee a proper water storage capacity.

NEEDED WATER SUPPLY ITEMS

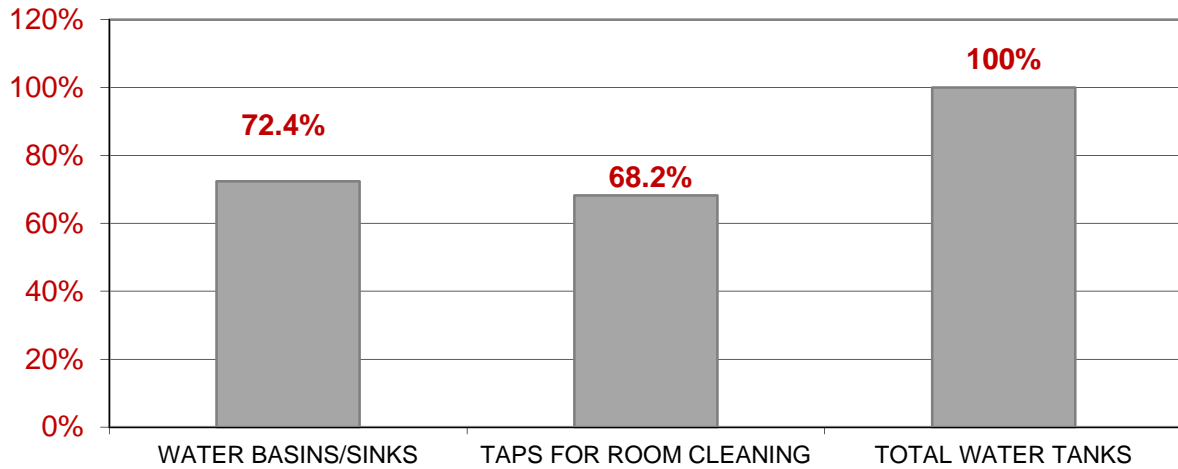


Chart 6: Share of cases in which was recorded the need for water supplies facilities

For what concerns the **sanitation**, it was found that the facilities needed interventions to ensure a safe environment and the dignity of persons. In more than 50% of the cases the toilet doors were missing or the spaces used as a toilet were not properly protected and separated from other spaces or, in the worst situations, the toilet and the kitchen shared the same small space without any partition.



Picture 2: PA in El Beddawi - The same room hosts a toilet used by more than 15 persons and a sink used for cooking and washing dishes

In more than one case out of three it was not present an adequate/functioning toilet, including the disposal system, and in almost all cases, there was not an ablution hose, indispensable element in the Arabic tradition for personal hygiene.

NEEDED TOILET ITEMS

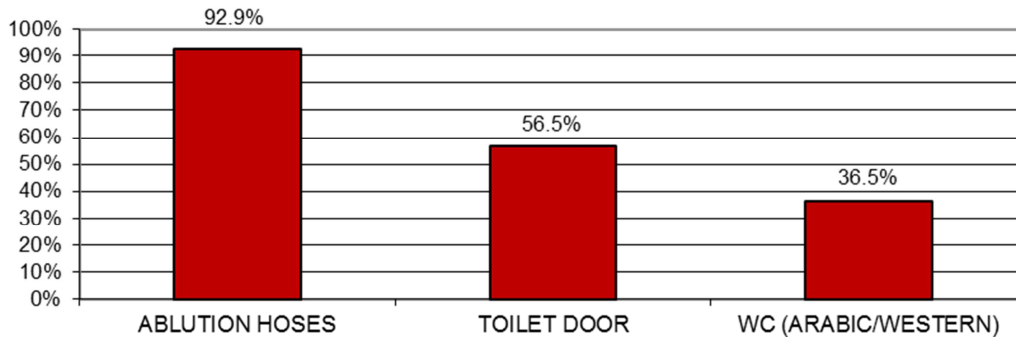


Chart 7: Share of cases in which was recorded the need for sanitation facilities

6. THE RAPID ASSESSEMENT

The analysis of the data collected with the present survey shows that the families identified as "in need" of WASH interventions are 2,310, for an estimated amount of **10,857 people**.

Relating this number to the value provided by the report by UNHCR regarding the total number of refugees in the district of Tripoli (i.e. 65,000 registered refugees as of 31.07.2014), it is apparent that about 17% of the refugees are facing extremely serious conditions with regard to the WASH sector, a percentage that cannot be neglected.

These families have been grouped by type of dwelling following UNHCR's standard:

- Small Shelter Unit (SSU): privately owned unfinished or otherwise substandard buildings that have been brought to minimum shelter standards in order to accommodate between 1 and 6 households in need;
- Collective Shelter (CS) privately owned unfinished or otherwise substandard buildings that have been brought to minimum shelter standards in order to accommodate more than 6 families in need;
- Private Apartment (PA) which designate rented houses, accommodating usually up to 2-3 families in need.

In the current survey it was found that 703 families live in CS (30.43%), 394 in SSU (17.06%) e 1,213 in PA (52.51%). The chart below represents this division:



HOUSING TYPES

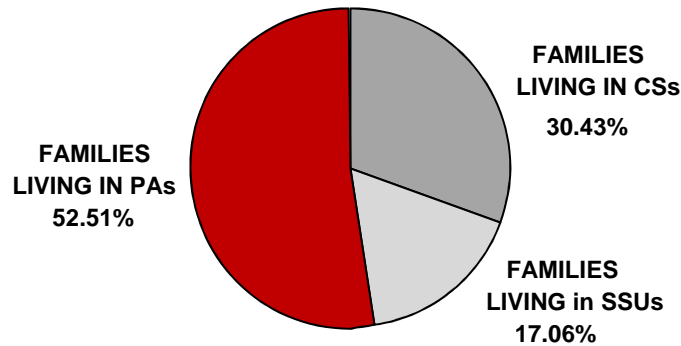
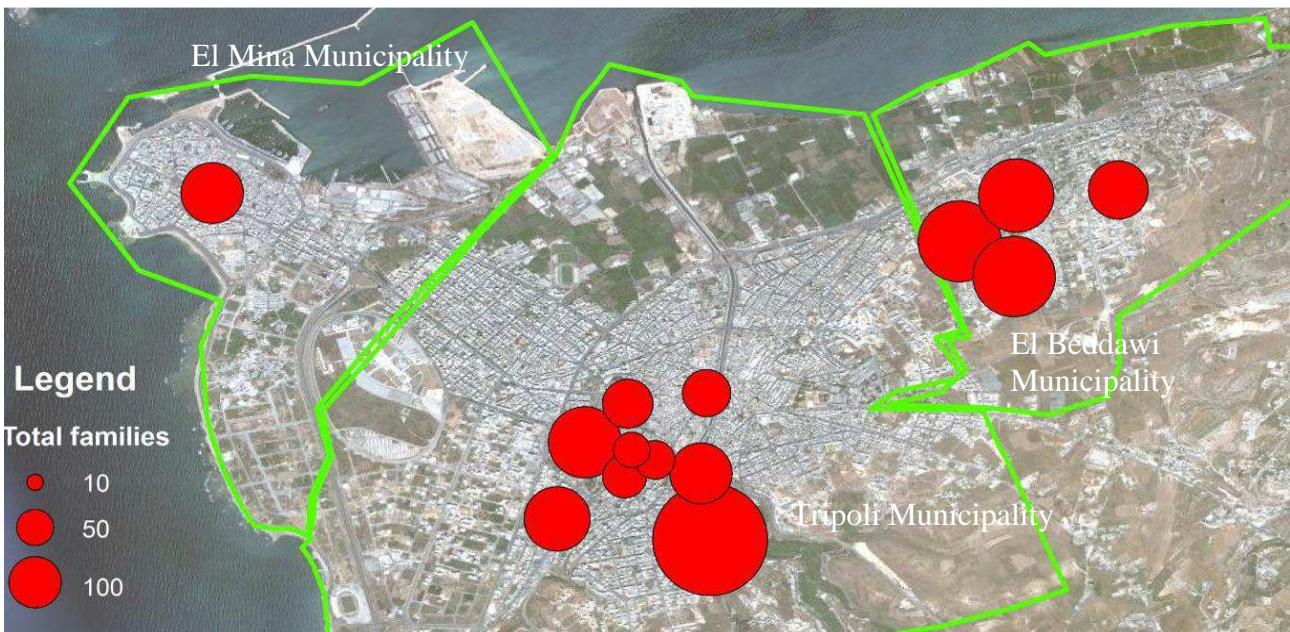


Chart 8: Housing type divisions observed in the current survey

The refugee population in need of WASH assistance is distributed throughout the urban territory as shown below:



Map 4: Density of presence of refugees' families in the three municipalities. The bubble size is proportional to the number of families of refugee living in the area.

From this map it is evident that families "in need" are grouped together especially in the area of the "Old City" of Tripoli and in part of the neighborhoods of Bab-El-Tebbaneh, Dahr Abou and Samra Mogher, as well as in the Beddawi area near the Palestinian Camp and to a smaller extent in the central area of El Mina.

With regard to the types of housing available, it was noted that the presence of SSUs and CSs is grouped in the "Old City" of Tripoli, in the neighborhoods of Bab-El-Tebbaneh and Dahr Abou Samra Mogher, and in the Palestinian Camp in Beddawi, thus representing two areas with major problems for what concerns the density of refugees and quality of housing types and consequently for the available WASH services.

From the current study, consistently with what has been found in the previous ones, it appears that out of the 46 areas analyzed 78.26% have an overall shortage of water tanks or are face issues

related to the availability of water, 43.48% do not have an adequate toilet and about 20% presents need of sinks, showers or hand washing points.

Among them, 10.87% were reported as extremely urgent and almost all of these cases were concentrated in the extremely poor neighborhood of Abou Samra.

MOST NEEDED INTERVENTIONS IN THE 46 AREAS SURVEYED

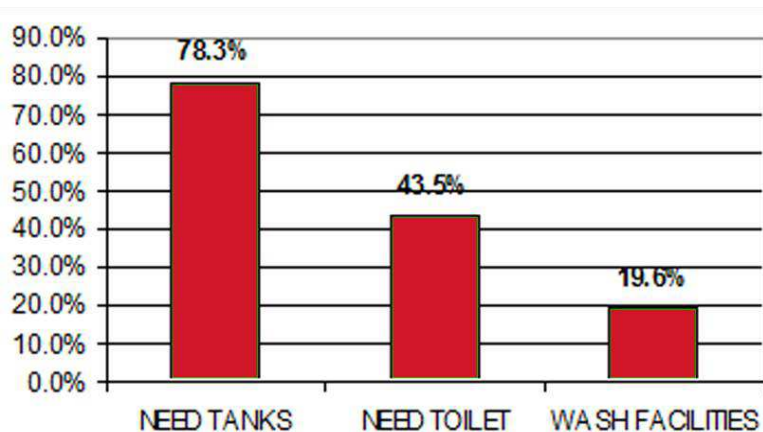


Chart 9: Gaps in WASH sector recorded in the present survey

7. COMMUNITY SUPPORT PROGRAMS

In order to identify the needs in the WASH sector, it was considered appropriate to investigate the subject among other important stakeholders, namely the institutions of the three municipalities (Tripoli, El Mina, El Beddawi) in which the survey was conducted.

The three Municipalities institutionally represent the whole population residing in the areas concerned by this study and can, therefore, provide a more comprehensive overview on the problems of the city, and offer guidance on the historical evolution of the situation in the WASH sector, including plans of future development, when available, or potential solutions to the problems identified.

This kind of approach suits with CISP objectives which aim at offering support not only to the families of Syrian refugees in the city of Tripoli but to the Lebanese community as well, in order to mitigate potential tensions between the hosting community and the refugees and to support the Lebanese society to face this long lasting crisis in a logic of fairness and need-based response.

The modality applied has been the conduction of interviews to representatives of the three municipalities, most of the time heads of departments related to the WASH sector. The questionnaire allowed to identify the main problems concerning:

- Water supply;
- Wastewater system;
- Drainage network;
- Solid Waste Management.

Below the results are presented divided by Municipality.



El Beddawi

WASTEWATER:

The sewage network in the area of Hay al Tank (Jabal Beddawi) is an open channel (which starts from Ayroneyeh and then discharges the wastewater directly into the sea). It is subject to flooding, houses are connected to this channel in a chaotic way, it produces unpleasant odors in the area and it is a suitable breeding site for flies and mosquitos. All these factors represent serious health hazards for local dwellers.

The Municipality suggests to implement a closed sewage network and to improve houses connections.



Picture 3: Unfinished building in El Beddawi hosting more than 6 families of refugees

WATER SUPPLY:

At present the only area of the municipality served with a water supply network is the one close to the main street, which is served by the municipal network and therefore even the households in the close surroundings of the main street get access to that system. In the rest of the municipality, the population uses private boreholes which provide highly polluted water.

However, a project currently under implementation is extending the water network that will provide drinking water to the entire municipality.

Tripoli

WASTEWATER:

In the neighborhoods of Bab El Tebbaneh, Aswaq and Dahr Mogher the sewage network is now 30-40 years old and there are several points where the system presents leakages, with wastewater infiltrations in the basement of the houses, resulting in significant health risks for the whole population of these areas and even more for the houses directly affected by the problem.

This issue is not currently addressed by the municipality for both little interest in intervening in marginal neighborhoods and poor sections of the city, and because, being part of the infrastructure on private land, the municipality does not deem to have free access to intervene in those areas.

The municipality recommends the involvement of NGOs in order to suggest possible solutions to the problem and to highlight the urgent need for action in this regard.

In the area called "New Tripoli" (the new neighborhoods being built in the south-western part of the city), the buildings are not currently connected with the wastewater network but use private septic tanks. If the district will not be connected to the main system for the disposal of blackwater, it is expected that in a time span of ten years this is likely to become one of the main issues for the neighborhood.

However, the municipality has plans for the extension of the sewage network in this area of Tripoli.

WATER SUPPLY:

In the poorest areas of the city (i.e. Bab El Tebbaneh, the Old City, and Zahreye Dahr Mogher), according to past studies on water quality, water is not suitable for human consumption, being bacteriologically and chemically polluted (it is believed that this pollution is due in part to losses of the sewerage system which in some places contaminates the water for domestic use). Consequently, the majority of households in these neighborhoods usually buy the drinking water. The municipality proposes as the first step to solving the problem a table of discussion and study on the subject, composed of representatives of the Municipality of Water and Establishment of the Ministry of Infrastructure.

The Municipality deems necessary surveys on water quality and the adoption of filtering / purification systems for the water intended for drinking purpose.

El Mina

WASTEWATER:

The neighborhoods of Masakin Al Shaabiyah and Old Mina have a very old sewer system, with leakages in many points.

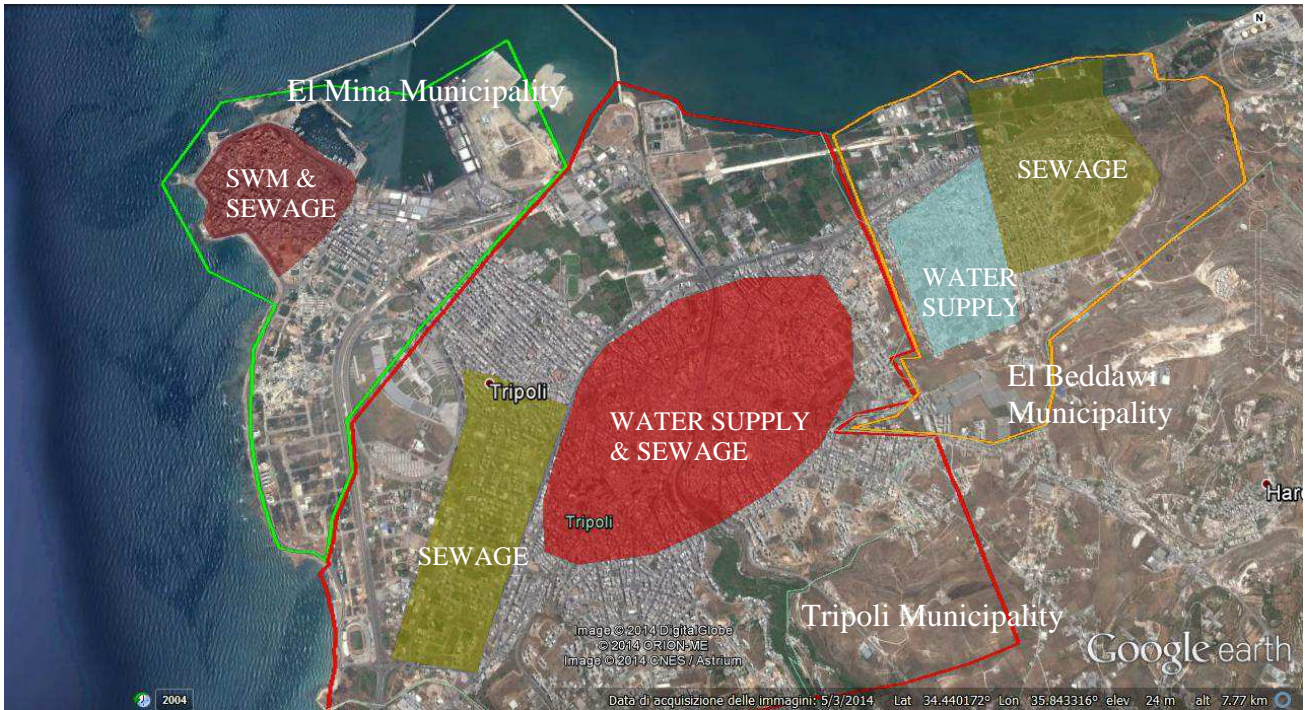
The entire city of Mina discharges its wastewater directly into the sea without being connected to any central treatment system.

In addition, in the historical center (Old City), the wastewater is mixed with stormwater. The Municipality suggests repairing the damaged sections of the sewage network, extending its coverage to all the neighborhoods of the municipality, and completing the connection to the treatment plant thus avoiding direct discharge into the sea. The Municipality estimates this work at a cost of approximately \$ 5,000,000 - 6,000,000.

SOLID WASTE MANAGEMENT:

The Municipality is facing problem in the collection of solid waste, and the main gaps identified are the lack of staff, lack of an adequate number of bins, lack of adequate vehicles for the solid waste collection (which may move within the very narrow streets in the old center of the Municipality). The municipality also reports the need for an improvement in the overall management of solid waste collection, forecasting for this work a cost of less than \$ 50,000.

In the map below are represented the approximate boundaries of the municipalities and the various areas where the Institutions have reported problems related to the WASH sector.



Map 3: Areas indicated by the Municipalities as in need of WASH intervention; each area has overlaid the indication of the intervention needed.

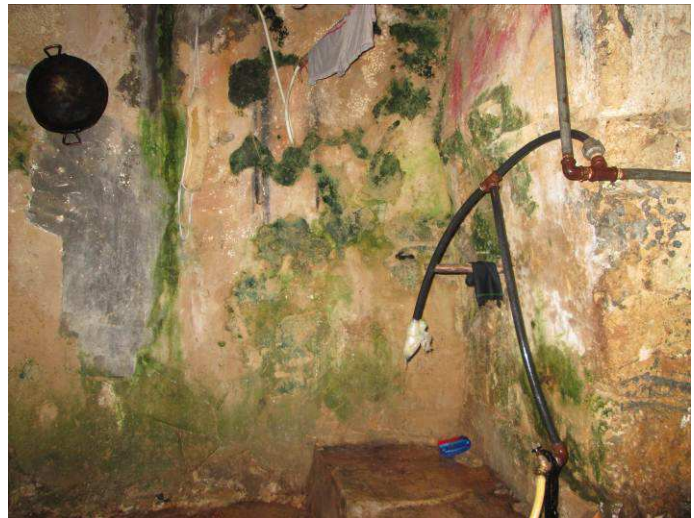
8. CONCLUSIONS

The current study focused not only on the identification of families in need, but also on the division in housing types, as it is believed that the needs in this sector and the WASH intervention options available are directly related to the kind of house the refugees live in. In fact, despite all the typologies recorded in this assessment presented deficiencies related to the WASH sector, it is necessary to apply different approaches to different housing types. The needs of refugees in a SSU or a CS may in some cases be similar to the needs of refugees who live in PAs, but there are significant differences between the different types of housing both in terms of magnitude of the impact that these gaps can have on dwellers and the possible solutions that can be adopted.

Indeed, large shelters (collective centres or shelters), small shelters (usually garages/shops, stores, work sites, one room structures, basements) and unfinished buildings in urban areas, often present a lack of basic sanitation facilities, low water storage capacity, inadequate water supply and inefficient solid waste management.

In particular, regarding the access to water and the water quality, many households have inadequate storage facilities, both in terms of quantity and quality, with tanks usually damaged (holes and rust), dirty, uncovered and undersized compared to the need of users: connection to the water network, when present, usually covers about 6 hours per day, thus making necessary the presence of large water tanks for storage. This lack of means for proper water supply and storage was largely confirmed in the present survey.

CSs and SSUs are usually lacking adequate access to basic sanitation facilities: shops and stores sometimes do not even have a separate room for the toilet, but it is located in a common space, thus creating serious sanitary hazard. The ‘bathrooms’, when present, are usually not properly equipped and there is limited access to water; they are usually substandard spaces with unhealthy conditions (mold on the walls, water infiltrating from the rooftop through cracks on the ceiling, leaking pipes, insufficient drainage of greywater), and, especially in CSs, the number of users for a single toilet is very high, increasing drastically the health risks and depriving the personal dignity.



Picture 4: Toilet walls covered with mold in a substandard PA

Where the sewage network is not present, latrines are connected to simple pits which need to be emptied on a regular basis. People living in unfinished buildings sometimes do not have access to any latrine facility and have recourse to open defecation as a result. This situation represents an even greater burden on vulnerable people with chronic illness, disability, or women pregnant or lactating.

In CSs and SSUs there is usually little space dedicated to personal hygiene and people take their shower in a corner of the house or of the toilet and in some cases wastewater is not properly evacuated, thereby creating ponds of stagnant wastewater.

Usually refugees living in unfinished buildings or premises unsuitable for residential purposes wash dishes and clothes outside the house or in the bathrooms: in the first case, sometimes it is not present a system for the disposal of greywater, forming pools of water stagnant, while in the second case, in particular the practice of washing the dishes in the same space dedicated to defecation, creates considerable health risks.



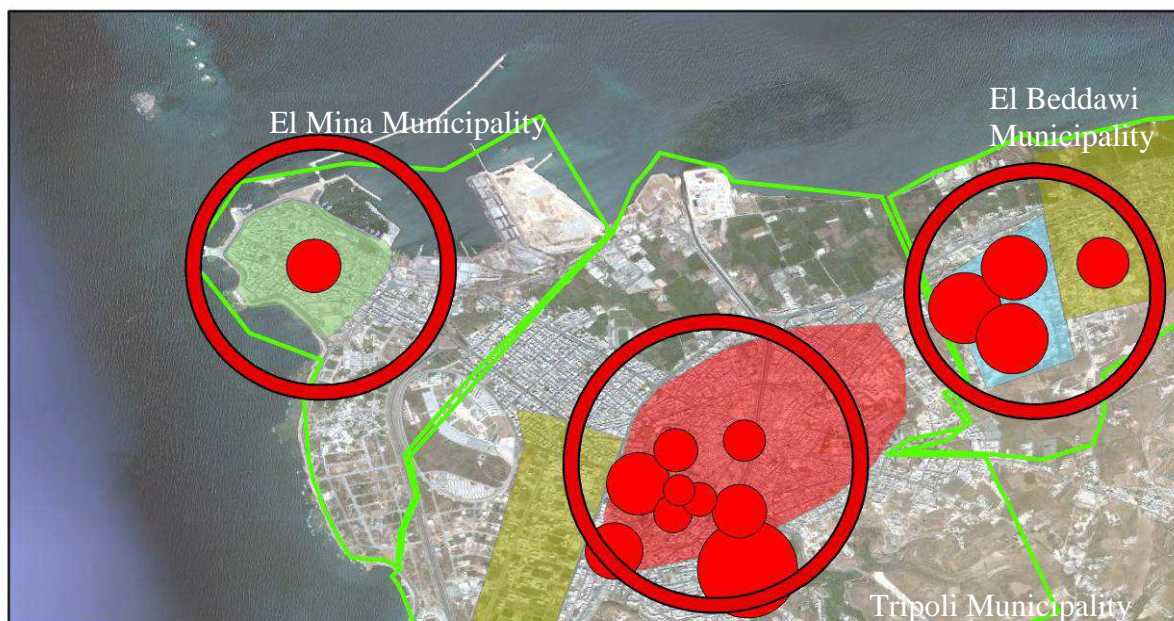
Picture 5: Grey water is discharged directly into the streets

PAs, in the majority of cases, are instead connected to the water network and are equipped with regular bathrooms, but these are not always connected to the sewage system; they are often connected to simple pits which need to be emptied on a regular basis at a high cost. Therefore these interventions are not usually executed in a timely manner, worsening the environmental conditions.

A waste management system is in place at the level of the municipalities. However, at household level, once more the situation varies between families staying in Pas, where the surroundings are usually cleaner and waste collection service is more timely and efficient, and those living in ‘informal’ types of dwellings, where collection services are sometimes discontinuous and inefficient and as a consequence solid waste is gathered and burned in a improvised place, close to the houses.

From the present survey, and from the information provided by the municipalities, it is possible to highlight some areas that are affected by a particular lack of facilities and require greater attention, both in support of Syrian refugees and disadvantaged Lebanese citizens.

In the map below are shown, circled in red, the areas identified by municipalities as in need of WASH communal interventions and at the same time identified through the present survey as in need of household-level interventions, focusing on the presence of SSU, which, as exposed previously, present generally the poorest housing conditions and have no or inadequate WASH facilities. These areas are therefore considered as the highest priority areas for intervention.



Legend

- Area of Urgent Need
- Wastewater issues
- Water Supply and Wastewater issues
- SWM and Wastewater issues
- Water supply issues
- Municipalities' Borders

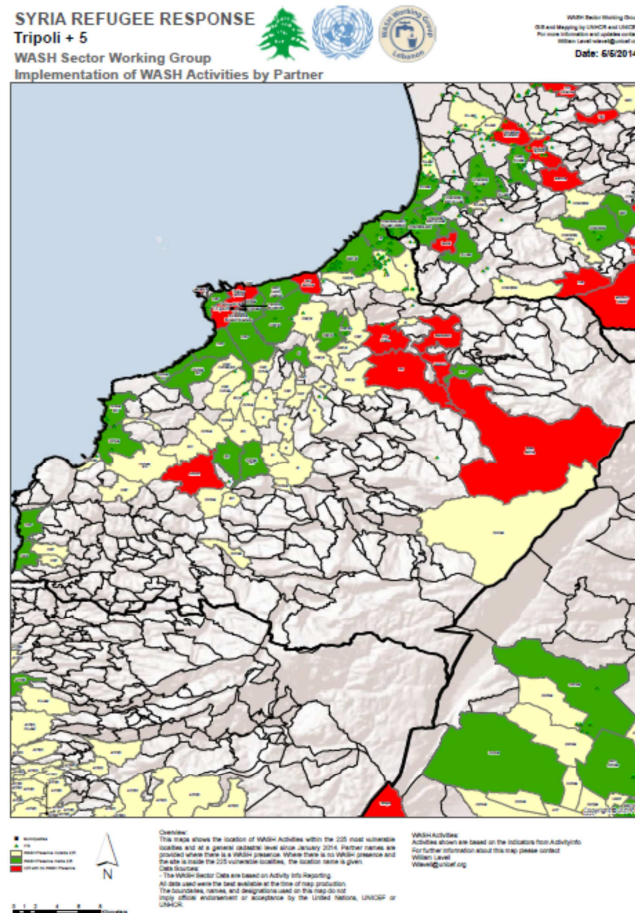
Map 5: This map overlays the area indicated by the municipality as needing urgent WASH interventions with those indicated from the current assessment as in extreme need. Circled in red the areas where most of the needs are concentrated.

It is therefore evident from the present study that, given the current conditions, the needs of refugees in the territory of Tripoli are still massive and mostly unanswered: the number of families in need is still very high, their housing and WASH facilities conditions are often extremely poor and

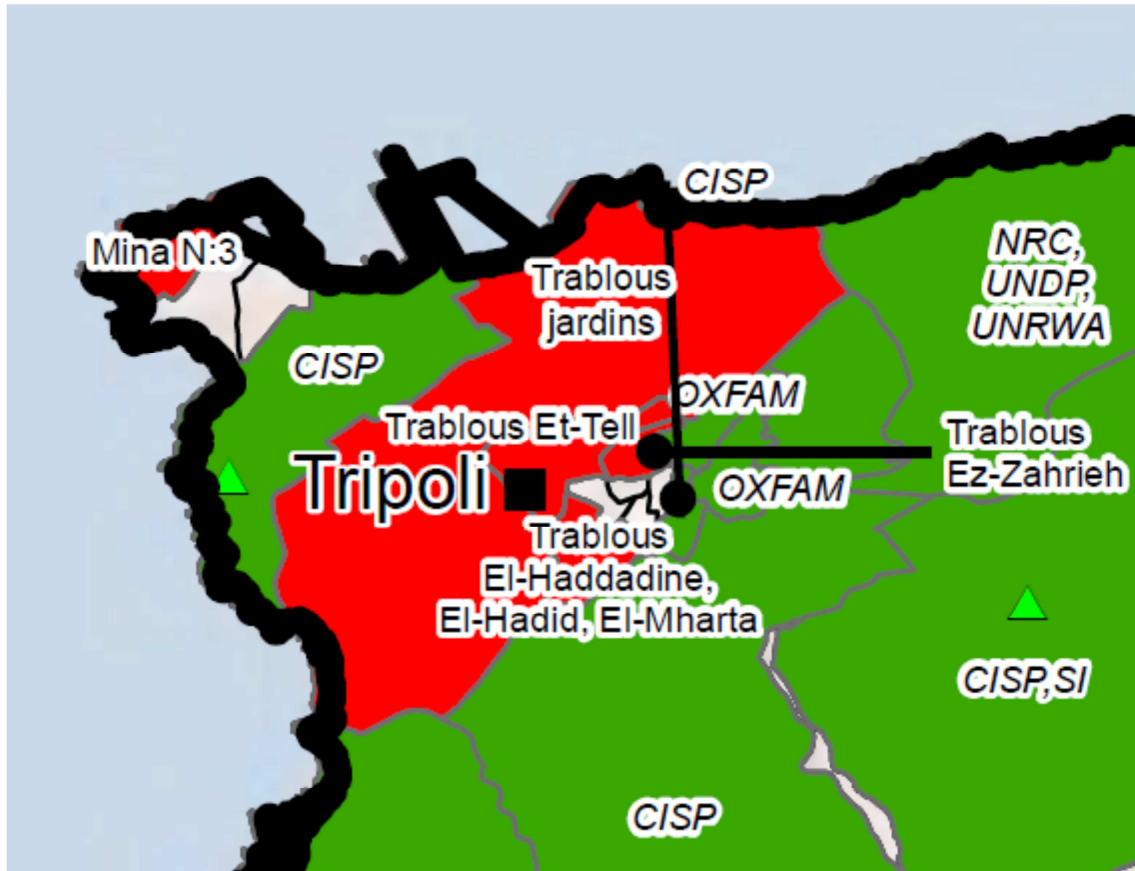
in many cases require extremely urgent interventions, in particular to support the poorest sections of vulnerable population, forced to live in substandard environment carrying the burden of injuries or debilitating diseases.

These needs were also confirmed by the Institutions of the different municipalities, which have expressed the need for urgent action in the field of WASH in the areas concerned by our study. Furthermore, municipalities have indicated additional needs and other areas that require intervention, inhabited by both locals and refugees, thus aggravating the overall picture of the WASH sector of the three municipalities and showing even more clearly the need and urgency of interventions to solve the problems highlighted.

These gaps in WASH interventions are then confirmed by the map below, which shows that in the first half of 2014 the areas identified in this report as suffering from gaps related to the WASH sector did not receive any kind of support and it must be taken into consideration that even the areas identified as those who have received support have not necessarily received it to an exhaustive extent or that not all the components of the WASH sector have been covered.



Map 6: Interventions carried out in Tripoli and its surroundings from January 2014 to May 2014. Areas are coloured in red when refugees residing in the area have received no support in the period of reference, while they are coloured in green when refugees residing in the area have received support by NGOs in at least one of the WASH sectors (source: UNHCR, UNICEF, WASH Working Group).



- Municipalities
- ▲ ITS
- WASH Presence Outside 225
- WASH Presence Inside 225
- 225 with No WASH Presence

Overview:

This maps shows the location of WASH Activities within the 225 most vulnerable localities and at a general cadastral level since January 2014. Partner names are provided where there is a WASH presence. Where there is no WASH presence and the site is inside the 225 vulnerable localities, the location name is given.

Map 7: Detail of the previous map focusing on the Municipalities concerned by the current survey