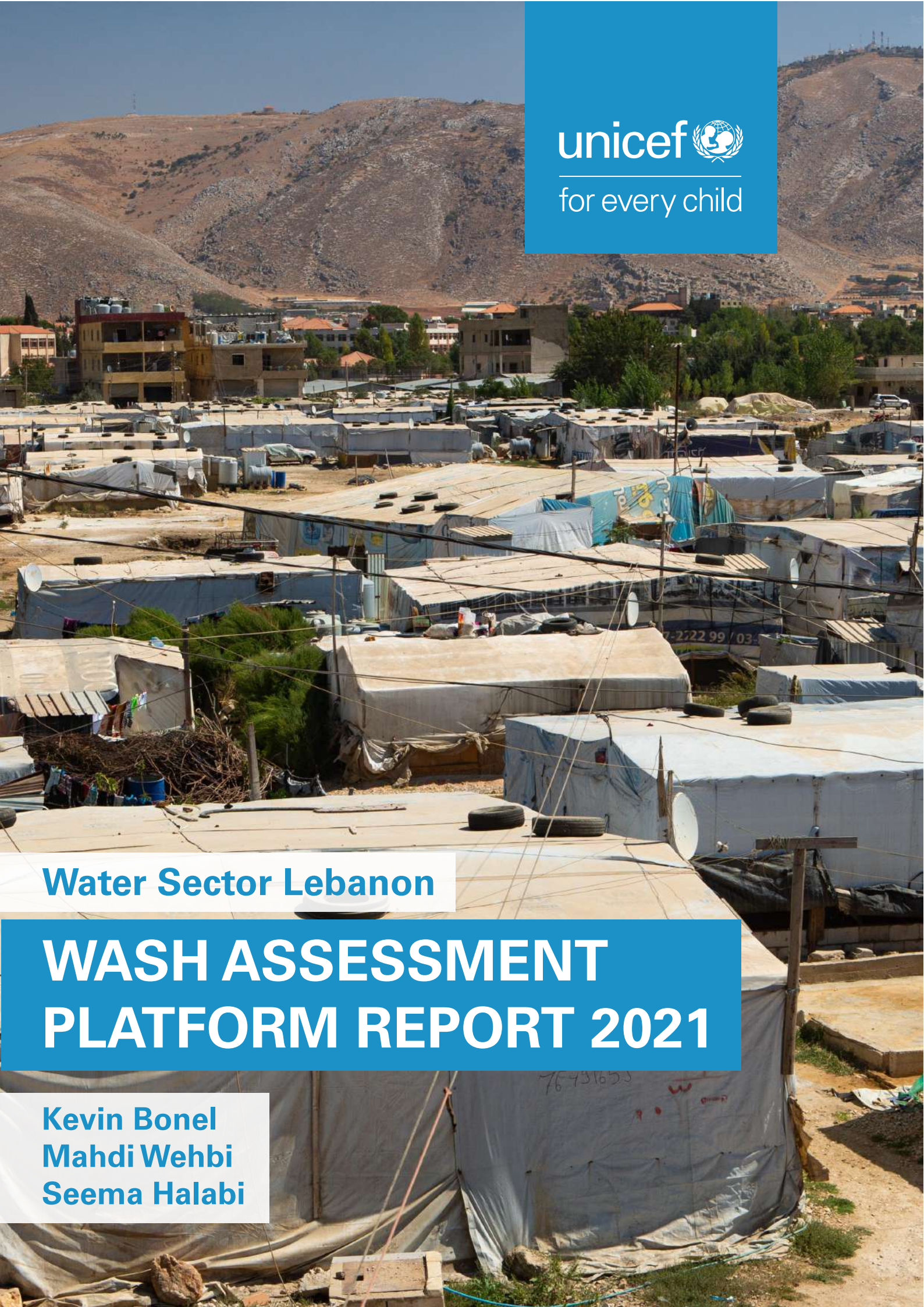

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Water Sector Lebanon

WASH ASSESSMENT PLATFORM REPORT 2021

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WASH ASSESSMENT PLATFORM REPORT 2021

Cover photo: Informal Settlement Ghazze 003. West-Bekaa, Lebanon.

ACKNOWLEDGEMENTS

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Abbreviations

COVID – Corona Virus Disease
CSMC – Collective Site Management and Coordination
CWC – Community WaSH Committee
HH – Households
ISs – Informal Settlements
LBP – Lebanese Pound
L/c/d – Liters per capita per day
MoE – Ministry of Environment
MoEW – Ministry of Energy and Water
NGO – Non Govermental Organization
SWM – Solid Waste Management
WAP – WaSH Assessment Platform
WaSH – Water Sanitation and Hygiene

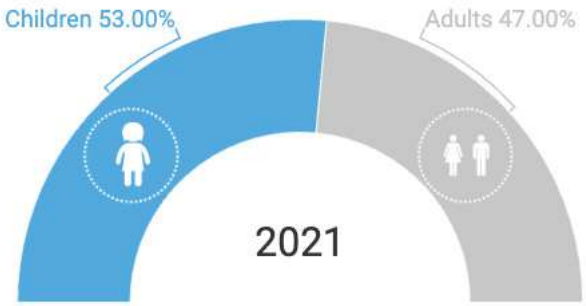
EXECUTIVE SUMMARY

WAP at a glance

Figure 1: Rapid site description of ISs within Lebanon

The WASH (Water Sanitation & Hygiene) Assessment Platform (WAP) Report 2021 showcases the vulnerability of informal settlements (ISs) in Lebanon to WaSH related stressors by using a standardized data collection survey across all WaSH agencies. In collaboration with 11 partner organizations, UNICEF (United Nations International Children Emergency Fund) Lebanon has consolidated and analyzed data from 5,768 ISs housing 326,702 individuals, 53% of which are children.

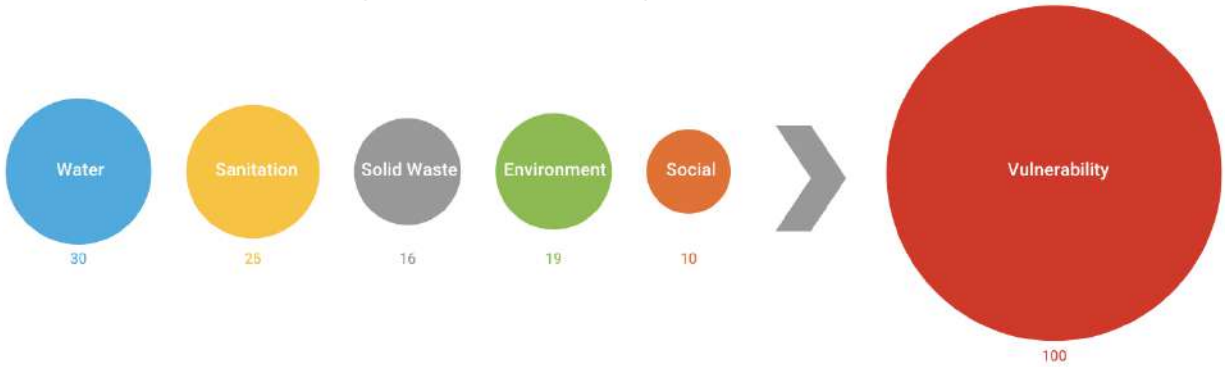
Figure 2: Percentage of Children in all ISs



The nationwide vulnerability score in ISs across Lebanon is influenced by social, water, sanitation, solid waste, and environmental variables. These stressors each have their own sub-criteria that are weighted out on a scale to calculate overall vulnerability, as shown in figure 3. Vulnerability scores are weighted using the following scale: water at 30 points, Sanitation at 25 points, Solid Waste at 16 points, Environment at 19 points, and Social at 10 points, each with their respective sub criterions. For example, sub-criteria for water stressors are access (15 points), availability (9 points), and quality (6 points) each with their own criteria.

WAP at a glance

Figure 3: Sub criteria defining overall vulnerability



The WAP Report 2021 estimates the vulnerability per governorate and highlights the types of potential services required to influence the day-to-day programme planning, decision making and national response plans for the 326,702 refugees in the ISs of Lebanon. On average, the sites are hosting 56 people, with the consideration that 9 percent of the sites are hosting an average of less than 30 individuals.

The situation of the sites is relatively stable. Only 6 percent of the sites surveyed (305 sites hosting 7,964 individuals) have been inhabited for less than a year and 74 per cent of those sites are less than four tents.

The most vulnerable governorates in 2021 are Bekaa, Baalbek-Hermel, and Akkar housing almost 90% of the total refugee population in more than 85% per cent of the settlements.

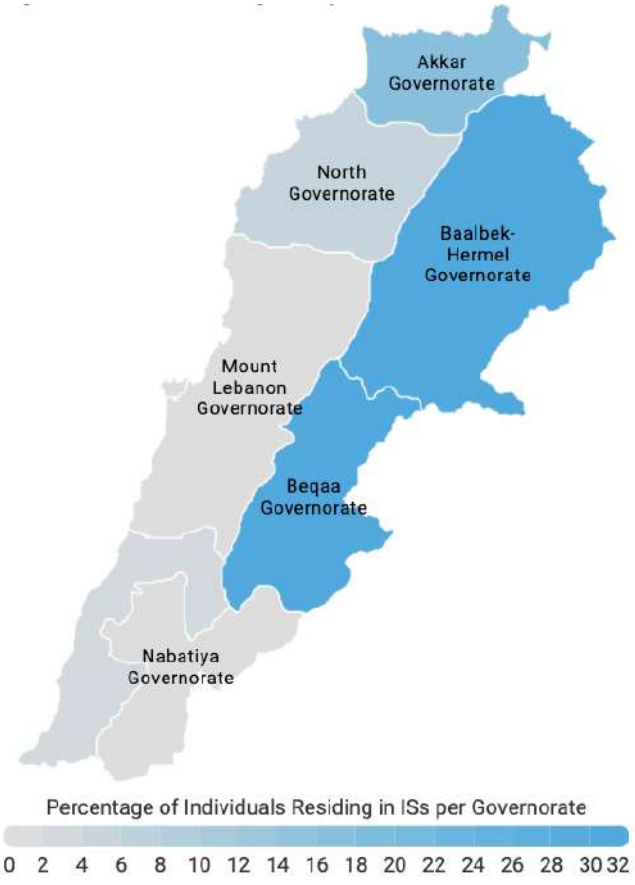
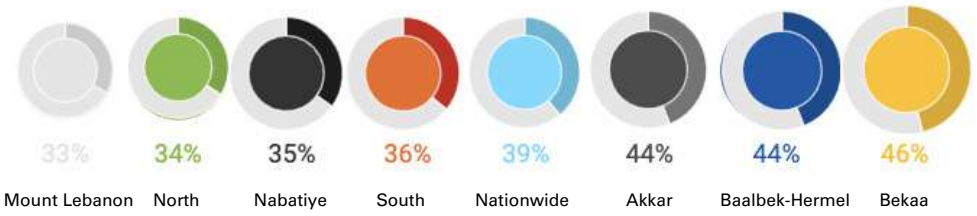


Figure 4: Percentage of Individuals Residing in ISs per Governorate

Vulnerability

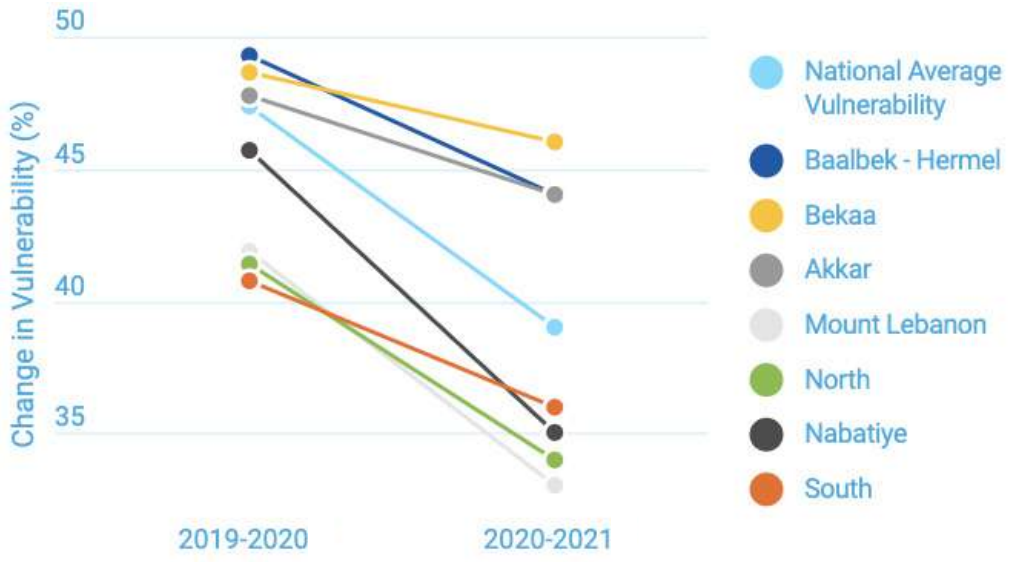
The national average vulnerability is 30.10 percent. The overall national vulnerability fluctuates per governorate – ranging from 33% in Mount Lebanon to 46.20% in the Bekaa. The most vulnerable governorates are the Bekaa, Nabatiyeh, and Baalbek-Hermel – communally these governorates house almost 75 per cent of the refugee population. The different vulnerability scores are below from low to high.

Figure 5: Vulnerability of governments from low to high



The graph below presents the vulnerability results for 2019-2020 and 2021 sweeps in comparison. Vulnerability has reduced from 47.37 percent to 30.10 percent, a 17.27 percent drop in one year.

Figure 6: Change in Lebanon nationwide vulnerability 2020 to 2021

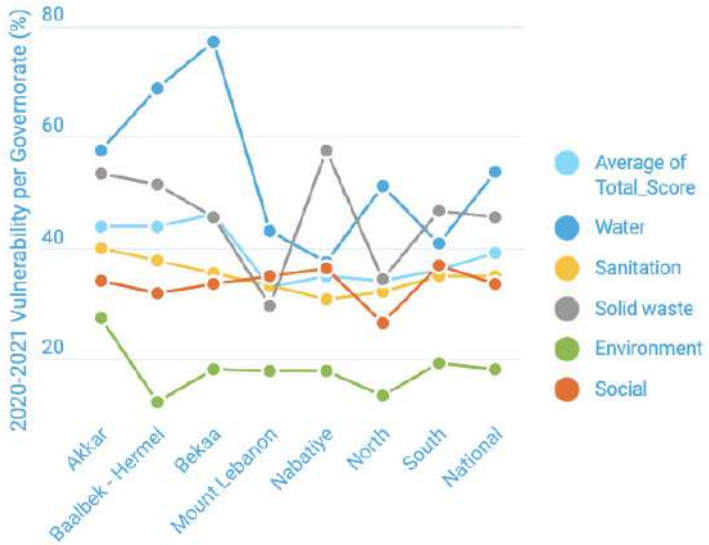


We can also notice that the vulnerability has decreased significantly in the governorate of Baalbel- Hermel by 22.11 percent, Akkar by 21.16 percent, Mount Lebanon by 20.58 percent and the North by 19.47 percent.
The remaining governorates also decreased, with a percentage change of 17.48 and 14.19 per cent in Nabatiyeh and the South, respectively. Exceptionally, the governorate of Bekaa maintained its vulnerability index with a decrease of only 2.43 per cent since 2020.

Vulnerability

The overall vulnerability variables have decreased except for the governorate of Bekaa which experienced an increase in vulnerability of water stress and solid waste stressors as shown in Figure 7. The Bekaa governorate scores at the top in 4 out of 5 stressors except for solid waste where Nabatiye governorate scores slightly higher. Notably the governorate of Bekaa houses 41% of refugees nationwide and has had 80 new sites out of the 291 sites newly established nationwide.

Figure 7: Lebanon nationwide vulnerability



This graphic represents the contribution of the sectorial vulnerability criteria to the overall vulnerability per governorate in 2020-2021. It showcases that the Bekaa governorate, housing 30 per cent of sites, faces severe vulnerability to water-related stressors at 77 per cent of ISs. Water vulnerability is dependent on water access, availability, and quality – as the governorate of Bekaa has less connection to private boreholes, ISs are heavily dependent on water trucking that scores low as this is the least sustainable source of water. The national average of water stress is 53.72%, with the second-highest stress in Baalbek-Hermel at 68.76%.

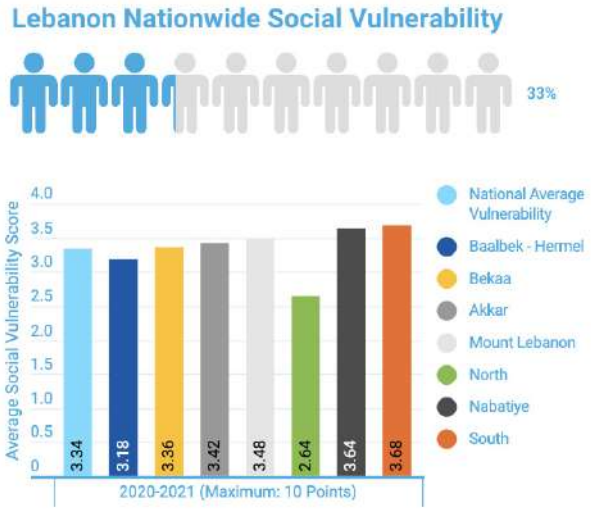
Solid waste stressors are another major contributor to national stress with three governorates presenting above the national vulnerability of 45.49%, these governorates are Nabatiyeh, Akkar and Baalbeck Hermel at 57.71%. 53.39%, and 51.33% respectively. Solid waste stress is influenced by storage and handling. Nabatiye has the lowest rate of waste collected with 70% of the waste being handle onsite. The South has one of the lowest storage capacities and Bekaa is the governorate where the solid waste collection is the costliest.

Environmental vulnerability remains relatively homogenous across all governorates with a national average of 18.03%, the three governorates that fall below the national average are Akkar, the South and Bekaa. Environmental vulnerability is influenced by vector of diseases, cleanliness, and location of sites relative to proximity to hazards as well as the percentage and duration of flooding.

Looking at social vulnerability, the national average is 33.42%, five governorates score above the national average vulnerability, South (36.77%), Nabatiye (36.36%), Mount lebanon (34,78%), Akkar (34.20%), and Bekaa (33.58%). Social vulnerability depends on the prevalence of individuals with special needs, the community structures, crowdedness, and seasonality.

Social

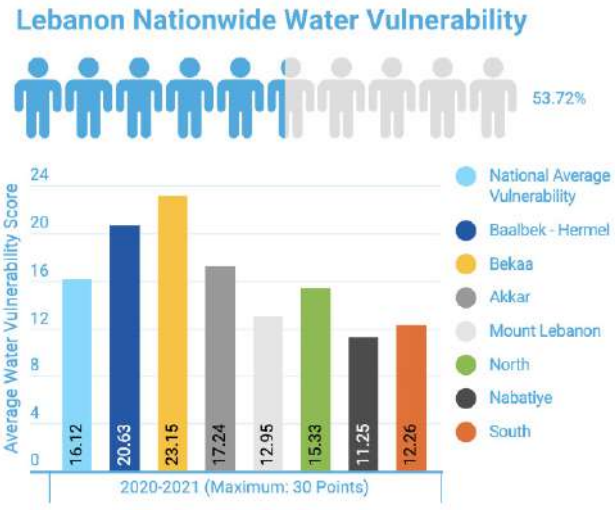
Figure 8: Lebanon nationwide social vulnerability



The national social vulnerability score is 3.34/10, meaning 33.4% of refugees residing in ISs are vulnerable to social stressors. The vulnerability score is calculated according to the special needs of the community (53 percent are children), the presence of community and WASH governance structure (90% and 71% not present respectively), the crowdedness (70% of sites are less than 4 meters apart, with 54% of sites being active sites).

Water

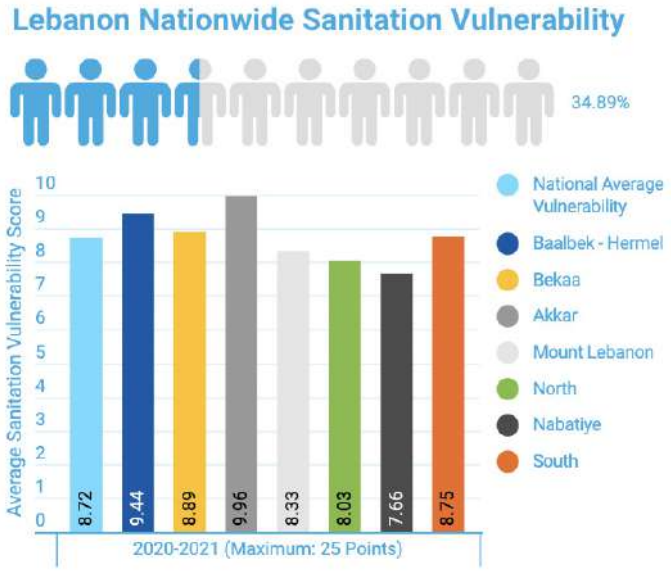
Figure 9: Lebanon nationwide water vulnerability



The national water vulnerability is 16.12/30, meaning 54.4% of refugees residing in ISs are vulnerable to Water stressors. The vulnerability score is calculated according to the access, availability, and quality of water. The most vulnerable governorate is the Bekaa with the average person receiving 76.22 L/day on average and are mostly dependent on water trucking. In terms of water access, Akkar and North have the lowest average daily availability with 70.52 and 72.80 L/cap/day respectively. The vulnerability is mostly influenced by the high dependency of water trucking per paid for by NGOs or residents.

Sanitation

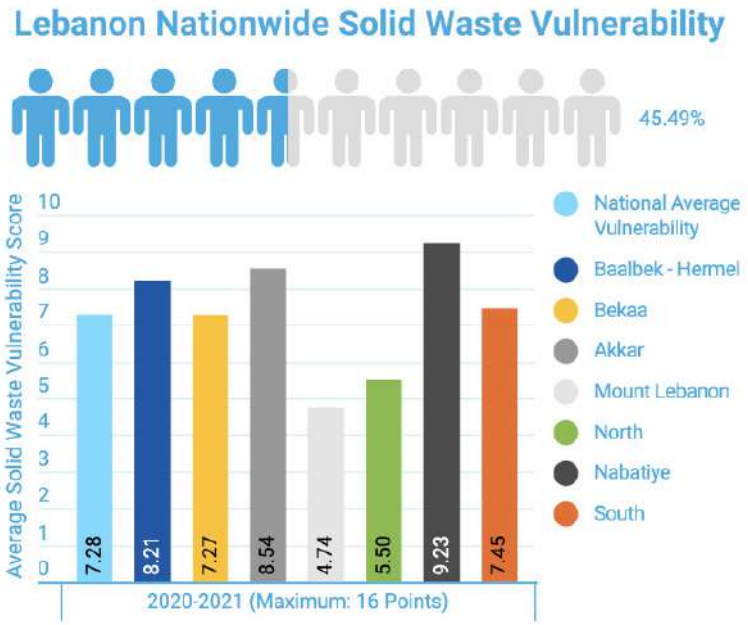
Figure 10: Lebanon nationwide sanitation vulnerability



Nationwide the sanitation vulnerability is 35% (8.72 over 25). The vulnerability is mostly due to the average number of improved latrines per site (1 for 8.1 people - 1 for 7.5 people in 2020) not reaching the sector standard of 1 improved per family in 64% of the sites (45% in 2020).
High desludging frequency is also largely contributing to sector vulnerability. Most of the high desludging rates are related to undersized or inappropriate containment facilities. Finally, the low proportion of proper greywater management and the absence (apart from few pilots) of treatment in most of the sites are also increasing the sanitation vulnerability of the sites.

Solid waste

Figure 11: Lebanon nationwide solid waste vulnerability



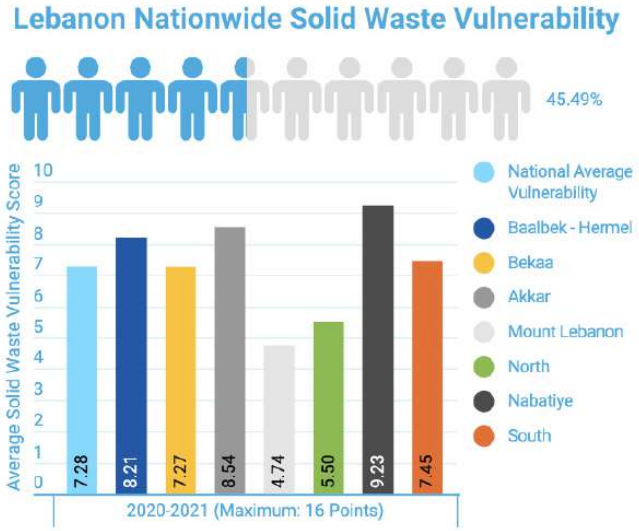
Solid waste

The national solid waste vulnerability is 7.28/16, meaning 45.5% of refugees residing in ISs are at risk of solid waste related stressors. Vulnerability to solid waste depends on the availability and size of storage and the handling of waste in terms of collection frequency and storage as well as the cost burden.

Nabatiye is the governorate with the least available storage capacity and 70% of the sites are left with the waste to be managed on-site. In Baalbeck and Akkar, respectively 21,2% and 32% of the sites are managing their waste onsite. Bekaa is the governorate presenting the costliest solid waste collection.

Environment

Figure 12: Lebanon nationwide environmental vulnerability



The environmental vulnerability is quite low on average (3.43/19). Nationwide the environmental vulnerability is due to the proximity to a hazardous site (especially in the Nabatiye, Bekaa, and Akkar), the nuisance caused by both insects and rodents (the primary concern in South) and the surface of the sites affected by the floods (primarily impacting the sites in Akkar). The Littering of Solid waste and open defecation is not so prevalent to influence the average governmental vulnerability apart in Nabatiye where the littering starts to become problematic.
Overall, environmental vulnerability reduced from last year as the number of sites affected by the floods and the severity of those floods reduced from last year.

INTRODUCTION

Background

The WASH Assessment Platform (WAP) was developed by Water sector partners in 2017 as a centralized digital dashboard to respond to nationwide WASH vulnerability in ISs in relation with real-time data from all WaSH agencies in Lebanon. This platform aims to highlight the key areas of WASH related intervention within the seven governorates in Lebanon that house ISs. The WAP allows implementing partners to access online data and business intelligence generated data interpretations to inputs of WASH field officers on the ground.
In terms of emergency response and planning, the WAP has proven to be a critical sector-wide tool for highlighting the types of potential services required to influence day-to-day programme planning, decision making, and national response plans for 326,702 refugees in ISs. Additionally, it advises the monitoring and evaluation of current and past conditions in ISs.
The WAP supports the WaSH actors to ensure the WaSH response in all ISs is systematically prioritized and targeted enabling the most effective utilization of any level of funding by:

- Defining which ISs are the most WaSH vulnerable and what specific factors contribute to this vulnerability;
- Through a weighted scoring system ranking all IS in an online live database;
- Enabling all partners to update the status of the ISs they are responsible for with new data that changes the vulnerability score;
- Evaluating the impact of targeted and prioritized WaSH activities after a period.

Several criteria have been considered to evaluate vulnerability. Those criteria were defined based on the desired status of ISs to be independent. The Independence of an IS was defined as:

1. Safely managed drinking water (improved facility/facilities -located on-premises, available when needed, and free from contamination);

2. Safely managed sanitation (private improved facilities -where fecal wastes are safely disposed on-site or transported and treated off-site; plus, handwashing facilities with soap and water);

3. Appropriate hygiene behavior by its residents in the four critical areas of handwashing, menstrual hygiene management (MHM), safe water handling, and the safe disposal of excreta;

4. Households whose net income is sufficient to cover their basic needs for a dignified way of living in a displacement setting (affordable WaSH);

5. Negligible environmental, health or social impacts due to WaSH-related activities;

6. Low level of risk for the site to be evicted for any reason;

This tool is robust and straightforward. It enables agencies to prioritize and focus their intervention in the most in need sites as well as to tailor their response to provide the most significant impact. The agencies, having dedicated access online, can make automatic use of those data in their daily programming and decision making as well as can use this to inform their Monitoring and Evaluation plans and reports.

Methodology

The WAP consists of a series of sweeps that are carried out by all WASH agencies in Lebanon. By May 2021 , the survey was run in 9,247 locations in which 5,768 sites were inhabited with an overall of 326,702 individuals, over half of which are children. The standardized survey is used by all WaSH agencies in all available sites to prioritize site specific WaSH interventions reflecting real-time conditions as opposed to a randomized sample technique.

Questionnaire

Each year, to ensure comparability, The WAP preserves, to a certain degree, the questions used since 2017. The WAP questionnaire of 2021 was revised by the different agencies in charge of the assessment, notably during the WAP technical meetings. This revision ensures the most accurate measurement of indicators, appropriate wording of the questions. The questionnaire consists of 85 questions that collect information at the site level. The questionnaire includes critical indicators on social, water, sanitation, solid waste, and environmental situation of the sites.

The WAP questionnaire is a site survey administrated with either the community representative of the site or any designated focal point. The questionnaire is conducted face to face with a site visit to ensure the visual inspection of the WASH facilities. This survey is taking a maximum of two hours for a more extensive site.
Now, the agencies must ensure the questionnaire is updated in the entire site and in its area of coverage every four months. A new sweep will run at the end of every year.
The full questionnaire can be downloaded using the following link:

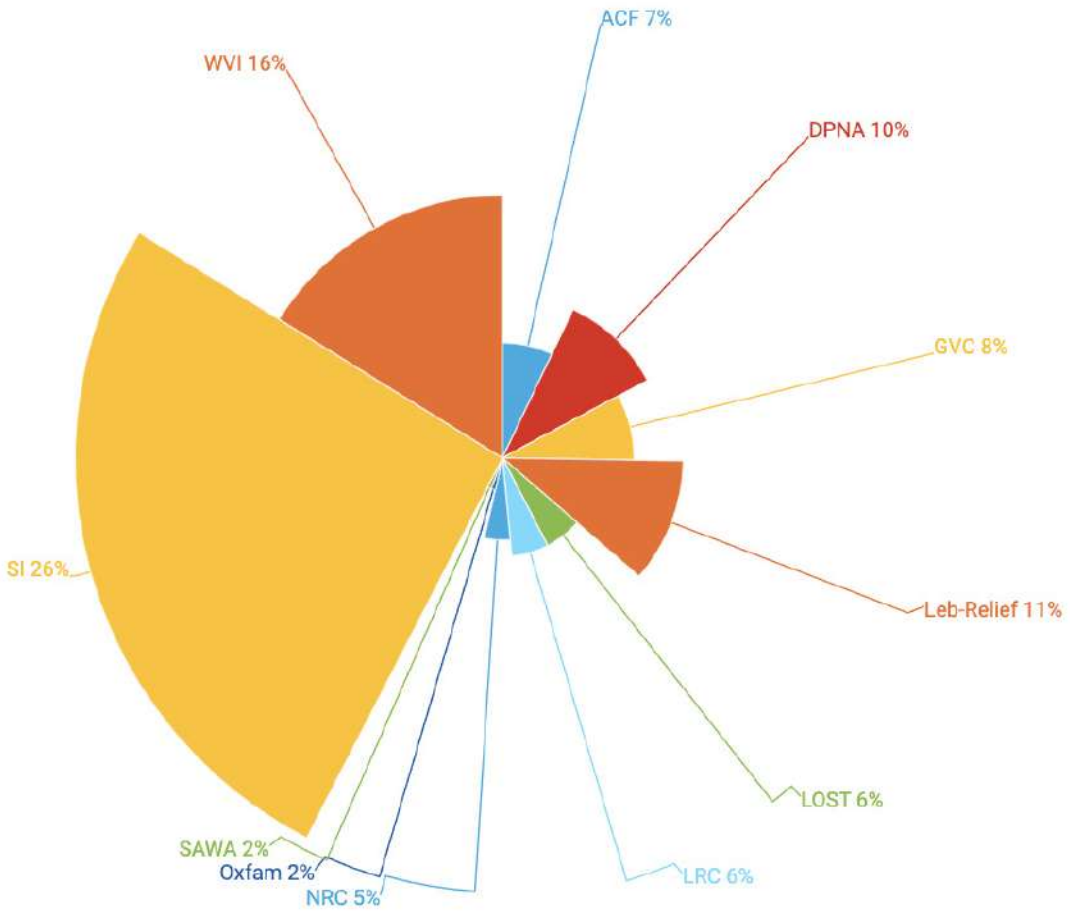
Limitation and data quality assurance

This survey, like any survey, has a limitation. The major limitation is that the survey relies on self-reported data. But the desk review from the partner to assess if the survey matches with their own database is helping to mitigate this limitation.
The demographic data from WAP are higher than the IAMP one. When the difference between the WAP data and the IAMP data is above 10%, the partners must revise and confirm which data is valid.
Finally, the calculation or extrapolation of the WAP data could be sometime a bit problematic, and the WAP 2020 has been adapted to ensure the reliability of data. The built-in calculation has enabled the assessor to check if the different information is realistic by directly providing the calculated estimation of critical indicators such as the number of litres of water per person per day or the average number of persons per useable latrines.

Agencies working and assessments completed during this sweep

The graph below showcases the degree of contribution for each of the 11 WASH agencies across Lebanon that had contributed to the generation of data used within this report.

Figure 13: Number of assessment of inhabited sites conducted by agencies 2020-2021



How is the vulnerability score calculated?

The vulnerability score is defined as a combination of social, water, sanitation, solid waste management, and environmental vulnerabilities. Those sectorial vulnerabilities are determined based on several indicators. The indicators, their calculation method, the respective weight to the sectorial, and overall site vulnerability are presented hereafter.

Criteria	Sub-Criteria	Criterion	Criterion weight	Sub-criteria weight
Social	Special Needs	Female-headed households	0.75	3
		Children	0.75	
		Elderly	0.75	
		Physically Disabled	0.75	
	Community Structures	WaSH Structure	1	2
		Community Structure	1	
	Crowdedness	Crowdedness (distance)	1	3
		Crowdedness (density)	2	
	Seasonality	Seasonality (quantity)	1	2
		Seasonality (duration)	1	
Water	Access	Water Storage Capacity	3	15
		Source Type	12	
	Availlibity	Quantity when accessed	4	9
		Frequency of access	2	
		Seasonality	3	
	Quality	Fecal Coliform	4.5	6
		Turbidity	0.75	
		Nitrates	0.75	
Sanitation	Access	Latrine access (structures)	9	12
		Latrine access (expansion)	3	
	Wastewater Disposal	Grey Water Disposal	2	11
		Black Water Disposal	3	
		Desludging (frequency)	3	
		Desludging (seasonality)	3	
	Treatment	On-site treatment	2	2
Solid Waste	Storage	Waste Storage	6	6
	Handling	Collection Storage	3	10
		Collection Frequency	3	
		Cost Burden	4	
Environment	Vector	Insects	2	4
		Rodents, Snakes, ...	2	
	Cleanliness	Littering	2.5	5.5
		Open Defecation	3	
	Location	Proximety Hazards	5	9.5
		Flooding Percentage	2.5	
		Flooding Duration	2	

RESULTS DISCUSSION

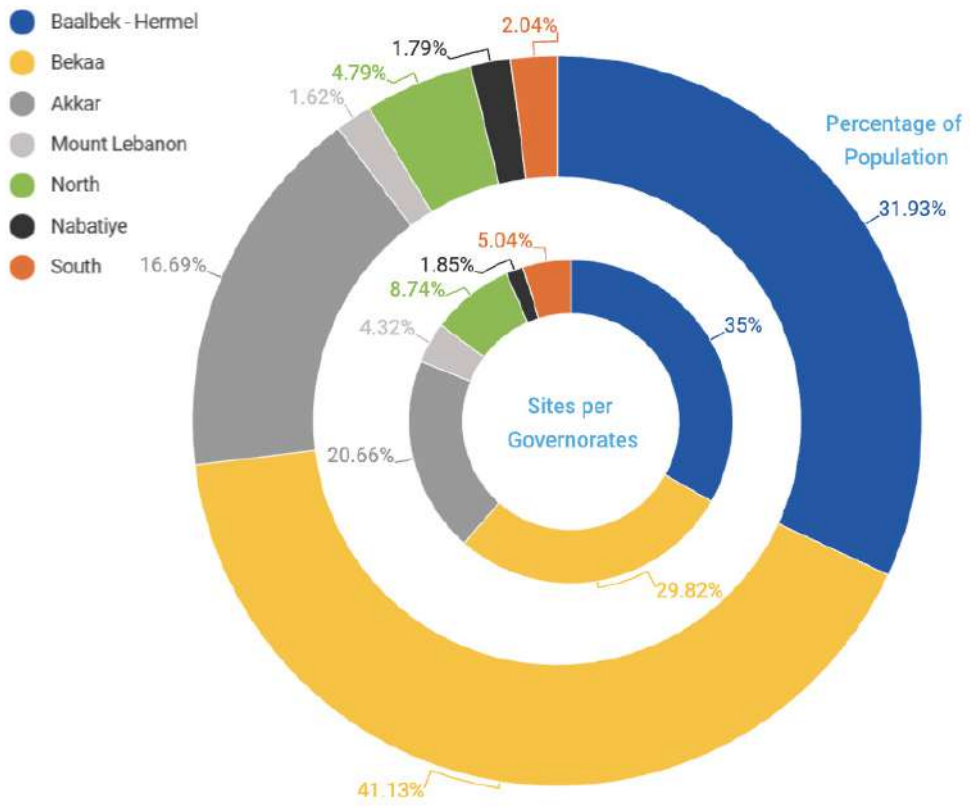
Sites description

In 2021 the survey was conducted in 9,241 site locations, this included 5,768 sites that were hosting 326,676 individuals. Based on the previous Inter Agency Mapping Project (IAMP) criterion differentiating sites with four tents and above as active sites as opposed to sites with less than four tents, the 2021 survey presents the following repartition of sites:
- 53 percent of the sites (3,067) are active, hosting 89.3 percent (291,631) of the refugee population living in ISs.
- 46 percent of the sites (2,701) are less than four dwellings, hosting 10.7 percent (35,071) of the people residing in ISs.

Repartition of sites and people per governorate

The largest refugee communities are living in the provinces of Bekaa and Baalbek Hermel. Those two governorates are hosting 73 per cent of the refugee population that is residing in 65 per cent of the sites in the country. The third-largest refugee population is living in the governorate of Akkar. This governorate amounts to 21 per cent of the sites nationwide, hosting 17 per cent of the overall Syrian population residing in ISs. The remaining governorates are hosting less than 10 per cent of the population hosted 14 per cent of the sites.

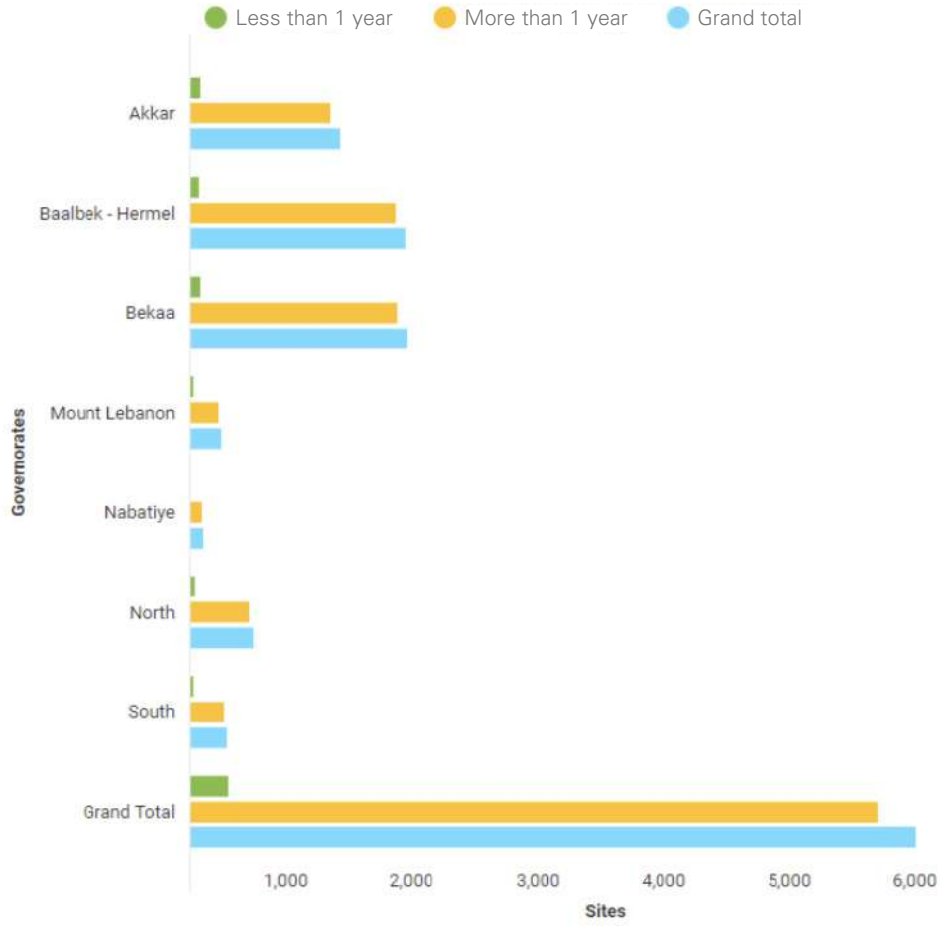
Figure 14: Percentage of population per governorate



How long has this site been inhabited?

Overall, the situation of the sites is relatively stable, with 5,463 (94 percent) sites established for more than a year, and only 304 newly established (six percent). The figure hereunder is presenting the sites and percentage of new sites per governorates.

Figure 15: Snapshot of established sites and newly developed sites



The governorates with the most significant proportion of new sites are:

- Mount Lebanon (8% new)
- North (7% new)
- Akkar (6% new)
- South (5% new)

Those 305 new sites are hosting 7964 people, and 74 per cent of the sites (226) are less than four tents' sites hosting 2,398 individuals.

Presence of community groups

A Community WaSH Committee is present in less than ¼ of the entire sites. Those committees are created and maintained in the most massive site settings. Indeed, it makes sense to have such representation to ensure the operation and maintenance and timely referral for a good quality of the WaSH services. The WaSH Committees or Focal points facilitate the WaSH services provision for a bit less than half of the refugee population living in ISs. The governorates with the most significant presence of CWC are:
- the North with 79 percent of the sites and 80 percent of the ISs resident in the governorate.
- Baalbek- Hermel, with 32 percent of the sites and 46 percent of its population
- the Bekaa, with 30 percent of the sites hosting 52 percent of the population in ISs from the governorate

Figure 16: Presence of community groups

Figure 17: Presence of other committees and community structures

The other committees and community structures such as the Collective Site Management and Coordination (CSMC) or others are present in solely 9 per cent of the sites over Lebanon and support the coordination for 8,8 percent of the overall population in ISs. The three governorates with the most significant committee structures (not WaSH) are the North (49%), Akkar (14%), and Bekaa (3%).
Baalbek-Hermel (2 percent of sites and 3 percent of the population), Bekaa (3 percent of sites and 6 percent of the population), and Akkar (14 percent of sites an 17 percent of its population)

Seasonal movements

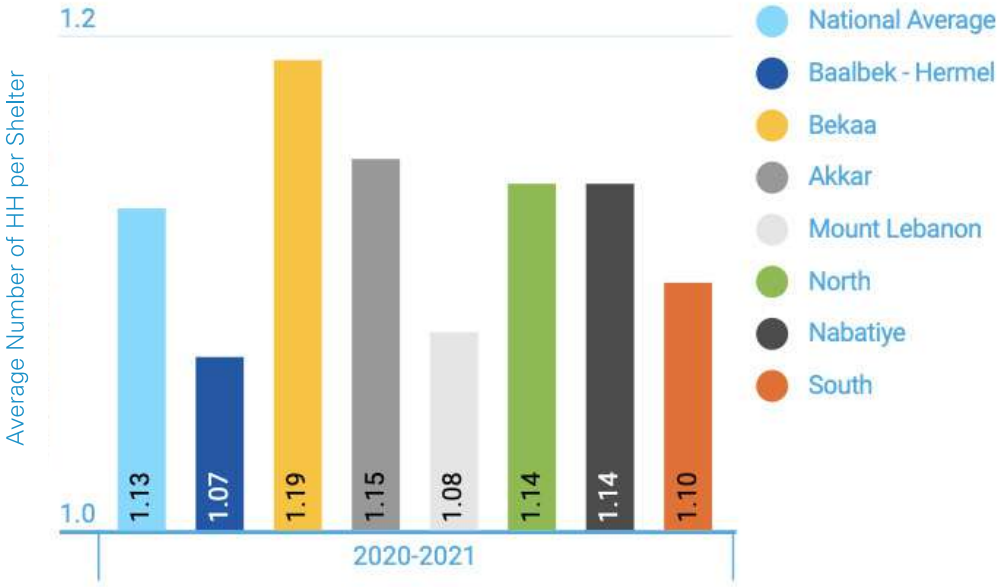
Seasonal movement is a practice reported for a marginal part of the population residing in ISs. Less than 1% of the total number of households (318 over 58,983 (0.54%)) are moving into sites. Besides, 0.82% of the households are moving out of the sites on a seasonal basis.
For the number of households moving into and out of a site, it remains challenging to define a trend and possible seasonal movements. Only in North and Akkar- where 61% of the households moving out of the sites - a small pattern is standing out for people leaving the sites in October, November and December, but it's not possible to identify where they are going.

Density of population

Two distinct criteria are informing the density of population in the sites:

- the number of households sharing the same dwelling or roof,
- the distance between shelters, being an indicator of the crowdedness, and the risk of quick propagation of fire.

Figure 18: Average number of households per shelter per governorate



The average number of households per shelter is on average 1.13 in 2021. The repartition of households sharing the same dwelling is relatively homogenous nationwide. The governorate of Bekaa and Akkar are presenting the most substantial proportion of shelters shared by more than one household with an average of 1.19 and 1.15 respectively. Baalbeck-Hermel and Mount Lebanon fall low on the shared dwelling per household scale, with 64 and 55 per cent of their population live in one household respectively.

Figure 19: Rapid site description

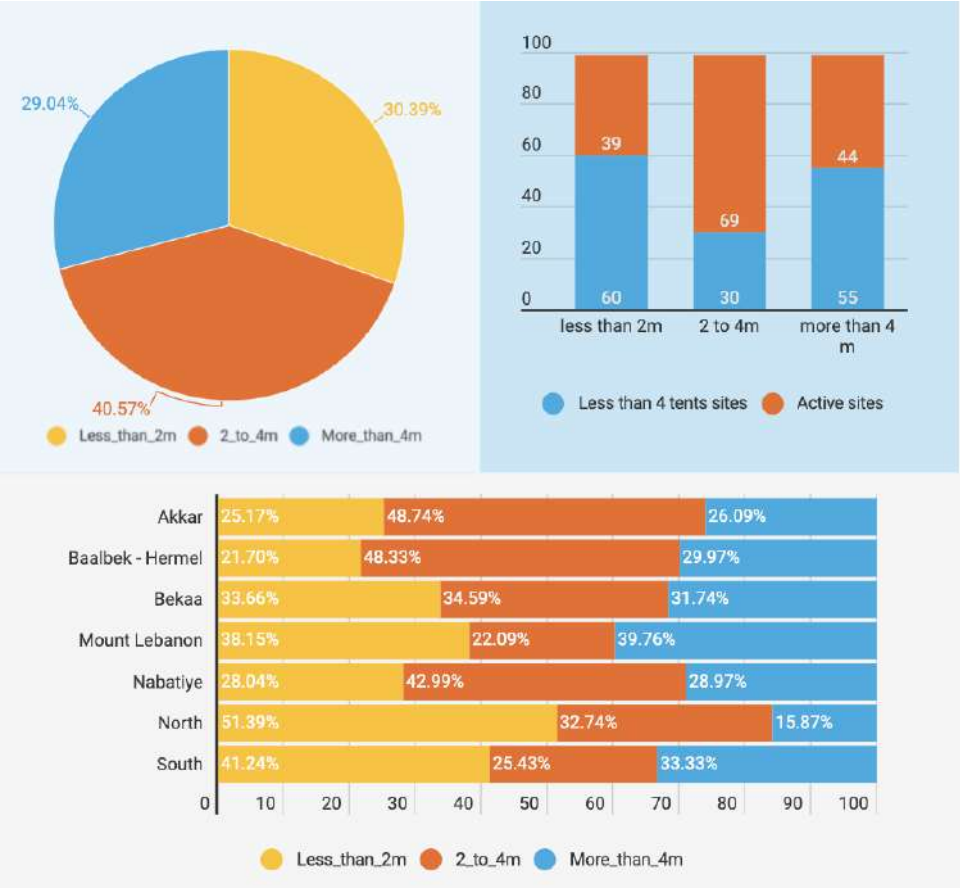
The distance between shelters

The size of the population living in a site doesn't affect the crowdedness, based on the distance between shelters, as 34.3 per cent of the people living in highly dense settings (less than 2m) represent 30 percent of the sites. Most of the population (48.6 percent) live in a compact environment where tents are separated from 2 to 4m from each other. 29 percent of the sites are sites with low density and hosting 17.1 percent of the population. Besides, the sites with less than four tents represent the largest share of the highly dense settings (60 percent).

The distance between shelters

Finally, across the country, the governorate of the North and the South have the highest representation of the highly dense settings at 51 percent living less than 2m apart. The figure below presents the reparation of the distance between dwellings per governorate.

Figure 20: Reparation of the distance between dwellings per governorate



Relation with landlord/authority or their representative

Eighty-nine per cent of sites, hosting 87 per cent of refugees, have declared a good relationship with their landlord. Meanwhile, slightly over 8 per cent of sites, housing over 10% of the population, have reported average conditions. Only 1.61% of sites, hosting 2% of refugees in ISs have reported bad relations with their landlords.

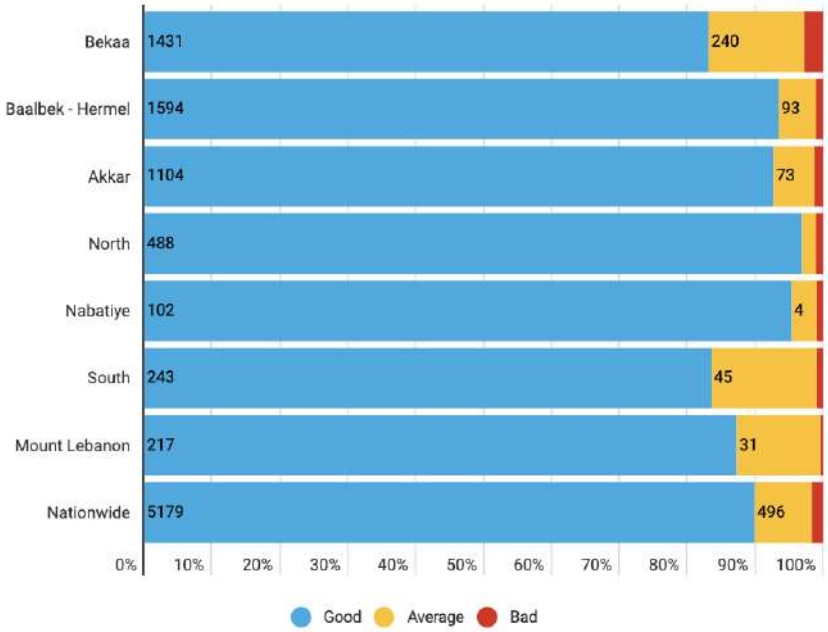
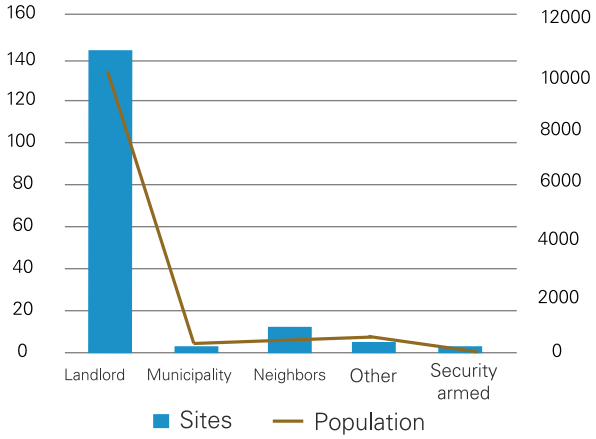


Figure 21: Number of sites - relationship

Eviction status

One hundred seventy-two sites (2.9% of the total number of locations) hosting 3,6 percent of the total population living in ISs (11,950 people) have received an eviction status. The governorates of Bekaa, Baalbeck-Hermel, and Akkar account for 78 percent of the eviction notice.

Figure 22: Number and source of eviction notices received per site



The landlords are predominantly providing the eviction notice. It represents 85 per cent of the cases, followed by the Neighbors (less than 7% of the eviction notice). The security forces and Lebanese Armed Force have sent an eviction notice to 2% of the sites. The remaining 6% are currently under eviction noticed issued by municipalities by the MoEW (Bisri Dam lands).

The risk of eviction from landlords has increased and taken the largest proportion of the eviction notice. This results from the current financial crisis. The landlord not able to get the same rental charges as before are more reluctant to continue hosting the Syrian refugees on their lands. Also, it must be noticed that the threat from Neighbours has increased tremendously.

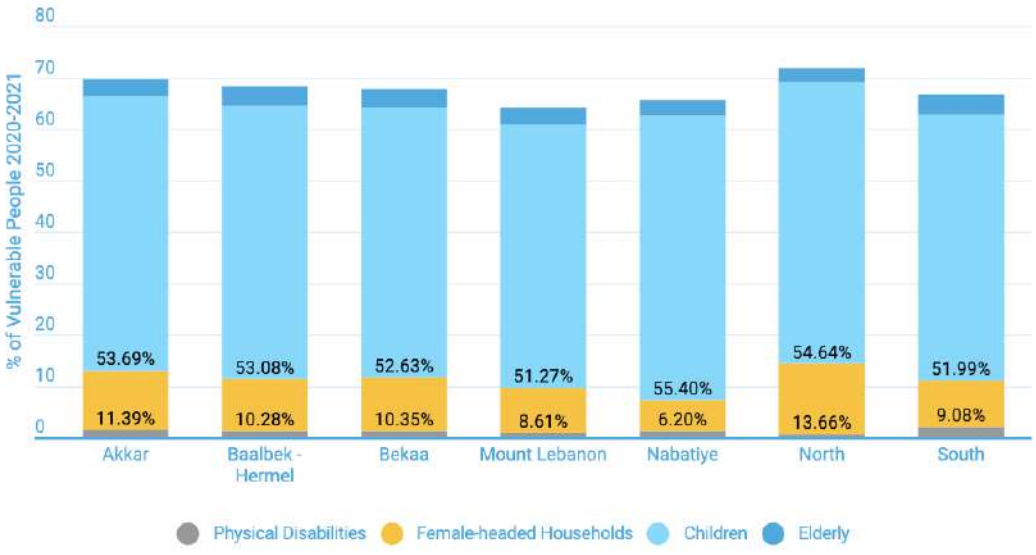
Vulnerable people and people with special needs

Vulnerable people are divided into four different categories:

- People with physical impairments
- Female head of household
- Elderly
- Children

The figure hereunder summarizes the repartition of those vulnerable groups nationwide

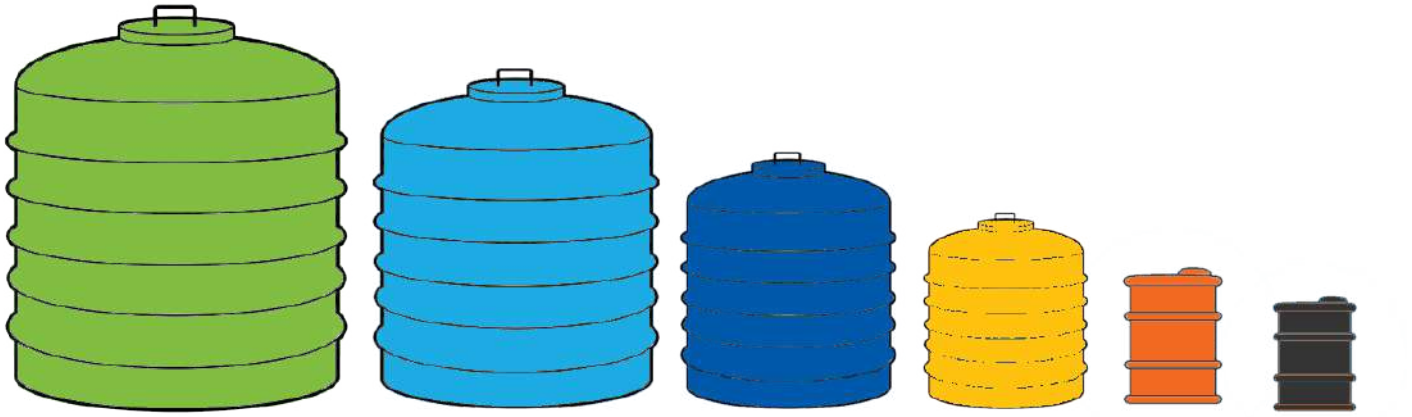
Figure 23: Percentage of vulnerable people in 2021

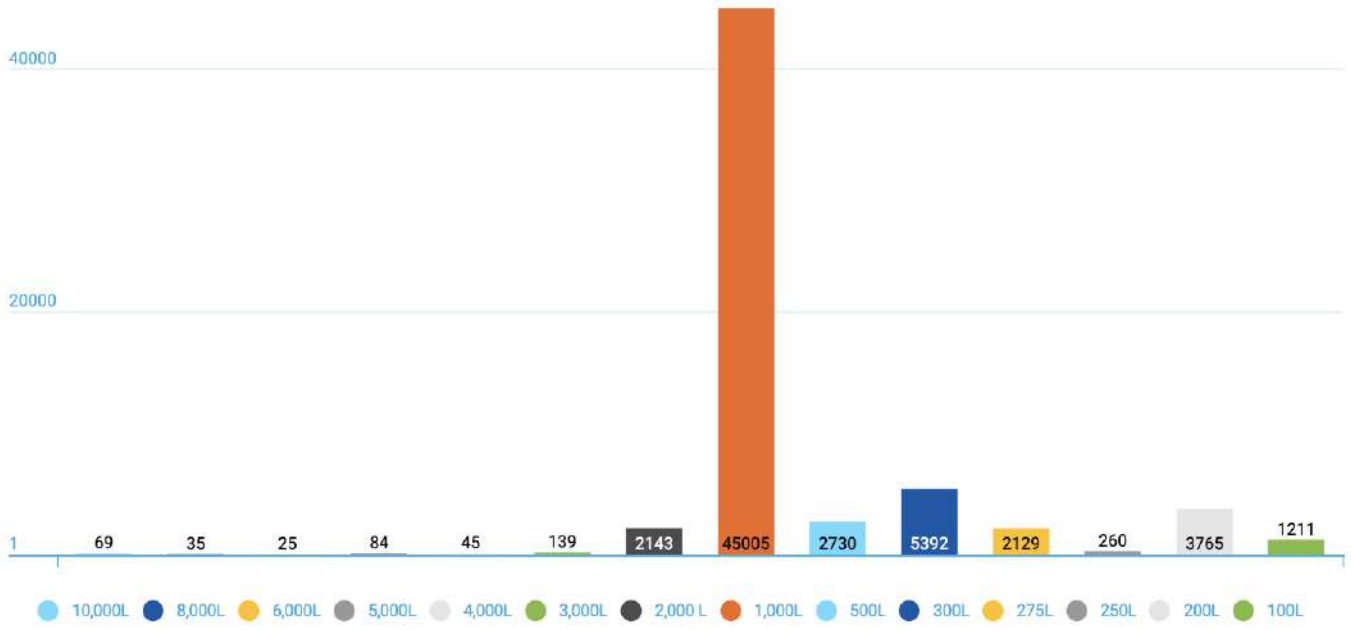


WATER

Water storage volume

Figure 24: Volume of water storage available on site



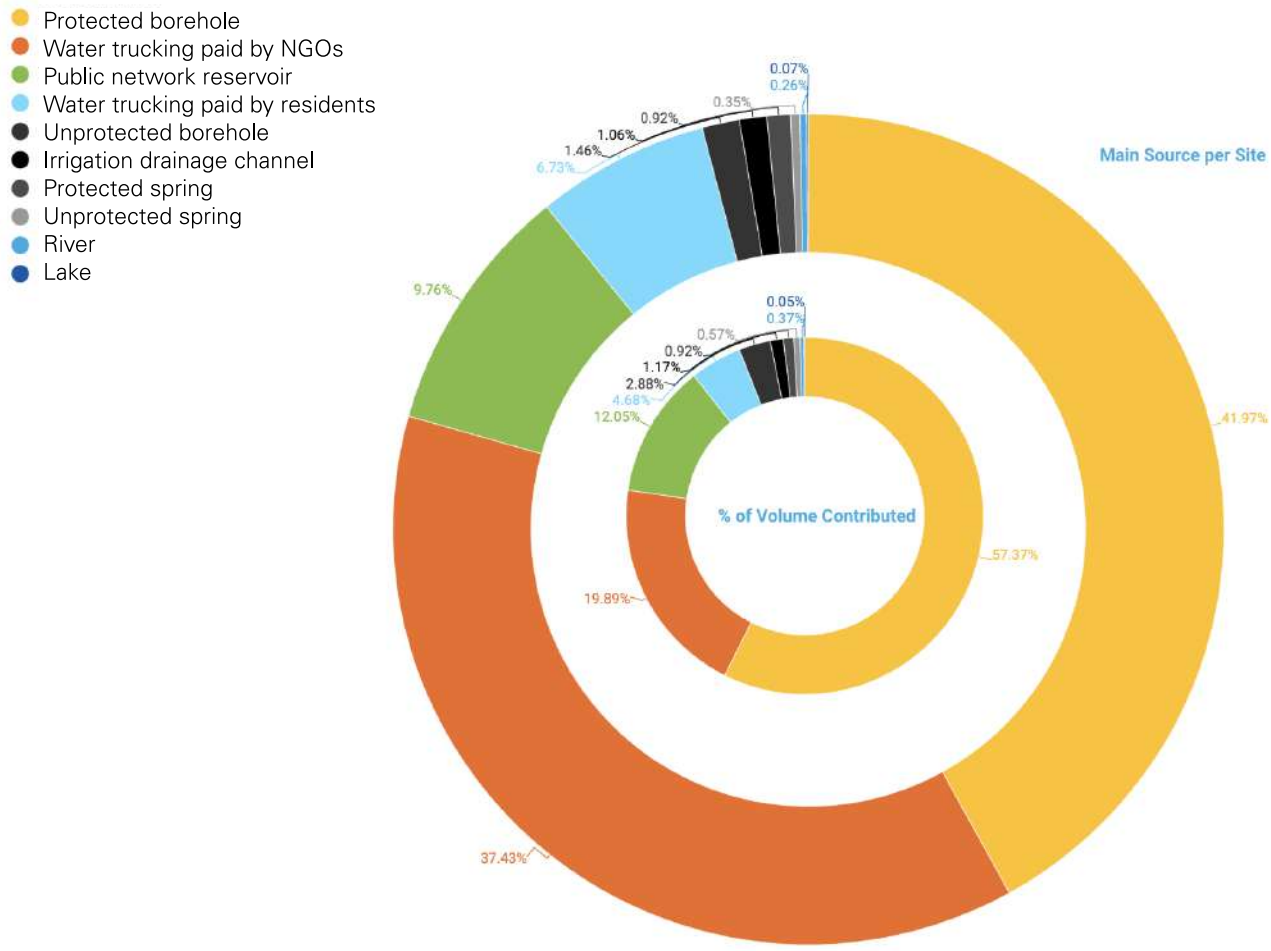


The most common type of water storage container is the 1000 liters tanks, with 45,005 tanks installed in nearly 5210 sites. The average water storage volume is 172L per person. One hundred seventy-eight sites report less than one day of water storage per person (35L), with 13 sites reporting none of the water tanks mentioned above. This is a significant improvement compared to last year, where two hundred and ten sites were reported without access to any water tanks.

The different source of water

Primary source and percentage of contribution

Figure 25: Primary source of water and percentage of contribution



The pie chart above represents the percentage the sources used as the primary source of water in sites and the volume they produced.
52 percent of the sites depend on protected sources available on site (41 percent protected boreholes, 10 percent Networks, and 1 percent protected spring). 42 percent of the sites are receiving water trucked to the site as the primary source. Above ¾ of those sites, the water trucking is paid for by NGOs. The volume of the water transported by NGOs for a primary source represents 40 percent of the total volume of the primary sources.

Source of drinking water and mixing of sources

		Sites	Individual	%Sites	%Individual
Sites mixing sources		2,466	132,089	43%	40%
Sites only one source	Unsafe surface water sources (Rivers/Lake/drainage Channel)	22	590	0%	0%
	Unprotected Borehole	25	1,103	0%	0%
	Unprotected spring	11	122	0%	0%
	Protected Borehole	1,294	52,990	22%	16%
	Protected Spring	23	626	0%	0%
	Public Network/Reservoir	374	11,605	6%	4%
	Water trucking paid by residents	271	8,482	5%	3%
	Water trucking paid by NGOs	1282	119,095	22%	36%

The table above presents that 57% of the sites hosting 194,613 individuals (60% of the overall ISs population) are having access to only one source of water. We can notice that 127,577 individuals are relying on unstainable Water trucking. 93% of those people are relying on the Water trucking paid for by NGOs. This represents a significant increase compared to last year when only 46,161 people depended solely on water trucked paid for by NGOs. This massive increase is undoubtedly a result of the limited access to the field from the technical teams due to the Covid-19 restrictions, reducing the number of assessments and possibilities to connect to alternative onsite sources.

At the time of writing the report, people depending solely on water sources not present onsite, especially on water trucked by NGOs are dependent on the funding level of this crisis and the availability of fuel for the tankers. Those populations with limited water storage are vulnerable and shall be prioritized for assessment to identify alternative sources and innovative solutions to reduce the risk of not having access to any water if the funding shrinks.

Besides, most of the sites relying on a single source of water have access to protected boreholes. It enables 52,990 people to fill their water needs.

590 people living in 22sites have only access to unsafe surface water and shall be prioritized for further assistance even if residing in small size sites.

The table hereafter presents the number using each source and how people prioritize them (from Primary to fourth water source).

Source of drinking water and mixing of sources

	Total	Main source	Second source	Third source	Fourth source	Fifth source
Bottled Water	1,520	-	1,084	98	1	-
Water trucking paid for by res	646	388	232	25	1	-
Water trucking paid for by ngo	2,288	2,159	125	4	-	-
Unprotected Spring	26	20	2	4	-	-
Unprotected Borehole	162	84	39	39	-	-
River	16	15	1	-	-	-
Public Network/Reservoir	803	563	240	-	-	-
Protected Spring	107	61	46	-	-	-
Protected Borehole	2,741	2,421	319	-	1	-
Lake	4	4	-	-	-	-
Irrigation/Drainage Channel	60	53	6	1	-	-

Due to the considerable groundwater resources in Lebanon, most of the sites depend on Protected boreholes; additional thousand sites are using this source as a primary source. We can notice that 2159 are declaring using water tucking paid for by NGOs as the primary source. In total, 2288 sites are using water trucking paid for by NGOs.
It is also essential to notice that 20% of the sites are completing the water they access as primary or secondary sources with bottled water.

Presentation of the seasonality of the source

Type of Primary source	available all the year	not available all the year	Grand Total
Protected Borehole	40.7%	1.2%	2,421
Water trucking paid by NGO	37.2%	0.2%	2,159
Public Network/Reservoir	9.4%	0.4%	563
Water trucking paid by the resident	6.6%	0.1%	388
Unprotected Borehole	1.4%	0.1%	84
Protected Spring	1.0%	0%	61
Irrigation/Drainage Channel	0.9%	0.1%	53
Unprotected spring	0.3%	0.1%	20
River	0.2%	0%	15
Lake	0.1%	0%	4

The almost totality of the sources are available all year long. We can notice that only in 2.2% of the case, the water source is for some months unavailable. It is mostly affecting people, depending on protected boreholes. It is mainly due to two different factors:

1- the protected borehole is too shallow and becomes dry during or at the end of the summer period,
2- the inhabitants are prevented from using this source to enable the landlord to resume the irrigation of its crops.

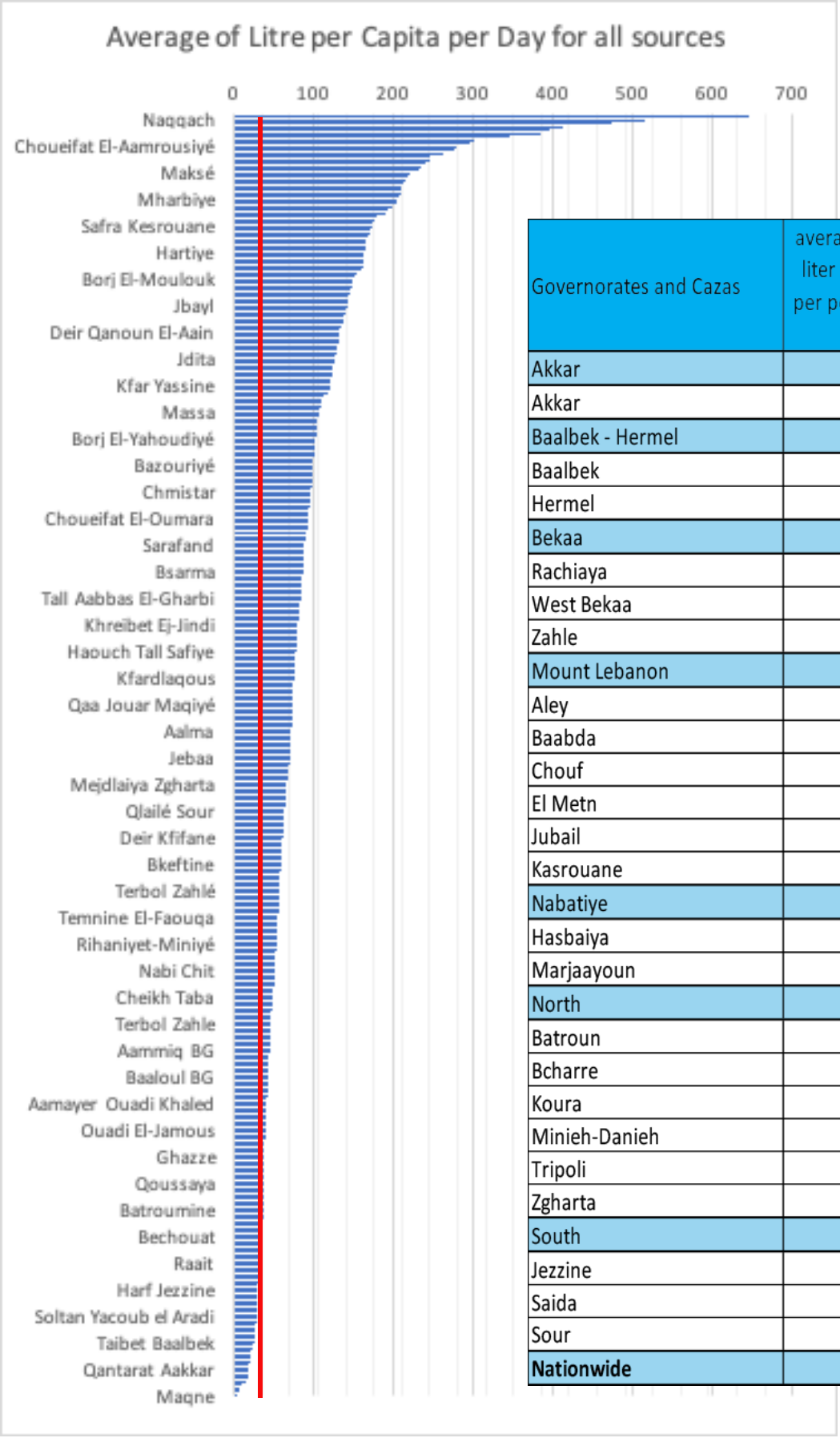
Presentation of usage per type of source

Source	Drinking		Cooking/ washing food		Personal hygiene		Domestic hygiene		Total
	# of Sites	% of Sites	# of Sites	% of Sites	# of Sites	% of Sites	# of Sites	% of Sites	
Public Network/Reservoir	410	73%	359	64%	404	72%	397	71%	563
Protected Borehole	1199	50%	1242	51%	2078	86%	2019	83%	2421
Protected Spring	43	70%	48	79%	30	49%	34	56%	61
Unprotected Borehole	15	18%	19	23%	73	87%	77	92%	84
Unprotected Spring	11	55%	10	50%	16	80%	19	95%	20
Water trucking paid by NGO	1557	72%	1511	70%	1362	63%	1499	69%	2159
Water trucking paid by the resident	267	69%	264	68%	271	70%	261	67%	388
Lake	0	0%	1	25%	3	75%	4	100%	4
River	5	33%	7	47%	14	93%	15	100%	15
Irrigation/Drainage Channel	13	25%	8	15%	53	100%	53	100%	53

We can notice from the table above that the public network is considered the safer source, with 73% of the population having access to it using it for drinking. Water trucking paid for by NGOs is the second water source considered the safest, with 72% of the population using it for drinking. The sources considered unsafe for drinking are :
The unprotected boreholes. Solely 18% of the population having access to it are using to drink
The lakes, gratefully nobody is resorting to using unsafe surface lake water for drinking.
Still, unsafe sources such as rivers and irrigation channels are used for drinking in a limited number of sites, respectively 5 and 13. The use of unsafe water sources is mainly done for personal and always domestic hygiene.
Half of the sites connected to protected boreholes are using it for drinking, cooking and washing food, and mostly use this water for personal and domestic hygiene.
The protected springs are considered as safer sources than protected boreholes but are present in a limited number of sites.
Protected boreholes and springs, even if considered improved sources, are still sensitive to contamination from the collection of shallow water. In addition, those water infrastructures mainly were designed for irrigation purposes and not drinking or domestic water supply.

Presentation of l/c/d

Figure 26: Presentation of water access per liter per capita per day (L/c/d)



Governorates and Cazas	average yearly liter of water per person per day
Akkar	54.13
Akkar	54.13
Baalbek - Hermel	113.41
Baalbek	114.61
Hermel	87.58
Bekaa	104.46
Rachiaya	76.74
West Bekaa	121.25
Zahle	97.73
Mount Lebanon	111.05
Aley	69.39
Baabda	49.60
Chouf	131.35
El Metn	224.04
Jubail	73.43
Kasrouane	101.96
Nabatiye	110.72
Hasbaiya	102.56
Marjaayoun	114.05
North	352.01
Batroun	98.29
Bcharre	106.67
Koura	96.20
Minieh-Danieh	510.38
Tripoli	77.30
Zgharta	161.54
South	174.80
Jezzine	290.92
Saida	184.31
Sour	88.60
Nationwide	**120.58**

Presentation of L/c/d

Nationwide the individuals living in ISs have access to 80.11 L/c/d. The two governorates with the most considerable access to water are Beirut, Mount Lebanon and Nabatiye, with respectively 148.43 and 123.97 litres per person per day. The two governorates with less access to water are the Akkar, with 70.52 L/c/d and the North, with 72.8 L/c/d. Moreover, nationwide, 1926 sites hosting 129,095 individuals do not have access to 35 L/c/d.
The previously mentioned number of sites includes 329 sites hosting 23,420 individuals having access to less than 15l/c/d. Last year the population not receiving 15L/c/d were 60% of the current population.

Payment of the source

Payment	No		Yes_rent		Yes_additional	
Main source	Sites	Ind	Sites	Ind	Sites	Ind
Irrigation Drainage Channel	1%	0%	0%	0%	0%	0%
Lake	0%	0%	0%	0%	0%	0%
Protected Borehole	33%	21%	6%	5%	4%	4%
Protected Spring	1%	1%	0%	0%	0%	0%
Public Network/Reservoir	7%	4%	1%	0%	2%	1%
River	0%	0%	0%	0%	0%	0%
Unprotected Borehole	1%	1%	0%	0%	0%	0%
Unprotected Spring	0%	0%	0%	0%	0%	0%
Water trucking paid by NGO	37%	58%	0%	0%	0%	0%
Water trucking paid by residents	1%	1%	0%	0%	5%	3%
Nationwide	82%	85%	7%	6%	11%	9%

For the primary water source, the majority of the people (276,969 individuals) are reporting accessing drinking and domestic water onsite for free.
But 15 % of the IS population residing in 18% of the sites are declaring paying for receiving water. So, most of the people are paying for water in addition to their rent.
Most people paying for water are paying to access onsite boreholes (30,203 individuals living in 542 sites). Within this group, 14,541 people in 221 locations are paying for it in addition to the rent. This number has doubled compared to last year. In 2020, 6,128 people only, were identified paying for water in addition to their rent.
The second source presenting many people paying for the water are the sites where the residents manage the water trucking. 81% of the 13,181individuals using this modality as a primary source are declaring paying for it.
Finally, only 2,128 individuals living in 19 locations receiving water via water trucking paid for by NGO are declaring paying to access this water. It has reduced significantly from last year and was undoubtedly due to misreporting.

Water quality of the different sources

	Main source			Second source			Third source			Fourth source		
Sources with Water analyses	5521	316,898	97%	936	67,980	95%	86	9,469	96%	2	444	100%
Total number of sources	5768	326,702		1010	71,774		89	9,847		2	444	
Safe water	3792	224,075	71%	628	46,663	69%	69	7,213	76%	2	444	8%
Not compliant	1729	92,823	29%	308	21,317	31%	17	2,256	24%	0	-	0%
Fecal contamination	1465	78,329	25%	280	18,779	28%	16	2,247	24%	0	0	0%
High Turbidity (above 5 NTU)	177	11,217	4%	13	796	1%	1	9	0%	0	0	0%
Nitrate ([NO3] above 45mg/l)	192	24,712	8%	84	8,611	13%	1	347	4%	0	0	0%

Regarding Water quality, tremendous effort has been put this year in collecting and analyzing samples from more than 95% of the different sources.

For the primary source, 71% of the sources are safe to drink. The 29% of unsafe primary sources are contaminated mainly by Fecal coliforms (85% of the unsafe primary sources) and then from too high Nitrate concentrations.

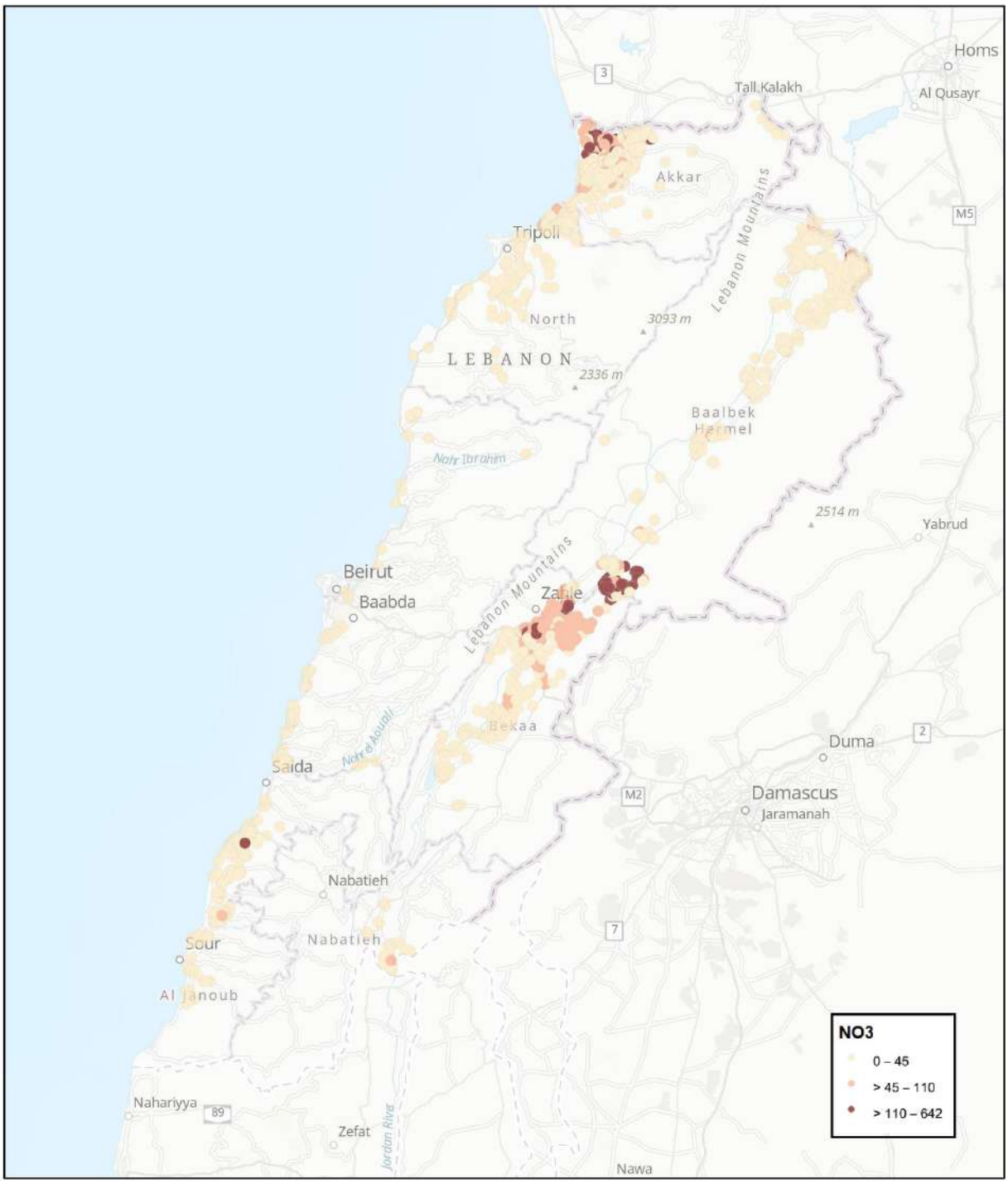
For the secondary source, 69% of the population accessing an alternative source have access to safe drinking water for the different parameters tested. 90% of the unsafe sources are contaminated by fecal coliforms and in parallel 30% of the sites are contaminated by Nitrate concentration above 45mg/L.

For the tertiary source, 76% of the sources present results in the palatable safety range for the tested parameters. 94% of the sources defined unsafe, are because of the presence of fecal coliforms and only one site is presenting high Nitrate concentration.
The two sites accessing a fourth source have access to water without high turbity or high nitrate concentration nor contaminated by fecal coliforms the day of sampling.

More than 50% of the sources contaminated by fecal coliforms are protected and unprotected boreholes. Simple disinfection of the well, if there is no diffuse contamination of the water table by adjacent wastewater containment or network or installation of a filtration unit onsite, could ensure the absence of Fecal coliform.

Water quality of the different sources

Figure 27: Mapping of the nitrate concentration in the different onsite sources



The map above presents the different Nitrate concentrations for the different onsite sources. We can notice that the two areas are presenting large contamination with Nitrates:

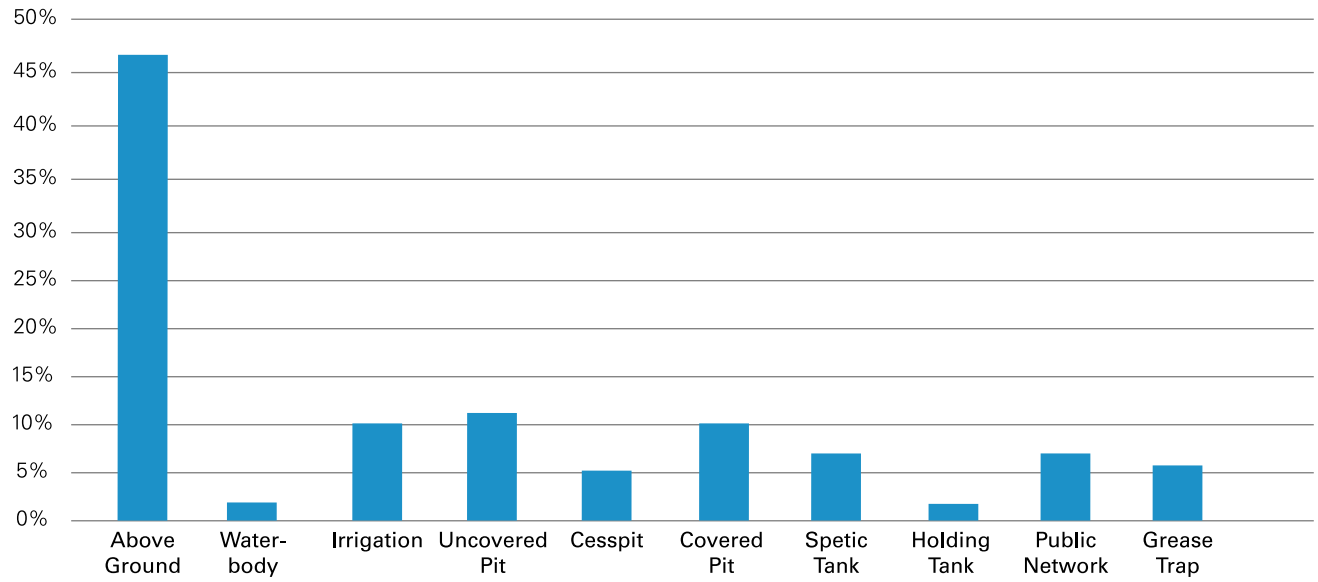
- Sahel Akkar
- From Zahle to Serrain et Tatha south Baalbeck governorate

Those two areas are largely agricultural places which could be the main reason for having such elevated levels of pollutant in the water.

SANITATION

Greywater management

Figure 28: National repartition of greywater disposal



Most of the shelter (46.48%) are discharging the greywater above ground. The remaining shelters are mostly managing the greywater in a similar type of containment as the blackwater. The connection to holding tanks is still marginal nationwide, 2% (1915) of the tents as this pratique increases the desludging frequency tremendously. Many tents connected to a holding tank for grey water discharge (76% or 1455) are in the Bekka governorate.

The pretreatment of the greywater by capturing the oil and fats using grease traps are present for 6% of the shelter nationwide. The governorates with the most significant representation of tents connected to such pretreatment are:

- Akkar with 1,313 (almost 20% of the tents of the governorate),
- Bekaa with 1,132 grease traps (6% of the shelters of the governorate, mostly present in Zahle district with 77% of the dwellings connected to those units).

Some sites have some treatment or pretreatment options for greywater, using some gravel and sand to purify this water.

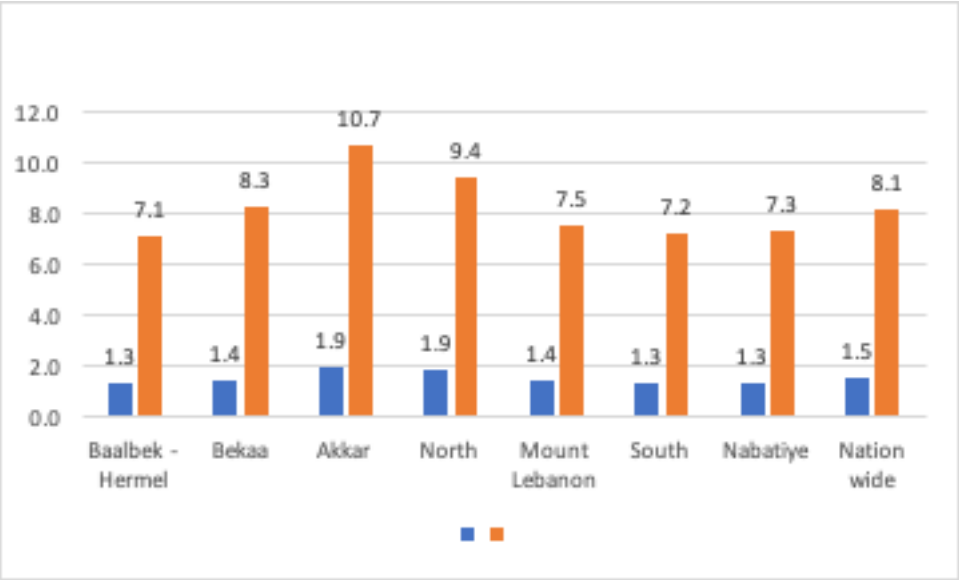
Blackwater management

User interface

Two hundred seventy five people living in twenty three sites across the country still do not have access to any, even unimproved sanitation facilities on their site. It represents a negligible percentage of the population and tremendous improvements have been made from last year as now only 275 individuals are left without any latrines compared to 929 in 2020.
In Figure 29, we can find the average number of people per latrine or user interface. The governorate of Baalbeck Hermel and Bekaa have the best coverage, respectively, of toilets per person and household. The governorate of Akkar is the one with a higher number of persons and families per latrine having on average one improved and usable latrine shared by 10,7 individuals and almost two households (1.9).

Sites with no latrines		
Governorates	# of Sites	# of Ind
Akkar	13	174
Baalbek-Hermel	2	31
Bekaa	3	25
Mount Lebanon	1	5
Nabatiye	3	39
South	1	1
Nationwide	23	275

Figure 29: Average number of people and households per improved and usable latrines



Nationwide, 2,439 sites hosting 80,421 individuals are reaching the Sphere standards recommendation one latrine per household. To ensure that, in the remaining 3,329 sites (hosting 246,581 individuals), the same standard is achieved, 15,112 latrines should be additionally constructed.

User interface

Governorates	Latrines outside shelter		Latrines inside shelter		Total latrines	Total improved and useable	Number of people	Average # of pers/ latrine	Average # of pers/ improved and useable latrine	Number of HH	Number of HH	Average # of HH/ improved and useable latrine
	Total	Improved & useable	Total	Improved & useable								
Akkar	4,468	3,765	1,480	1,341	5,948	5,106	54,548	9.2	10.7	9,947	1.7	1.9
Baalbek-Hermel	9,334	8,820	6,272	5,956	15,606	14,776	104,325	6.7	7.	19,649	1.3	1.3
Bekaa	13,854	12,025	4,779	4,200	18,633	16,225	134,356	7.2	8.3	23,026	1.2	1.4
Mount Lebanon	288	247	501	458	789	705	5,292	6.7	7.5	998	1.3	1.4
Nabatiye	836	775	31	30	867	805	5,861	6.8	7.3	1,059	1.2	1.3
North	1,166	1,072	601	594	1,767	1,666	15,656	8.9	9.4	3,106	1.8	1.9
South	566	529	419	396	985	925	6,664	6.8	7.2	1,198	1.2	1.3
National Average	30,512	27,233	14,083	12,975	44,595	40,208	326,702	7.3	8.1	58,983	1.3	1.5

This year we can notice a reduction of 1,388 latrines in the overall sites. The governorates Baalbeck-Hermel and Bekaa are the governorates with the most significant reduction of Latrines. In the south the numbers are stable. We can notice a significant increase in North, BML and Akkar.

The partners explain this high reduction of the number of people per improved and useable latrines mostly because people are starting to sell part or the entire structure of the latrines to cope with the current crisis.

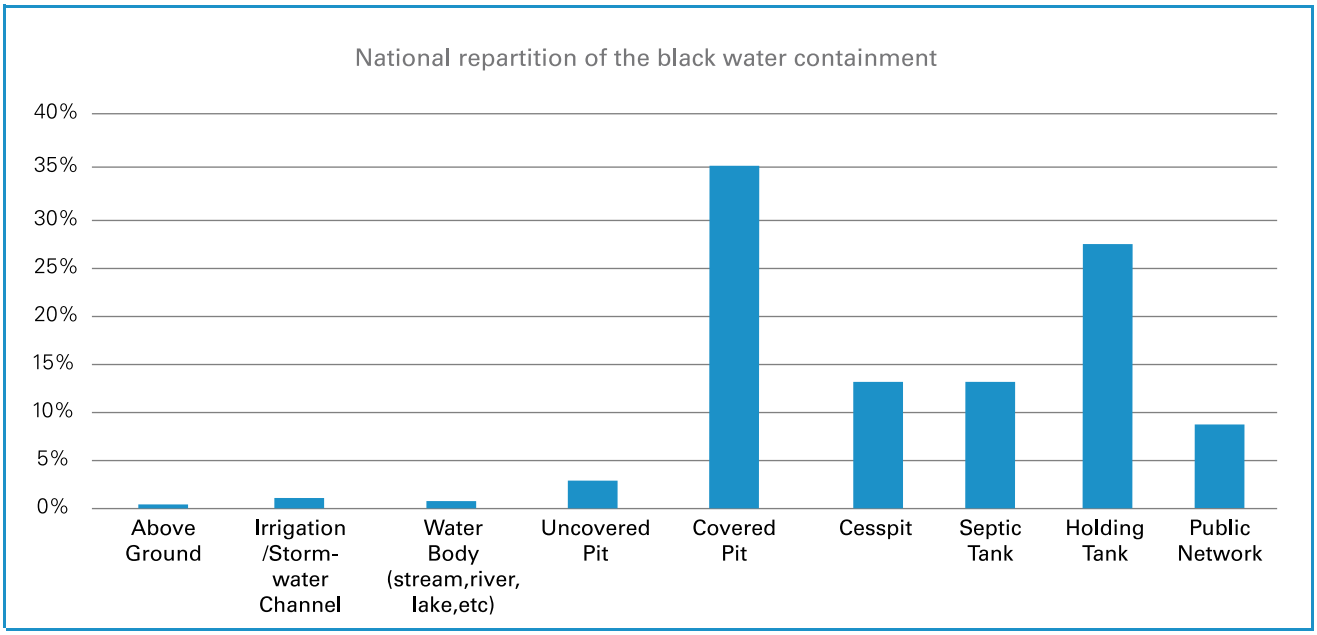
Containment

5 % (2,220 units)) of the latrines are discharging the blackwater into channels, water bodies, or unsafely in/on the ground. The repartition within the country is relatively homogenous for latrines above ground.
The governorates with the most substantial presence of restrooms connected to stormwater channel or irrigation channels are the Akkar and the Bekaa, respectively, having 364 and 131 bathrooms attached to channels.

The majority (47.5%) of the restrooms are connected to a covered pit (34,7%) and cesspit (12.8%). Those covered pits ensure sanitary containment of the blackwater, but the soil structure, geology, and water table level could lead to a rapid transfer of wastewater.
Thus, in such conditions, this containment is a source of pollution for the soil and groundwater resources. The percentage of latrines connected to such type of containment has sightly decreased from last year.

Containment

Figure 30: Percentage of the containment in Informal settlement accross the country



12.6% of the restrooms are connected to septic tanks in the country. Most of the toilets connected to septic systems are located in Akkar (55%), Bekaa (24%), and Baalbeck Hermel (15%).

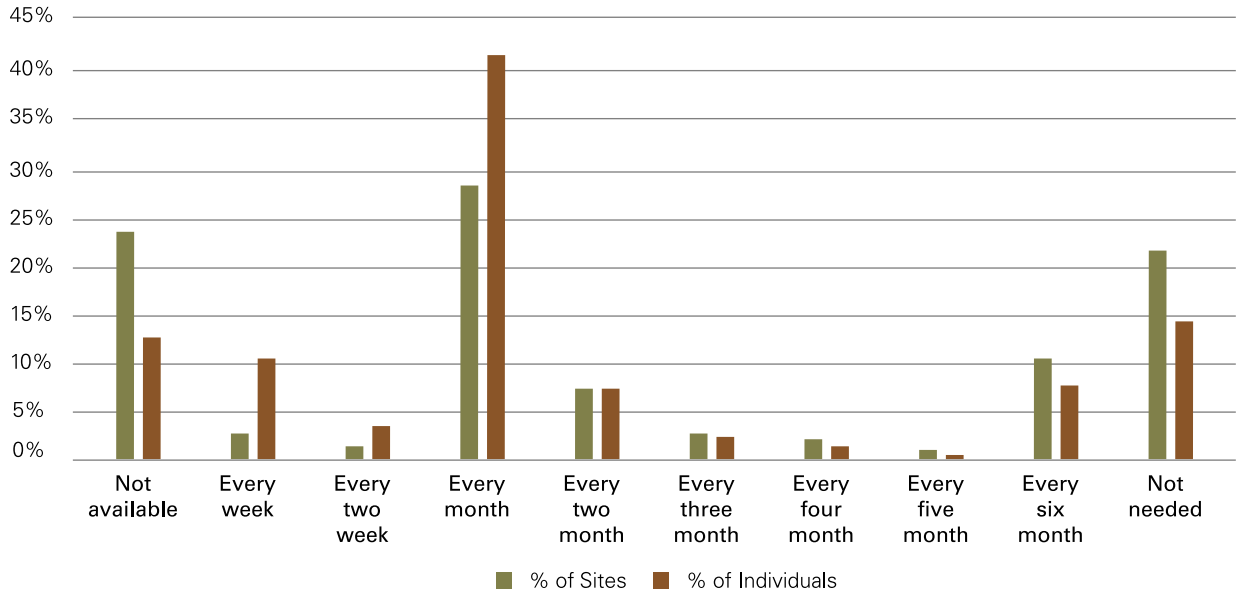
Latrines connected to holding tanks remain the second-largest type of containment used by wash partners in the country, with 27% of the toilets attached to it. This number has slightly increased from last year (23.6%). If this type of containment being sealed is avoiding any environmental contamination, this containment can require a high rate of desludging frequencies. Additional 926 latrines are connected to a holding tanks from 2020.

Finally, 3,693 latrines (8.3%) are connected to a sewer network, the governorates with the largest number of latrines connected to sewer network are Bekaa (1789), North (762) and Akkar (466). In the Northern governorate 43% of the latrines are connected to sewer network.

Desludging

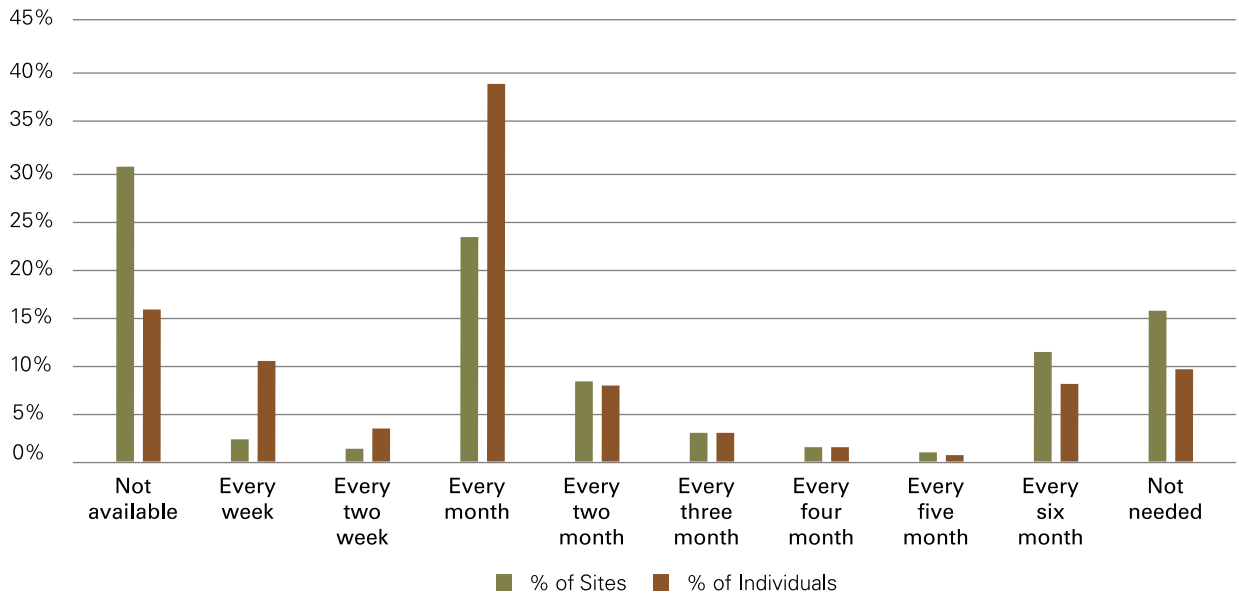
Desludging frequency

Figure 31: Desludging frequencies, repartition per sites and associated population in 2021



The graph above presents the desludging frequency per site and associated population. The most common desludging rate remains desludging once a month. The desludging once a month is a common practice for 1,630 sites hosting around 135,000 individuals. The most prominent sites (155 sites hosting 33,000 individuals) require desludging once a week. The desludging services are not available in 1,340 areas hosting 40,740 people, those sites mainly being less than four tents' sites. Finally, 45,608 individuals (14%) are residing in 1233 places where this service is not needed, mostly because the restrooms are connected to sewer networks or open pits/cesspits.

Figure 31: Desludging frequencies, repartition per sites and associated population in 2020



Desludging frequency

When comparing the data with 2020 WAP data, we notice that the desludging frequency of once a month has increased in more than 28% of the sites and affect more than 41% of the population. This increase could result from the rise of water provision from the early stage of the COVID response, increasing from 35L/c/d to 60L/c/d.

Desludging frequency	Above Ground	Irrigation/Storm water Channel	Water body (stream, river, lake, etc.)	Uncovered Pit	Covered Pit	Cesspit	Septic Tank	Holding Tank	Public Network
Every six months or more	0%	0%	0%	0%	3%	1%	2%	1%	0%
Every five mon	0%	0%	0%	0%	0%	0%	0%	0%	0%
Every four mon	0%	0%	0%	0%	0%	0%	1%	0%	0%
Every three months	0%	0%	0%	0%	1%	0%	1%	0%	0%
Every two months	0%	0%	0%	0%	2%	1%	2%	1%	0%
Every month	0%	0%	0%	1%	10%	5%	3%	20%	1%
Every two weeks	0%	0%	0%	0%	1%	1%	0%	1%	0%
Every week or less	0%	0%	0%	0%	9%	3%	1%	1%	0%
Nationwide	0%	0%	0%	2%	26%	11%	10%	25%	1%

The table above presents the desludging frequency per type of containment. That the containment with higher desludging rates are the covered pits and holding tanks. The covered pit is the containment responsible for the largest share of the weekly desludging. The sites needing weekly desludging are for 90% of them present in Baalbeck Hermel, mostly Aarsal.

Regarding the monthly desludging, this is due to the significant presence of holding tanks but also covered pits mainly installed in Baalbeck-Hermel and the Bekaa. Those two governorates are accounting respectively for 56 and 36 percent of sites and 68 and 25 percent of the population necessitating this frequent service. It might come from 2 different factors:

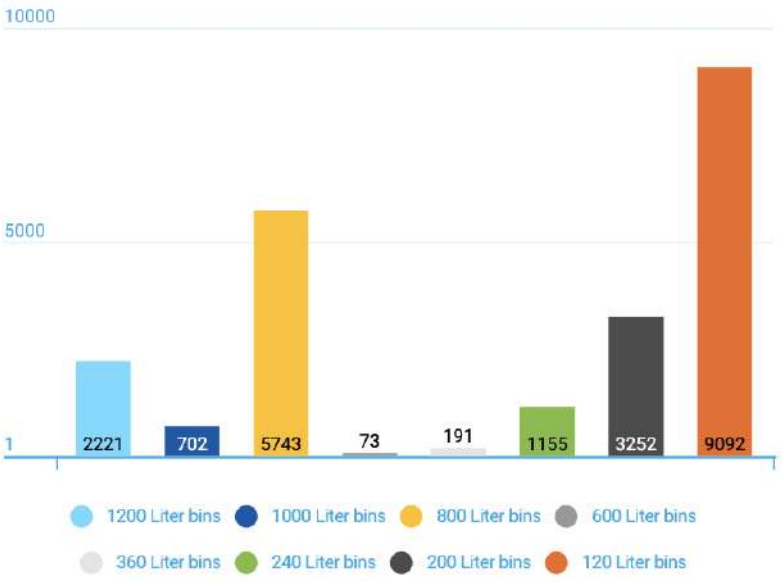
- an inappropriate sizing of the containment with possibly mixing of greywater increasing the frequency of desludging and,
- a habit took several years of crisis with this frequency of service, making it difficult to readapt or reduce the desludging rate to an on-call or when needed frequency.

SOLID WASTE

The volume of solid waste disposal storage

Figure 33: Frequency of collection

Dumpster (1200-600L)	SW Bins (360L)	SW Bins (240L)	SW Bins (200L)	SW Bins (120L)
39%	**0.8%**	**5.1%**	**14.5%**	**40.5%**



All over ISs, the most common size of bins available is the 120L metallic bins, often being a repurpose metallic barrel. Overall, ISs people have access to an average of 12L of storage of refuse per person or 66 liters per household.

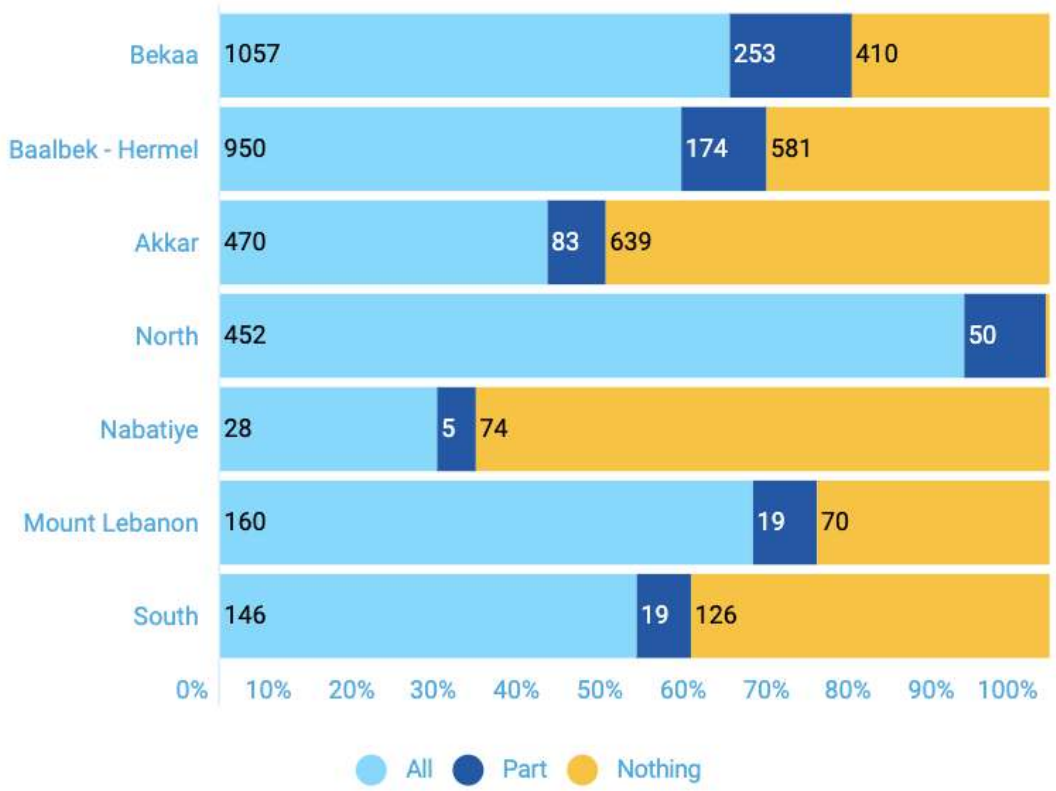
The governorates of Mount Lebanon and North are accounting for the most significant volume available for the disposal of refuse, respectively 242L and 163L per person. On the overhand, Baalbek-Hermel (with 31L per pers.), and Nabatiye (6L/pers), are the governorates with the lowest volume refuse available per person.

Two thousand six hundred forty sites (2,640) (47% of the sites hosting 143,713 individuals) are not having enough volume of the waste container to reach the emergency sphere minimum standards of 100L for 10 HH. It must be noted that the absence of solid waste containers is not affecting the collection of waste. Indeed, most of the municipalities, when collecting the waste from ISs, are collecting them even if there is no dumpster. The municipalities are agreeing with the ISs communities to define a location to be used as a dumpsite.

The collection of solid waste

Collection

Figure 34: Collection of solid waste per governorate

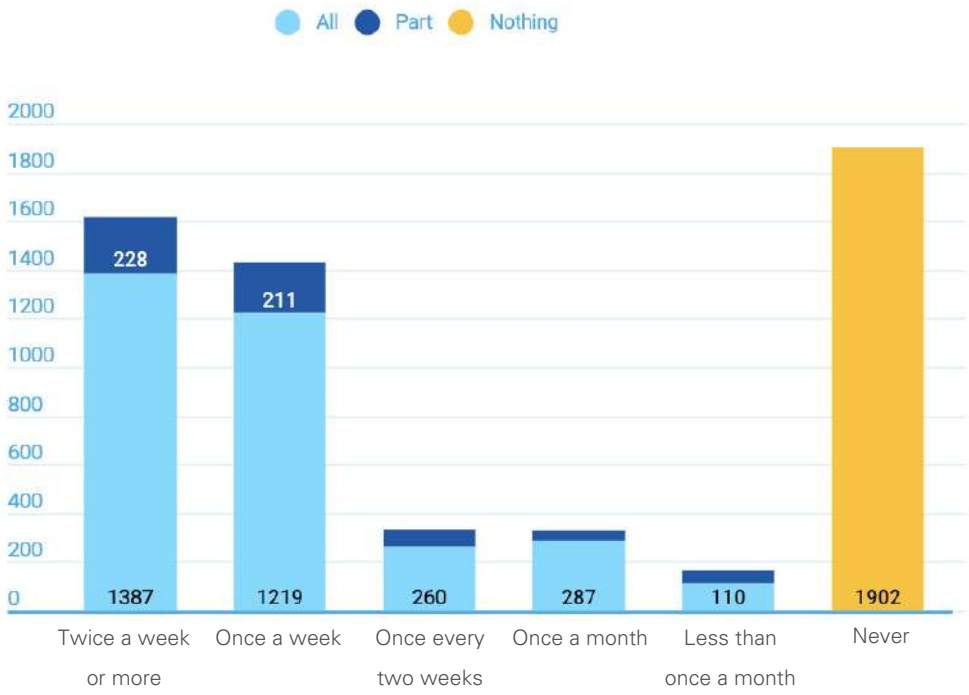


On average, 63 percent of the refuse produced in ISs are collected (totally or partially). There is a considerable disparity nationwide when it comes to solid waste management (SWM). The Bekaa is the governorate where solid waste is the most collected, with 76 percent of the refuse generated by the people living in ISs being totally or partially collected. Nabatiye is the governorate with the worst solid waste management for ISs, as only 30 percent of the refuse is collected.

There are many disparities between governorates countrywide, moreover within cazas, and even within cadasters. This significant heterogeneity is due to the management of the solid waste in Lebanon, being managed at municipal or Union of municipality level. As a result, those refuse are creating an extra burden on municipalities often already stretch to handle the waste produced by Lebanese citizens.

The frequency of collection

Figure 35: Frequency of solid waste collection



For 68 percent of the sites in the country where there is a collection of solid waste, the majority (1387 or 24%) have their refuse removed at least twice a week (as per minimum standards). Twenty-one percent of the sites have their waste collected weekly.

Management of the uncollected wastes

For the people residing in sites where there is no collection of solid waste, they are:

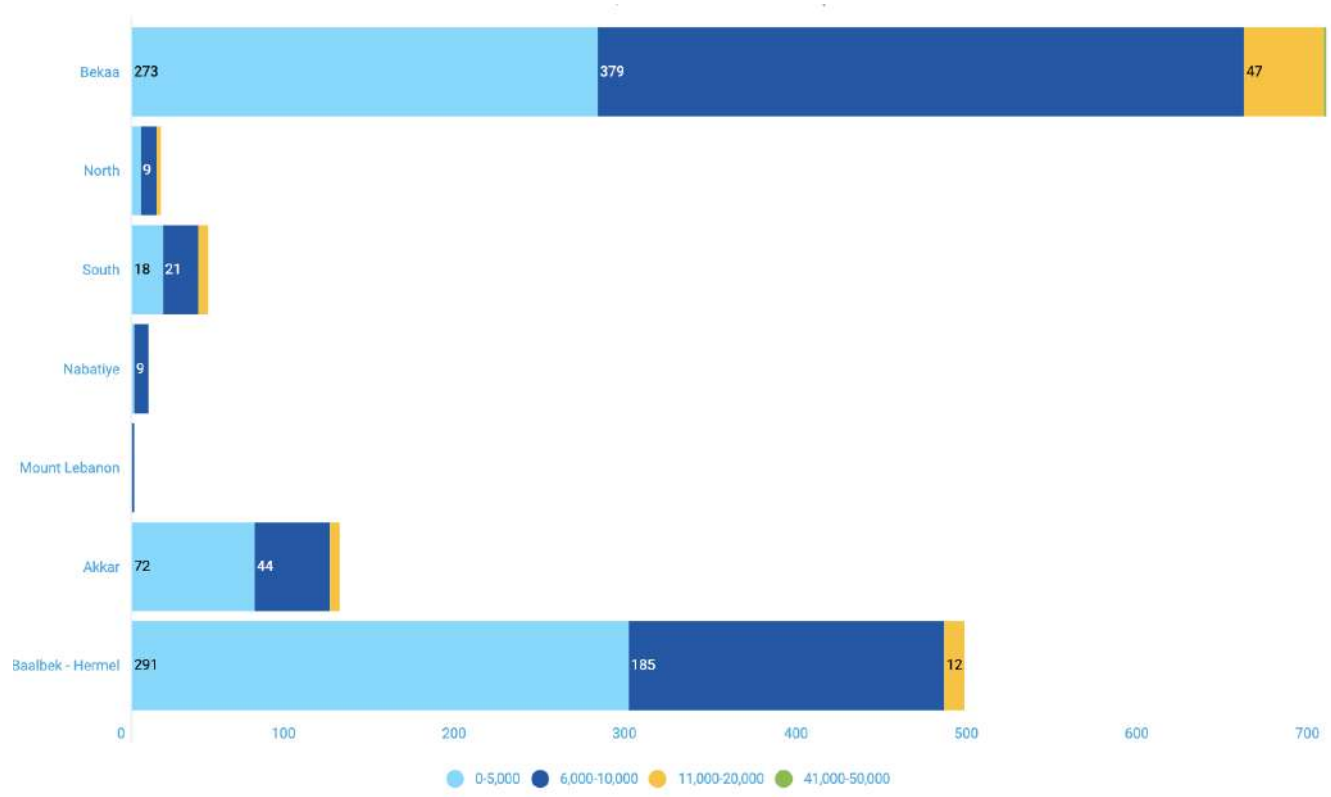
- collecting it and burning it onsite or far away from the site for of them. Burying, or dumping in channels or near the shelters, the ashes and remaining of wastes.
- Directly burying waste
- Dumping the garbage in a location far from the site
- Dropping it into channels (irrigation/stormwater…)
- Littering it near the shelters

Payment of solid waste collection

For the sites where there is a collection (full or partial) of the waste (59% of the sites), 43% of the occupants are reporting paying the service. The remaining sites are seeing the waste removal managed or paid by the NGOs or the municipalities.

Paying or not for the service and how much the service costs when you are paying differs widely between cadasters. The fees range between 5,000 LBP and 50,000 LBP per household per month. However, the average cost is 7,010 LBP per household per month. Most of the time, the occupants pay those fees directly to the municipality. However, in some sites, the Shawish or the landlord collects the money from inhabitants to pay the municipality.

Figure 36: Percentage of payment incurred by occupants and municipalities on solid waste collection per governorate



ENVIRONMENT

Environment

Problems with insects

Insects	Not at all	Negligible	Not so prevalent	Prevalent	Total number of sites
Akkar	6%	30%	36%	28%	1192
Baalbek-Hermel	21%	43%	30%	6%	1705
Bekaa	23%	37%	32%	8%	1720
Mount Lebanon	2%	15%	60%	22%	249
Nabatiye	5%	30%	51%	14%	107
North	26%	70%	3%	0%	504
South	6%	23%	42%	30%	291
Nationwide	17%	38%	32%	13%	5768

The table above presents the percentage of sites declaring having issues with insects. Thirteen percent of the sites are stating having a problem with insects (reduction of 7%) From 2020. The most significant proportion of sites with this problem are present in the governorates South (86 sites) and Akkar (331 sites).

Problems with rodents

Rodents	Not at all	Negligible	Not so prevalent	Prevalent	Total number of sites
Akkar	11%	43%	24%	22%	1192
Baalbek-Hermel	18%	33%	42%	7%	1705
Bekaa	21%	33%	34%	13%	1720
Mount Lebanon	4%	17%	56%	23%	249
Nabatiye	6%	27%	55%	12%	107
North	29%	68%	2%	1%	504
South	5%	19%	44%	32%	291
Nationwide	17%	37%	33%	13%	5768

Regarding the problem of rodents, the repartition of sites is like the ones reporting issues with insects. It must be noted that the prevalence of rodents has decreased by 7 points from 2020. The governorates with the most significant representation problem of rodents are South (93 sites) and Akkar (268 sites). It also must be noted that the collection of solid waste or its frequency doesn't seem to trigger the prevalence of the issues of rodents (343/775 sites are prevalent and without or low collection of Solid waste). The presence of a nearby source of public health concern is not a trigger neither. Only less than 1/4 of sites in this situation (180/775).

Littering in the site

Littering	Not at all	Negligible	Not so prevalent	Prevalent	Total number of sites
Akkar	24%	42%	30%	4%	1192
Baalbek-Hermel	62%	18%	19%	1%	1705
Bekaa	62%	27%	9%	1%	1720
Mount Lebanon	61%	20%	14%	5%	249
Nabatiye	51%	25%	15%	8%	107
North	93%	7%	0%	0%	504
South	67%	18%	10%	4%	291
Nationwide	57%	25%	16%	2%	5768

We can see in the overall country that the sites are relatively clean without issues of littering. Eighty-two percent of the sites have no or negligible solid waste littered in the site. The numbers of sites with no problems of littering at all has increase of 7% from 2020. The governorate with the most significant problem regarding littering remains Nabatiye. This governorate presents the highest proportion of the littering (8% prevalent and 15% not so prevalent). It must be noted that 80% of those sites have no colletion of Solid waste at all.

Open defecation

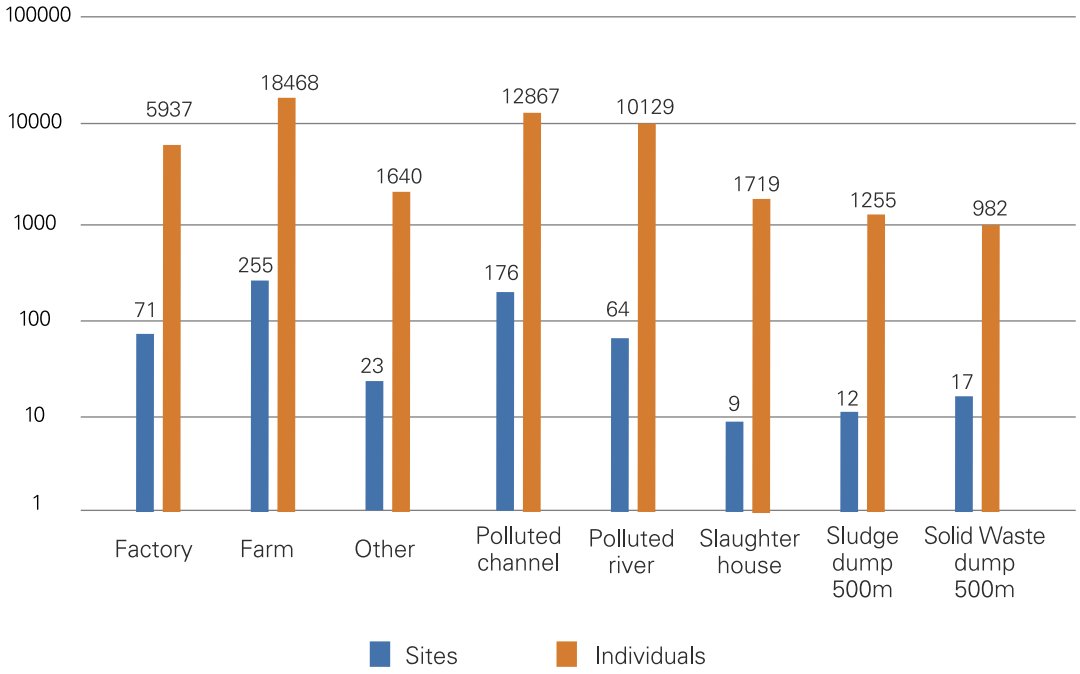
Open defecation	Not at all	Negligible	Not so prevalent	Prevalent	Total number of sites
Akkar	53%	38%	8%	1%	1192
Baalbek-Hermel	90%	4%	6%	0%	1705
Bekaa	91%	8%	1%	0%	1720
Mount Lebanon	91%	6%	1%	2%	249
Nabatiye	87%	9%	4%	0%	107
North	98%	2%	0%	0%	504
South	93%	4%	2%	0%	291
Nationwide	83%	12%	4%	1%	5768

Open defecation is relatively rare across the country. It's prevalent in 31 sites only across the country. It's absent or negligible in 95 percent of the sites. When linking the Open defecation to the availability of toilets onsite, we have identified that eight sites over the 31 have no restrooms. For the others, an average of 15.1 people per latrines is existing.

Source of public health concern

627 sites hosting 52,997 individuals are reporting having in the vicinity of their location (less than 500m) a hazardous activity or facilities in the vicinity of the site.

Figure 37: Proximity of site to hazardous activities or facilities



Most of the sites located in the vicinity of a hazardous site are found close to a farm.
Also, 176 sites hosting 12,867 individuals are declaring being located close to a polluted river, drainage, or irrigation channel.

Finally, 982 individuals living in 17 sites are stating being located close to a solid waste dumpsite, and more sadly, 1255 people in 12 sites are claiming to have a sludge dumpsite less than 500m away from their site.

Flood

Number of sites affected by floods

Governorates	# of sites of the governorate affected by a flood event	% of sites of the governorate affected by a flood event
Akkar	828	69%
Baalbek-Hermel	417	24%
Bekaa	488	28%
Mount Lebanon	68	27%
Nabatiye	42	39%
North	354	70%
South	112	38%
Grand total	2,311	40%

Over the year of 2020, 2,311 sites hosting 162,866 people have been affected by a flood event. The governorates of Akkar and the Bekaa, with respectively 833 and 488 sites affected by this hazard, are the most affected. Its respectively amounting to 74 and 28 per cent of the places in those governorates. It must be noticed that this year many (221) sites were not affected in Bekaa compared to last year.

The surface affected in the site

Governorates	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	Total # of sites affected by flood	Total # of sites
Akkar	18	53	75	57	151	47	66	38	4	319	828	1192
Baalbek-Hermel	107	58	47	36	52	22	14	8	3	70	417	1705
Bekaa	32	31	46	43	104	27	34	23	6	144	490	1720
Mount Lebanon	11	17	18	9	2	2	3	5		1	68	249
Nabatiye	12	14	8	3	2		1	2			42	107
North	35	36	44	12	106	37	25	12	3	44	354	504
South	27	22	9	12	18	2	3	3		16	112	291
Grand total	242	231	247	172	435	137	146	91	16	594	2311	5768

Overall in Lebanon, more than 26% of the sites affected by floods see the floods affecting the entire site. In Akkar, it's close to 40% of the sites affected by floods that see the complete site flooded. 57% of the sites are affected by 10 to 50% of their surface.

Duration of the floods

The floods tend to last less than five days (94% of the sites). Sixty-seven percent of the sites affected by floods last one or two days. But for a minority of the sites, the flood event can last up to one month.

	Number of days the flood event lasts																
Governorates	1	2	3	4	5	6	7	8	9	10	12	15	20	25	28	30	Total
Akkar	505	212	80	13	12		3							2		1	828
Baalbek-Hermel	66	132	96	24	31	4	16	24		8		1	4			11	417
Bekaa	45	120	136	40	48	2	33			21	1	6	5	2		31	490
Mount Lebanon	15	30	14	4	3		1								1		68
Nabatiye	15	16	7	1	2					1							42
North	269	77	7						1								354
South	40	40	16	5	4		2		2	2						1	112
Nationwide	955	627	356	87	100	6	55	24	3	32	1	7	9	4	1	44	2311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