



JORDAN EMERGENCY SERVICES AND SOCIAL RESILIENCE PROJECT (JESSRP) MONITORING AND EVALUATION FRAMEWORK

JORDAN

BASELINE STUDY

MAY 2015



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REACH operates under ACTED in Jordan and is a joint initiative of ACTED, IMPACT Initiatives and the UN Operational Satellite Applications Programme (UNOSAT). REACH was established by ACTED in 2010 to strengthen evidence-based decision making by aid actors through efficient data collection, management and analysis before, during and after an emergency. This contributes to ensuring that communities affected by emergencies receive the support they need. All REACH activities are conducted in support of the Government of Jordan and UN partners, for the development of the Jordan Response Plan, and are within the framework of interagency aid coordination mechanisms.

EXECUTIVE SUMMARY

The Jordan Emergency Services and Social Resilience Project (JESSRP) aims to strengthen the capacity of municipalities by investing in social infrastructure and supporting visible and tangible improvements at the municipal level. Investments in **social infrastructure** aim to support community and recreational centres; increase information-sharing between municipalities and citizens; promote town hall meetings and accountability mechanisms for municipalities. **Visible and tangible improvements** refer to physical improvements such as increased street lighting; road rehabilitation; and addressing the solid waste issues prevalent in many municipalities. In partnership with the World Bank, the UK Department for International Development (DFID) and the British Foreign and Commonwealth Office (FCO), REACH is evaluating the support provided by the World Bank under the JESSRP to municipalities in northern Jordan.

The present study outlines findings from the household level baseline data collection that was conducted between August 2014 and September 2014 across three northern governorates in Jordan, Irbid, Al-Mafraq and Al-Zarqa. Within these governorates, 16 municipalities were assessed - nine “treatment” municipalities that had been selected as recipients of World Bank municipal service interventions (Al-Ramtha Al-Jadeedah, Al-Serhan, Al-Sho'aleh, Al-Za'atri and Al-Mansheah, Bal'ama Al-Jadeedah, Gharb Irbid, Irbid Al-Kubra, Mafraq Al-Kubra and Sahel Horan) and 7 “control municipalities” (Al-Kfarat, Al-Mazar Al-Jadeedah, Al-Yarmook Al-Jadeedah, Al-Zarqa, Hosha Al-Jadeedah, Rhab Al-Jadeedah, Sabha and Dafianeh) which had not been selected for World Bank interventions. A randomised sampling methodology (95% level of confidence and 5% margin of error) was used in order to have generalizable findings at the municipal level. The overall objective of the evaluation is to compare the level of change observed in ‘treatment’ and ‘control’ municipalities between the baseline data collection and the endline.¹

The purpose of the baseline was to measure key indicators in relation to municipal services such as water, solid waste management, sanitation, roads, public lighting, public leisure spaces, and community outreach, across the municipality population, to assess level of access; frequency of use; prominent coping strategies adopted; and levels of satisfaction with municipal services.

As highlighted in the National Resilience Plan (NRP) 2014-2016, the influx of Syrian refugees has led to further strain on already over-burdened municipal services.² This is reinforced by baseline findings which demonstrate that household access to key municipal services for the host and refugee population are over-stretched or lacking amongst both the control and treatment municipalities. This was found to be particularly true for the provision of services related to water, solid waste management, sanitation, public leisure spaces and community outreach, which has led to high levels of dissatisfaction with municipal services amongst communities. These findings reinforce the importance of the JESSR project, initiated in recognition of a need to provide further support to municipalities in their delivery of services, thereby enhancing satisfaction levels amongst the community, and subsequently improving resilience and social cohesion.

Key Findings

Solid Waste Management

Almost half of households (48%) reported that garbage collection occurred at least once every two days. However, 45% of households reported garbage collection occurred less frequently: weekly (33%), once every two weeks (6%), monthly (2%) or never (4%).

34% of households were ‘satisfied’ or ‘very satisfied’ with municipal solid waste management services, however a larger percentage (41%) of households were ‘unsatisfied’ or ‘very unsatisfied’, the majority of whom (70%) reported that this was because garbage collection was not frequent enough.

¹ Endline data collection is scheduled for August 2016.

² [National Resilience Plan, Brief on the Impact of the Syrian Crisis by Sector](#), 1st June, 2014

35% of households had used a coping strategy to deal with a lack of municipal waste management services in the 7 days preceding the survey. Prominent coping strategies included disposing of trash by the roadside or in a landfill (49%) and burning (45%).

Sanitation

The majority (80%) of households reported not having access to a sewer system. Instead these households relied on desludging trucks to empty latrines. 69% of these households reported using private trucks, while 1% had access to public trucks. The average household expenditure for private desludging services was 39 JOD (55 USD) over a six month period.

More than half (52%) of households reported being ‘unsatisfied’ or ‘very unsatisfied’ with municipal desludging services provided in the community. Unsurprisingly, the most common reason for dissatisfaction with desludging services was because no desludging service was provided by the municipality.

33% of households reported using a coping strategy to deal with the lack of desludging services provided by the municipality in the six months preceding the survey. Prominent coping strategies included: relying on private desludging trucks (69%) and digging another pit (21%).

Public Lighting and Roads

The majority of respondents (56%) were satisfied or very satisfied with the availability of public lighting in their community. Nevertheless, 26% reported being ‘unsatisfied’ or ‘very unsatisfied’. Amongst unsatisfied respondents, the primary reason for dissatisfaction with public lighting in the community was a lack of lighting (54%).

The majority (74%) of respondents reported ‘never’ feeling unsafe at night in their community.

Although 56% of respondents were ‘satisfied’ or ‘very satisfied’ with the quality of roads in the community, 42% were ‘unsatisfied or ‘very unsatisfied’ with the quality of roads, and the municipal maintenance of roads (43%). Amongst unsatisfied respondents, the main reason for dissatisfaction was lack of municipal maintenance of roads in the community (74%).

22% of respondents had used a coping strategy due to poor quality of public lighting and poor quality of roads in the 30 days preceding the survey. Prominent coping strategies identified included: incurring additional costs to fix a personal car (29%) and avoiding public areas (24%).

Public leisure spaces

In all 16 municipalities the majority of households reported ‘never’ using public leisure spaces, or that these spaces are not available in their community, such as parks (reportedly never used by 89%), community centres (92%), sports centres (93%) and libraries (99%). **The majority (58%) of respondents were ‘unsatisfied’ or very ‘unsatisfied’ with the quality and availability** of public leisure spaces in their community. The main reason for dissatisfaction with public leisure spaces was lack of availability.

90% of respondents indicated that they used a coping strategy in the 30 days preceding the survey to deal with the poor quality and availability of public leisure spaces in the community. Prominent coping strategies included socialising at home (36%); having women socialising less outside (22%), children or youth using unsafe buildings as playgrounds (16%); and children or youth roaming the streets (15%).

Community Outreach

The largest proportion of respondents (45%) had no opinion about the way the municipality is handling key issues in the community. 33% reported that they were ‘unsatisfied’ or ‘very unsatisfied’, while 23% of respondents reported they were ‘satisfied or very satisfied’ with the way the municipality handled key issues in the community.

Overall, the majority of households (62%) reported being aware of where to make a complaint regarding municipal services, if they needed to do so.

21% of respondents reported that they had made a complaint, with primary reasons for complaints including: waste accumulation (49%); lack of public lighting (14%); poor quality of roads (14%); and water-related issues (13%). **The majority (75%) of respondents that made a complaint were ‘unsatisfied’ or ‘very unsatisfied’ with the outcome** of the complaint, primarily because they perceived there to be no response or follow-up from authorities.

Water

The majority (81%) of households were connected to the public water network. These households reported that they received water through the public water network (pipes) at least once a week – 88% in the hot season and 92% in the cold season.

Almost half of households (48%) reported facing a water shortage during the hot season compared to only 8% of households during the cold season. Although households were much less likely to face water shortages during the cold season, those who did face shortages on average more frequently (9 times) than those facing shortages in the hot season (6 times).

Around half (51%) of households were ‘unsatisfied’ or ‘very unsatisfied’ with the public piped water services provided in the community. The three most common reasons why households were dissatisfied with piped water services were because water was perceived as poorly managed (32%); the water flow/pressure was weak (26%); and lack of connection to the network (16%).

The majority (59%) of households knew how and where to make a complaint regarding water services. Syrian respondents were three times more likely (89%) not to know where and how to make a complaint about piped water services than Jordanian respondents (27%).

The vast majority (95%) of households reported using a water-related coping strategy in the 30 days preceding the survey. Prominent coping strategies identified to deal with water shortages or poor water quality included: purchasing bottled water from shops (26%); reducing water consumption (24%); or buying water from private trucks (21%). The average household expenditure on private water was 32 JOD (45 USD) over a 30 day period.

Recommendations

Overall findings indicate that the information sharing amongst project stakeholders, and the level of engagement between municipalities and residents, could be improved. Improved information sharing will ensure that interventions aimed at enhancing access to municipal services and their delivery are informed by communities, and that those communities are aware of the efforts and initiatives in place. In order to facilitate effective implementation of interventions, specific recommendations for project stakeholders are listed below:

Ministry of Municipal Affairs (MoMA)

Short term recommendations:

- Relevant M&E experts should provide **project management and monitoring and evaluation training** for the WB's Project Management Unit (PMU) staff responsible for internal monitoring of project implementation. This is to ensure progress is effectively tracked, with sustainable long-term monitoring.
- Ensure the mission mandate of the Local Development Unit at municipal level is clear, and empower the **unit to work in collaboration with the PMU to monitor JESSRP implementation.**
- Hold a workshop with all MoMA departments as well as Cities and Villages Development Bank (CVDB) who are responsible for distributing donor funds to municipalities. This will provide an opportunity to outline the relevant issues listed above, as well as to inform the development of a work plan on how to implement the suggested recommendations.

Medium to long term recommendations:

- Provide support to municipalities to **strengthen their community outreach activities.** For example, facilitate a workshop amongst the treatment municipalities, which allows municipal representatives to share **best practices and lessons learned** regarding community outreach activities for both the refugee and host population.
- Municipalities should be supported in the area of information management and in database management. Throughout this assessment, municipalities reported a lack of information management within their administrations and therefore encountered difficulties in providing the relevant information needed for this assessment. Both municipalities and MoMA should be supported through capacity building initiatives and guidance as to the storage and management of information.
- **Liaise with donors on the needs of municipalities,** particularly in regards to municipal services such as water and public leisure space, where households reported a high level of coping strategy usage
- **Inform donors** on the current state of **Jordan's sewer system** and advocate on behalf of municipalities where there is an extremely low proportion of households connected to the sewer system and where **public desludging services** are relatively poor.

Municipalities

Medium to long term recommendations:

- **Strengthen community outreach initiatives** in coordination with MoMA and UNDP. Examine ways to improve information sharing between the municipality and community residents.
- Hold **information sessions** which inform residents of how they can make a complaint regarding municipal services. Designate a **focal point in the municipality who can manage complaints mechanisms** and effectively respond to residents' complaints within the community.
- Examine how to better **maintain existing public leisure spaces** in the community and where these spaces do not exist, examine which types of public leisure space community residents would benefit from and where such spaces could potentially be located. This should be conducted **in consultation with the community.**

- Conduct an **information campaign** which educates community residents about the **available desludging services** the municipality can provide and the role of municipalities in ensuring **adequate sanitation**.
- **Strengthen the dialogue between community residents and the local government** by asking residents in different localities of the municipality **where public lighting and road maintenance is needed**.
- **Inform MoMA** of areas in the municipality where the **water network is not accessible**, to see if the **water network can be strengthened and expanded** or if alternative water resources can be provided, either through the repair, maintenance or construction of public wells and/or through increasing the number of available public water trucks.

Donors

Medium to long term recommendations:

- **Provide monitoring and evaluation training for MoMA staff (PMU), CVDB, and Development Unit** staff in municipalities to ensure they are better qualified to effectively monitor project implementation.
- In municipalities where a significant proportion of households reported using coping strategies, support for municipal service delivery should be re-evaluated and increased
- Explore ways to best provide support to **municipal sanitation services** in cooperation with MoMA and targeted municipalities i.e. **increasing the number of desludging trucks** and/or **expanding the sewer network**, and **increasing the number of solid waste management employees**.

Next steps

This baseline report will be shared with key stakeholders of the project through two channels, 1) presentations conducted by REACH staff to project stakeholders, MoMA, CVDB, municipalities, and donors, and 2) through electronic dissemination via REACH's online Resource Centre. In order to best share the findings, the final report will be translated into Arabic to ensure wider dissemination amongst national actors.

A coordination meeting will be held amongst key stakeholders to discuss the next phase of the monitoring and evaluation framework: the monitoring component. The monitoring phase of the project will collect data in treatment municipalities to assess the impact of these interventions on community residents and their level of satisfaction with such interventions. During the coordination meeting, the specific interventions that will be monitored (solid waste management, community outreach, sanitation, roads, public lighting, etc.) in the each of the treatment municipalities will be discussed in greater detail. The first monitoring phase is provisionally planned for July 2015, ahead of JESSRP Annual Review, scheduled for October 2015.

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Abbreviations and Acronyms

CBOs	Community-Based Organisations
CVDB	Cities and Villages Development Bank
FCO	British Foreign and Commonwealth Office
DFID	UK Department for International Development
GoJ	Government of Jordan
JESSRP	Jordan Emergency Services and Social Resilience Project
MoMA	Ministry of Municipal Affairs
NRP	National Resilience Plan
PMU	Programme Management Unit
NGO	Non-Governmental Organisation
ODK	Open Data Kit
UN	United Nations
WB	World Bank

Geographical classifications

Governorate – The highest administrative boundary below the national level.

- The governorate has an executive and advisory board.
- The governorate is headed by the governor.
- The governor is the highest executive authority in the governorate and the representative of the executive authority and leads all government employees in the governorate. The governor also has authority over all governorate departments except for judges.

District – Governorates are divided into districts.

- The district has an executive and advisory board.
- The district reports to the governorate.
- The district office is an administrative area within the governorate, headed by the district officer or district administrator.

Sub-district – Municipalities are divided into sub-districts.

- The governorate, district and sub-district represent the government and designed to enforce law.

Municipality – A civil financially independent institution that can decide its borders.

- The municipality plans prepares, and implement programs for sustainable development in consultation with local communities.
- The municipality manages all services, local facilities and projects which have been assigned to them on their own or through partnership with the private sector and/or civil society institutions.
- The municipal administration council consists of a chairman (Mayor) and members³ and the council is directly elected by the community residents⁴.

Village/neighbourhood – Municipalities are divided into villages/neighbourhoods.

- Each village or neighborhood can belong to a municipality and district, which can be different or the same.

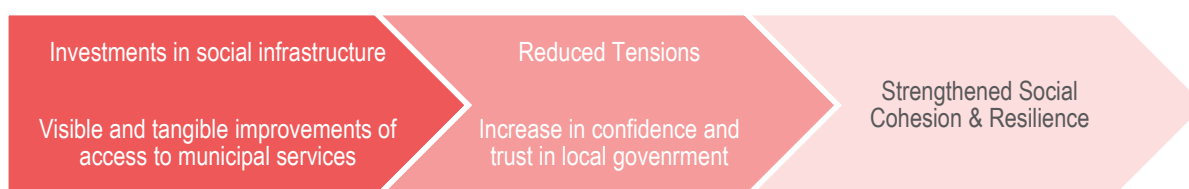
³ Except for Amman and private areas in Aqaba and Petra.

⁴ Except for Amman which is 50% appointed.

INTRODUCTION

The protracted Syrian crisis, now extending into its fifth year, has generated the largest refugee exodus in recent history, with a total of 3,819,983 registered refugees now living outside of Syria, the majority of which have sought refuge in neighbouring countries of Jordan, Iraq, Lebanon and Turkey.⁵ Since 2011, approximately 622,586 Syrians have crossed the border into Jordan, putting immense strain on already scarce resources, and intensifying competition for basic services. The vast majority of these refugees do not reside in formal camps, but have settled in host communities,⁶ where competition for livelihood opportunities and overburdened basic services and housing markets, present a challenge to social cohesion and community resilience.⁷ The National Resilience Plan (NRP) 2014-2016, emphasizes that while municipal services were already overburdened prior to the crisis, the demands resulting from the influx of Syrian refugees has exceeded the capacity of many municipal authorities.⁸ Perceptions of poor municipal services coupled with limited communication between municipal authorities and citizens, has been found to be negatively associated with community resilience and social cohesion.⁹

The Jordan Emergency Services and Social Resilience Project (JESSRP) aims to strengthen host communities' capacity by investing in social infrastructure and supporting visible and tangible improvements at the municipal level. Investment in social infrastructure refers to anticipated project outputs, including supporting community and recreational centres, increasing information-sharing between municipalities and citizens, promoting town hall meetings and accountability mechanisms for municipalities. Visible and tangible improvements refer to outputs such as increased street lighting, road rehabilitation, and addressing the solid waste issue prevalent in many municipalities.



The diagram above refers to the phased progression for strengthening social cohesion and resilience at the community level. It is foreseen that both investment in the social infrastructure, coupled with visible and tangible improvements will improve social cohesion by creating channels to address sector specific tensions, and serve to increase the level of confidence and trust in municipalities. Efforts in these areas will demonstrate the municipalities' ability to respond and address, in a visible way, the challenges host communities in northern Jordan. In partnership with the World Bank, DFID and FCO, REACH developed a Monitoring and Evaluation Framework for the JESSRP.¹⁰ This framework is comprised of a baseline, three monitoring phases and an endline study. This report showcases the findings from the baseline data collection conducted in August 2014-September 2014. The baseline and the endline include both the treatment and control municipalities whereas the monitoring phases will solely focus on the treatment municipalities. The control municipalities were selected and matched to either one or two treatment municipalities based on similar characteristics: proximity to border area, percentage of Syrians, cultural and geographical similarities, and population size, among other factors (see Table 1 on the following page).

The baseline study assessed key sectors and services which fall within the scope of municipal provision: water, solid waste management, sanitation, roads/sidewalks, public lighting, public leisure spaces and community outreach.

5 UNHCR, <www.data.unhcr.org>, [as of 18 February 2015].

6 UNHCR, UNICEF and WFP, Joint Assessment Review of the Syrian Refugee Response in Jordan, (January 2014).

7 REACH, Understanding Social Cohesion and Resilience in Jordanian Host Communities, Assessment Report, June 2014, 2

8 National Resilience Plan, Brief on the Impact of the Syrian Crisis by Sector, 1st June, 2014, accessed at

http://jordanembassyus.org/sites/default/files/NRP_Sector_Impacts_01.06.2014.pdf

9 REACH, Municipal Services and Community Relations in Al Mafraq and Irbid, Jordan, JESSRP, Assessment Report, August 2014.

10 The main coordination mechanism for the assessment was the Ministry of Municipal Affairs (MoMA) and their Programme Management Unit (PMU), in tandem with the Jordan's Cities and Villages Development Bank (CVDB). In addition to this government ministry, key stakeholders include UN agencies and other humanitarian and development actors from the international community.

METHODOLOGY

To measure social cohesion and community resilience in relation to municipal services, the following key indicators for the baseline were developed and served as the base for the assessment tool:

- ✓ Level of access to municipal services and use by the host and refugee population
- ✓ Frequency of usage, distance from household to key municipal services
- ✓ Satisfaction levels with municipal services
- ✓ Negative coping mechanisms to deal with challenges surrounding municipal services
- ✓ Effectiveness of municipality in addressing challenges surrounding municipal services
- ✓ Priority sectors for municipal intervention
- ✓ Level of engagement between residents and municipality

Within each of the key sectors and services—water, solid waste management, sanitation, roads/sidewalks, public lighting, public leisure spaces and community outreach—the baseline indicators above were measured to assess the current status within each of the 16 municipalities. The same indicators will be used for the endline study to enable comparison with baseline findings.

Table 1: Municipality matching

Group #	Control	Treatment	Municipality Matching
Group 1	Al-Kfarat	Al-Sho'aleh	Both municipalities have geographical and cultural similarities. Residents are from the same tribe and have comparable agricultural and livelihoods practices. Both municipalities are located close to the Syrian border and have comparable population size.
Group 2	Al-Mazar Al-Jadeedah	Gharb Irbid	Both municipalities have cultural similarities; both are located in the middle of Irbid governorate, located close to the Syrian border and have comparable population size.
Group 3	Al-Yarmook Al-Jadeedah	Sahel Horan Al-Ramtha Al-Jadeedah	All three municipalities are located close to Syrian border; residents are from the same tribe, and have comparable population size.
Group 4	Rhab Al-Jadeedah	Bal'ama Al-Jadeedah Mafraq Al-Kubra	In all three municipalities residents come from the same tribe (Bani Hasan) and have comparable livelihood practices.
Group 5	Hosha Al-Jadeedah	Al-Serhan	Both municipalities have geographical and cultural (Bedouin tribes) similarities; are located close to the Syrian border and have comparable population size.
Group 6	Sabha and Dafianeh	Al-Za'atri and Al-Mansheah	Both municipalities are not located by the Syrian border, have geographical and cultural (Bedouin tribes) similarities and comparable livelihoods practices.
Group 7	Al-Zarqa	Irbid Al-Kubra	Both municipalities are comparable in population size (predominately urban municipalities)

REACH used a random sampling approach at the household level to ensure that the data collected was statistically significant at the municipal level and allowed for further inter-municipal comparisons. The sample size was based on a 95% level of confidence and a 5% margin of error, equalling 385 questionnaires in each municipality with a total of 6,166¹¹ questionnaires conducted overall (see Table 2).

¹¹ In selected municipalities sample targets were slightly exceeded, totaling 386, 387 and 388 questionnaires were conducted.

Table 2: Number of households assessed by municipality

Governorate	Municipality	Sample Size
Al Mafraq	Al-Serhan	385
	Al-Za'atri and Al-Mansheah	385
	Bal'ama Al-Jadeedah	385
	Hosha Al-Jadeedah	386
	Mafraq Al-Kubra	385
	Rhab Al-Jadeedah	387
	Sabha and Dafianeh	385
Irbid	Al-Kfarat	385
	Al-Mazar Al-Jadeedah	385
	Al-Ramtha Al-Jadeedah	385
	Al-Sho'aleh	385
	Al-Yarmook Al-Jadeedah	385
	Gharb Irbid	385
	Irbid Al-Kubra	385
	Sahel Horan	385
Zarqa	Al-Zarqa	388
TOTAL		6,166

The questionnaire was developed in collaboration with water and sanitation experts from ACTED and technical assessment focal points from REACH. In addition, the REACH Assessment Team consulted field staff that had worked on the previous host community data collection projects, in order to understand and to mitigate the potential challenges faced due to questionnaire design. Lastly, the assessment tool was shared with donors (World Bank, DFID, and FCO) in order to receive and include critical feedback.

REACH conducted one day training for field staff (20 enumerators, 4 field coordinators) on the methodology and questionnaire. The majority of field staff recruited for data collection had worked with REACH in previous host community projects. During the training enumerators and field coordinators familiarised themselves with the questionnaire, which was followed by a question and answer session held with REACH assessment focal points and field staff, providing a forum for field staff to ask questions and address any concerns. Four days were dedicated to piloting the methodology and the questionnaire in the field. During the piloting phase, one hour was allotted each day to discuss the challenges faced in the field and ways to mitigate them.

Random sampling was undertaken using GIS capacity, mobile technology and the app MapFactor. Randomised GPS points were generated on maps of the selected municipalities, with distribution weighted based on population density. Field teams located the GPS points on the ground and administered questionnaires within a 125 meter radius of these coordinates using Open Data Kit (ODK) forms uploaded onto smart phones. This use of ODK allowed for completed questionnaires to be uploaded directly from the phone to the online server, removing some of the problems inherent in transcribing paper-based forms.

Each field staff member uploaded questionnaires onto the REACH server on a daily basis. A dedicated data entry focal point was assigned to monitor the data collected each day to ensure that any errors were identified and immediately addressed.

In order to reach the GPS points field teams used the smart phone app MapFactor. Maps were installed on an SD card meaning there was no need for an internet connection when travelling; in addition there was an intuitive voice navigation available in either English or Arabic. Enumerators entered the GPS coordinates into the app and it

provided them with directions to the selected destination. Enumerators would approach the first household they came across within the 125 meter radius of the GPS coordinates.

A secondary data review was conducted on key municipal services. The government liaison officer visited all 16 municipalities to collect this data and selected items have been incorporated into this report. This data includes the quantity of the following: public water trucks, wells, solid waste bins, desludging trucks, public leisure spaces, community outreach meetings.

Challenges and limitations

Reaching some of the randomised GPS points proved logistically challenging. While piloting the questionnaire and during the data collection phase there were a number of GPS points that could not be accessed by field teams for security reasons. Several areas were impossible to reach due to either the presence of check points and/or army bases. An additional challenge was that MapFactor did not always give the quickest route to each set of GPS coordinates, meaning that field teams familiar with the area often sought alternative routes. In exceptional cases when there was no household located within close proximity of the GPS coordinates, field teams would have to locate the next nearest household. When there was no household located within the defined 125m field teams had to randomly generate new points using a pin or a coin.

In addition, in terms of secondary data, our government liaison officer was unable to collect data from all 16 municipalities. Therefore, there are still existing information gaps regarding the municipal services items available in Ramtha Al-Jadeedah and Bal'ama Al-Jadeedah municipalities as they were unable to provide the requested data at the time of visit.

Demographics

In total, **6,166** randomly selected **adults were interviewed across the 16 municipalities included in this study**. The following section details key findings about the respondents assessed (see Table 3).

Table 2: Proportion of respondents assessed by nationality and gender

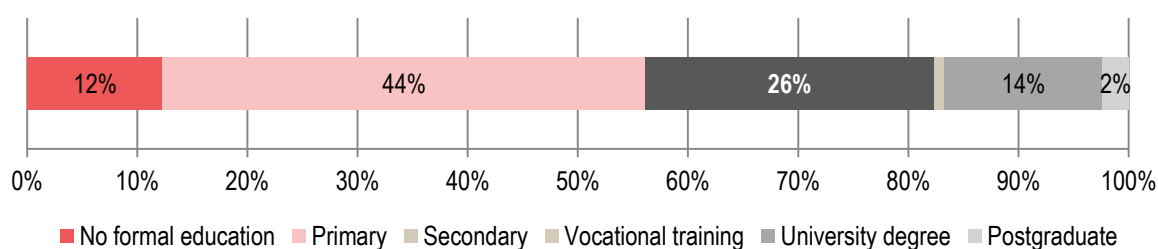
Nationality	# Male	%Male	# Female	% Female	TOTAL	% TOTAL
Jordanian	2661	43%	2469	40%	5130	83%
Syrian	414	7%	518	8%	932	15%
Other	78	1.30%	26	0.50%	104	2%
TOTAL	3153	51%	3013	49%	6166	100%

Overall, **5,130 (83%) of the respondents were Jordanian; 932(15%) were Syrian; and 104 (2%) respondents** were of another nationality. Mafrq Al- Kubra had the highest proportion of Syrian respondents at 49%, followed by Al-Za'atri and Al-Mansheah at 24%.

The random selection of interviewees generated almost equal proportions of male (3,153, 51%) and female (3,013, 49%) respondents. Al-Serhan had the highest proportion of male respondents (222, 58%), whereas the municipality of Al-Mazar Al-Jadeedah reported the highest proportion of female respondents (220, 57%).

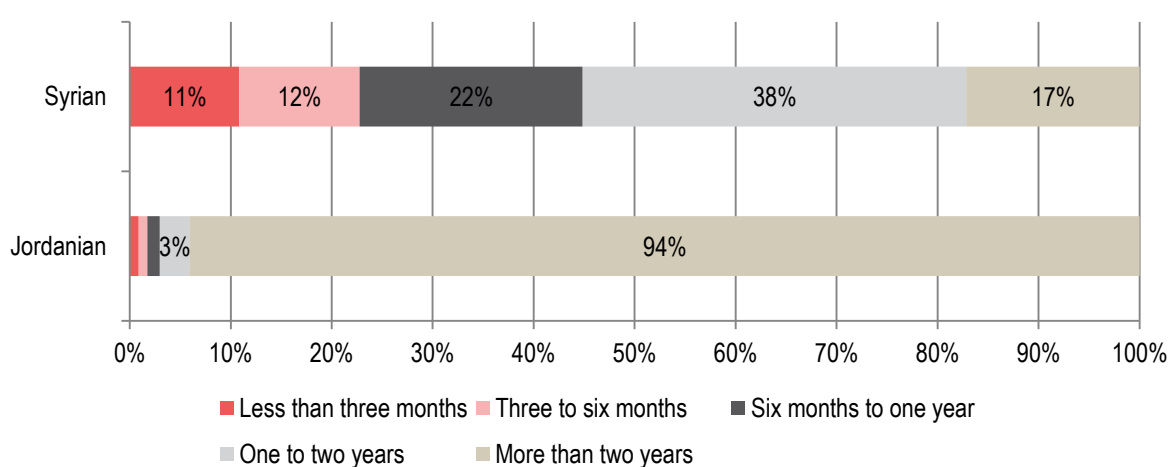
Almost half of respondents, 44%, had only completed primary education and 12% reported that they had received no formal education (see Figure 1). 26% of participants had completed secondary education and 14% had gone on to complete a university degree, with 2% continuing to postgraduate education.

Figure 1: Highest reported household education level



The vast majority of respondents reported they had lived in the community for more than two years (82%). 8% had been in the community for one to two years, and 10% had lived in the area for less than a year.

Figure 2: Length of time lived in the community, by nationality



Understandably, Jordanians reported being resident for longer in their communities than Syrian respondents. The vast majority of Jordanians, 94%, had lived in their communities for more than two years, compared to only 17% of Syrians (see Figure 2). 38% of Syrian respondents had lived in their area for one to two years; 22% between six months to one year, 12% three to six months and 11% had lived in their community for less than three months. The municipalities with the highest number of recently arrived residents were the two municipalities with the highest proportion of Syrian respondents, Mafraq Al-Kubra and Al-Za’atri and Al-Mansheah, where more than 30% of respondents arrived within the last two years. Al-Ramtha Al-Jadeedah and Al-Serhan municipalities followed closely, where more than 20% of respondents reported they lived in the community for less than two years. Both of these municipalities also had a high proportion of Syrian respondents compared to the other assessed municipalities at 24% (Al-Serhan) and 21% (Al-Ramtha Al-Jadeedah) respectively.

SOLID WASTE MANAGEMENT

Over recent years, municipalities throughout Jordan have endured strain on their solid waste management services. A previous REACH report (2014) found that as the population has grown “local government administrators are finding it increasingly difficult to close the widening gap between the provision of municipal services and the growing demands of new refugee arrivals.”¹² A municipal needs assessment by UNDP (2014) reported that the increased tonnage of solid waste and aging infrastructure has made solid waste management “the number one priority” for municipal services.¹³ Many municipalities cite poor resources, the limited number and age of trash compactors, as the primary reasons for why many municipalities are struggling to adequately collect waste.¹⁴ Waste accumulation has become a common source of frustration amongst both host and refugee populations. Reflective of this, the National Resilience Plan (2014) cites improving solid waste management municipal services as a necessary area for future intervention by aid actors, in order to facilitate social cohesion in Jordan’s northern municipalities.

Almost half of all assessed households (48%) reported that garbage collection in their area occurred at least once every two days. The majority of households (76%) reported disposing of solid waste in public waste bins; however 23% of households reported that they used more environmentally dangerous disposal methods such as disposing of trash in informal dumping areas or landfills (9%), by the roadside (9%) or by burning (5%). The use of these disposal methods was commonly cited as a coping strategy, adopted by households to deal with poor municipal solid waste management services. 35% of households reported using a coping strategy to deal with limited municipal waste management provision. The use of such coping strategies could be attributed to the fact that amongst half of households (50%), garbage collection was reported to not be frequent enough to meet household needs. Infrequent garbage collection prompted the majority (74%) of households to report an increase in pests in the community, and in turn to report a high level of dissatisfaction (64%) with the way the municipality is dealing with pest control.

To facilitate effective interventions in support of municipal services, this section describes the key solid waste management needs of households at the municipality level. It details household access to solid waste management services in community; perceptions of cleanliness; and pest control.

Level of access to municipal solid waste services

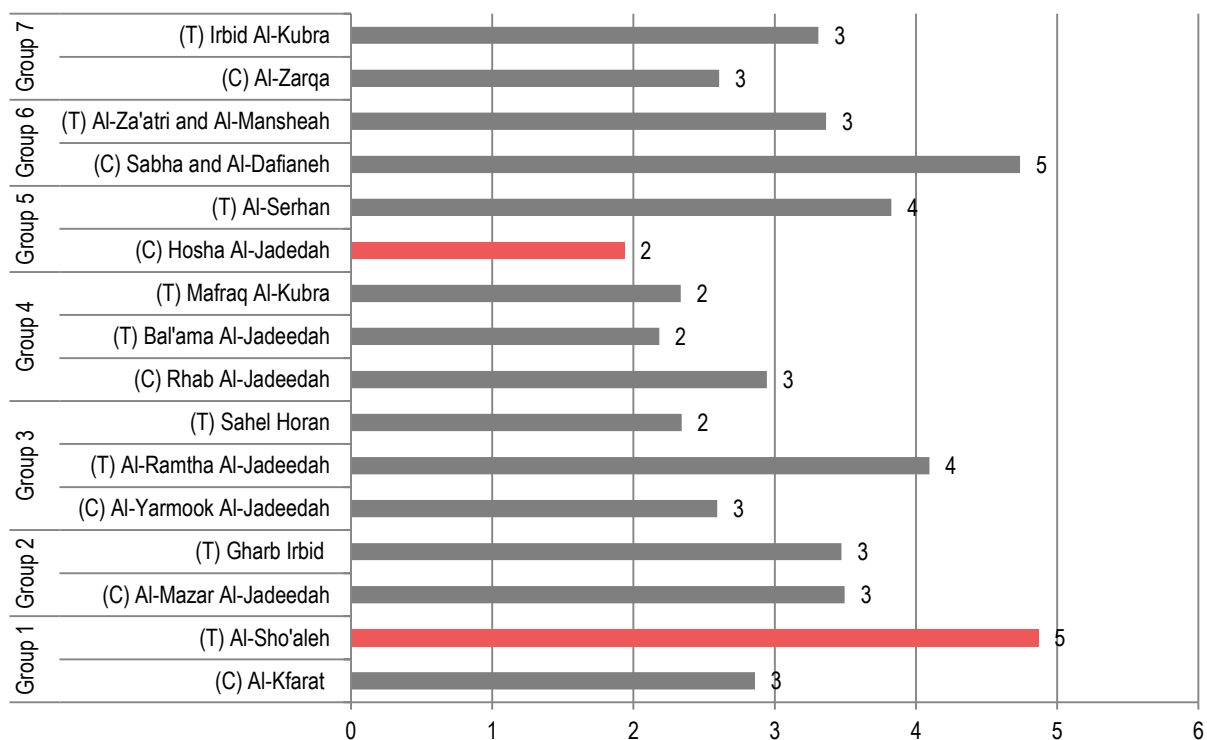
The average distance from the household to the nearest trash bin, with most common mode of transport, ranged from 2-5 minutes (see Figure 3). The municipalities where respondents reported the shortest average distance (2 minutes) from the household to the nearest trash bin were Mafraq Al-Kubra, Bal’ama Al-Jadeedah, and Sahel Horan and Hoshia Al-Jadeedah. The municipalities where respondents reported the furthest average distance to the nearest trash bin (5 minutes) were Al-Sho’aleh and Sabha and Dafianeh.

¹²REACH, Understanding Social Cohesion and Resilience in Jordanian Host Communities, Assessment Report, June 2014, 22

¹³ UNDP, Mitigating the Impact of the Syrian Refugee Crisis on Jordanian Vulnerable Host Communities, Municipal Needs Assessment Report, 10 April 2014, http://www.jo.undp.org/content/jordan/en/home/library/poverty/publication_3/

¹⁴ Ibid.

Figure 3: Average distance (in minutes) from the household to nearest trash bin



Frequency of garbage collection

Almost half of sampled households (48%) reported that garbage collection occurred at least once every two days. Garbage collection occurred most frequently in the two predominately urban municipalities of Al-Zarqa and Irbid Al-Kubra with 52% of respondents indicating garbage collection was conducted daily (Group 7-municipalities) (see Table 4). However, overall 45% of households reported garbage collection occurred rather infrequently, once a week (33%), once every two weeks (6%), once a month (2%), or never (4%).

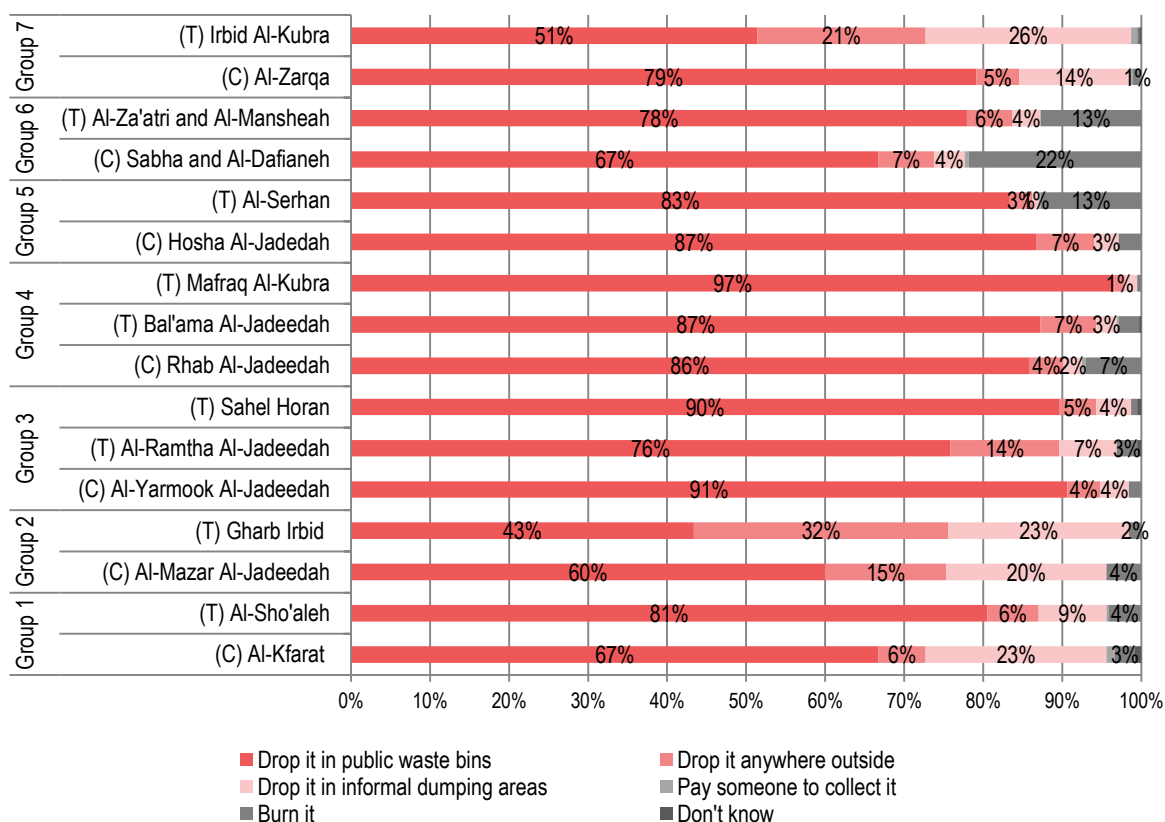
Table 3: Frequency of garbage collection

Group	Municipality	Every day	Once every two days	Once a week	Once every two weeks	Once a month	Less than once a month	Never	Don't know
Group 1	(C) Al-Kfarat	19%	25%	42%	5%	2%	0%	3%	4%
	(T) Al-Sho'aleh	50%	24%	15%	1%	1%	0%	3%	5%
Group 2	(C) Al-Mazar Al-Jadeedah	11%	23%	45%	6%	3%	0%	7%	5%
	(T) Gharb Irbid	28%	33%	29%	4%	1%	1%	2%	2%
Group 3	(C) Al-Yarmook Al-Jadeedah	30%	38%	16%	1%	0%	0%	1%	15%
	(T) Al-Ramtha Al-Jadeedah	22%	19%	36%	10%	3%	0%	6%	5%
	(T) Sahel Horan	26%	39%	24%	4%	1%	0%	1%	5%
Group 4	(C) Rhab Al-Jadeedah	5%	23%	51%	7%	3%	1%	4%	6%
	(T) Bal'ama Al-Jadeedah	6%	16%	44%	19%	8%	1%	3%	2%
	(T) Mafraq Al-Kubra	25%	28%	24%	6%	2%	0%	3%	11%
Group 5	(C) Hosha Al-Jadeedah	8%	42%	38%	4%	1%	0%	1%	6%
	(T) Al-Serhan	2%	19%	51%	10%	2%	0%	5%	10%
Group 6	(C) Sabha and Dafianeh	1%	9%	53%	8%	3%	1%	12%	14%
	(T) Al-Za'atri and Al-Mansheah	10%	33%	38%	2%	1%	0%	7%	9%
Group 7	(C) Al-Zarqa	52%	23%	12%	1%	0%	0%	5%	8%
	(T) Irbid Al-Kubra	52%	28%	12%	1%	1%	0%	2%	3%

Prominent waste disposal methods

A majority (76%) of assessed households reported they disposed of solid waste into public waste bins (see Figure 4). Gharb Irbid was the only municipality where less than half of households (43%) reported using this disposal method. In this municipality, 32% of households reported they disposed of solid waste anywhere outside, and another 23% reported they used informal dumping areas. Informal dumping areas are sites where, despite absence of official waste disposal solutions, community members dispose of trash. The municipality where the greatest proportion of respondents reported using informal dumping areas to dispose of solid waste was Irbid Al-Kubra at 26%. Sabha and Dafianeh had the highest percentage of respondents report they burnt their solid waste at 22%. Plausible explanations for the varying types of disposal methods amongst these two municipalities could be attributed to their location type; Irbid Al-Kubra is a predominately urban municipality, whereas Sabha and Dafianeh is a largely rural municipality. However, the use of these disposal methods suggests that both municipalities do not have sufficient public waste bins for community residents.

Figure 4: Prominent solid waste disposal methods



There was limited variation in waste disposal methods adopted by Jordanian and Syrian households, except in terms of burning and using informal dumping areas. 12% of Syrian households reported burning household solid waste, (particularly amongst the control municipalities) compared to 3% of Jordanian households. Whereas, a higher percentage of Jordanian households, 10%, reported they disposed of solid waste in informal dumping areas compared to 4% of Syrian households.

The secondary data collected on the following page indicates that while the sampled municipalities have garbage bins available, the number of compactors does not appear to be enough to collect the solid waste that has accumulated in these communities (see Table 3).¹⁵ The urban municipality of Al-Zarqa had the greatest number of trash bins at 1,347. Rhab Al-Jadeedah municipality had the least number of trash bins at 150. Similarly, the predominately urban municipalities in Group 7, Al-Zarqa and Irbid Al-Kubra had the greatest number of trash compactors, at 66 and 40 respectively. While Mafrq Al-Kubra has a large urban centre, the municipality only has 3 functioning trash compactors. A limited number of trash compactors in all municipalities, except for Group 7, could provide a feasible explanation as to why households have resorted to disposing of solid waste in areas other than public waste bins.

15 For a number municipalities, this data was not available. It should be noted that representatives from Municipalities were requested to provide this information, with many indicating that they needed support with information management and establishing reliable records as it was not easy to immediately access this data.

Table 3: Number of public waste bins and compactors

Group	Municipality	# Garbage bins	# Compactors
Group 1	(C) Al-Kfarat	250	4
Group 1	(T) Al-Sho'aleh	760	0
Group 2	(C) Al-Mazar Al-Jadeedah	No data	9
Group 2	(T) Gharb Irbid	375	6
Group 3	(C) Al-Yarmook Al-Jadeedah	500	3
Group 3	(T) Al-Ramtha Al-Jadeedah	No data	No data
Group 3	(T) Sahel Horan	870	4
Group 4	(C) Rhab Al-Jadeedah	150	5
Group 4	(T) Bal'ama Al-Jadeedah	No data	No data
Group 4	(T) Mafraq Al-Kubra	600	3
Group 5	(C) Hosha Al-Jadeedah	600	2
Group 5	(T) Al-Serhan	190	2
Group 6	(C) Sabha and Dafiane	200	5
Group 6	(T) Al-Za'atri and Al-Mansheah	300	3
Group 7	(C) Al-Zarqa	1347	66
Group 7	(T) Irbid Al-Kubra	500	40
Group Total	Municipality Total	6642	152

Perceptions of cleanliness

Perceptions of cleanliness and pests are understood as proxy indicators for assessing the extent to which households have access to solid waste management services. **74% of households 'agreed' or 'strongly agreed' that there had been an increase in pests in the community recently.** The municipalities where the highest percentage of respondents 'agreed' or 'strongly agreed' that there had been an increase in pests in their community were amongst the municipalities in Group 2 Gharb Irbid (84%), Mazar Al-Jadeedah (80%) and Group 6 Sabha and Al-Dafiane (86%) and Al-Za'atri and Mansheah (83%). The municipality where the lowest proportion of respondents 'agreed' or 'strongly agreed' that there had been an increase in pests in their community was Mafraq Al-Kubra at 53%.

41% of respondents perceived the level of cleanliness around their accommodation to be either 'poor' or 'very poor'. Gharb Irbid and Al-Ramtha Al-Jadeedah were the two municipalities where the highest proportion of households reported the level of cleanliness around their accommodation to be 'poor' or 'very poor', at 59%. The municipalities where the greatest proportion of respondents reported the level of cleanliness around their accommodation to be 'good' or 'excellent' were Al-Serhan (56%) and Al-Yarmook Al-Jadeedah (53%).

Solid waste coping strategies

In order to assess how poor access to solid waste management services is affecting households, respondents were asked how they coped with the lack of solid waste management services in the community and the number of times they used these strategies in the 7 days preceding the survey. **35% of households reported using a coping strategy to deal with limited waste management provision.** The findings below reflect the responses amongst households which reported using coping strategies

The two most common strategies were to dispose of trash in a landfill or by the roadside (49%) or by burning (45%). The municipality where the greatest proportion of respondents reporting to dispose of waste in a landfill or by the roadside was Al-Yarmook Al-Jadeedah at 67%, followed by Irbid Al Kubra (64%) and Ramtha Al-

Jadeedah (62%) (see Table 4). The municipality where the highest percentage of respondents reported burning trash was Al-Kfarat at 70% of strategies, followed by Sabha and Dafaineh (68% of strategies), and Al-Za'atri and Mansheah (65% of strategies). 5% of respondents reported retaining garbage indoors for a longer period of time. Al-Serhan was the municipality where the highest proportion of respondents reported to adopt this strategy at 23% of strategies, followed by Al-Kfarat at 9% of strategies.

Table 4: Proportion of used strategies by type of coping strategy

Municipalities	Type of coping strategy reported						
	Burn trash	Bury it	Dump waste by roadside landfill	Dump waste in river nearby water	Retaining garbage indoors for longer than usual	Recycle waste	Other
(C) Al-Kfarat	70.5%	0.0%	18.2%	1.1%	9.1%	0.0%	1.1%
(T) Al-Sho'aleh	33.0%	0.0%	61.9%	0.0%	5.2%	0.0%	0.0%
(C) Al-Mazar Al-Jadeedah	64.8%	1.1%	27.3%	0.0%	4.5%	0.0%	2.3%
(T) Gharb Irbid	34.1%	0.6%	62.7%	0.0%	1.3%	0.0%	1.3%
(C) Al-Yarmook Al-Jadeedah	25.9%	0.0%	66.7%	0.0%	5.6%	0.0%	1.9%
(T) Al-Ramtha Al-Jadeedah	30.8%	0.0%	62.0%	1.7%	5.1%	0.0%	0.4%
(T) Sahel Horan	38.1%	0.3%	59.6%	0.0%	1.3%	0.3%	0.3%
(C) Rhab Al-Jadeedah	58.3%	0.8%	36.4%	0.0%	4.5%	0.0%	0.0%
(T) Bal'ama Al-Jadeedah	53.5%	0.0%	43.8%	0.0%	2.8%	0.0%	0.0%
(T) Mafrag Al-Kubra	49.5%	0.0%	46.4%	0.0%	4.1%	0.0%	0.0%
(C) Hosha Al-Jadeedah	45.7%	0.7%	49.7%	0.0%	1.3%	1.3%	1.3%
(T) Al-Serhan	57.6%	0.0%	17.5%	0.6%	23.2%	0.0%	1.1%
(C) Sabha and Dafianeh	68.2%	1.1%	27.9%	0.0%	2.8%	0.0%	0.0%
(T) Al-Za'atri and Al-Mansheah	65.0%	0.8%	27.6%	0.0%	5.7%	0.0%	0.8%
(C) Al-Zarqa	54.5%	0.0%	34.8%	1.5%	4.5%	0.0%	4.5%

Legend	
0%	
1-25%	
26-50%	
51-75%	
76-100%	

Level of satisfaction with municipal solid waste management services

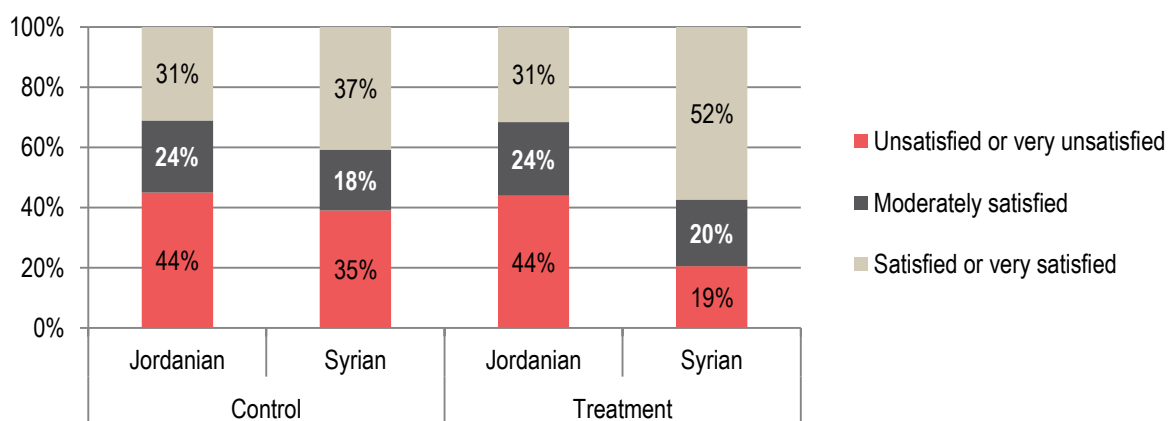
In order to better understand levels of satisfaction, households were also asked about their perceptions of municipal pest control and their satisfaction with the frequency of garbage collection. This section then proceeds to provide explanations for these satisfaction levels by exploring the reasons given by respondents for dissatisfaction with waste services and subsequently testing for relationships between key indicators for waste perceptions and satisfaction.

41% of households reported they were ‘unsatisfied’ or ‘very unsatisfied’ with municipal solid waste management services in the community. Amongst one treatment municipality and three control municipalities the majority of households reported they were either ‘unsatisfied’ or ‘very unsatisfied’ with municipal solid waste management services: Al-Ramtha Al-Jadeedah (62%), Al-Mazar Al-Jadeedah (61%), Al-Zarqa (54%) and Sabha and Al-Dafianeh (51%). No municipality had a majority of households report to be ‘satisfied’ or ‘very satisfied’ with

municipal solid waste management provision. The municipality with the highest percentage of households report they were either ‘satisfied’ or ‘very satisfied’ with municipal solid waste management services was Al-Serhan at 50%, followed by Al-Sho'aleh (48%), and Al-Yarmook Al-Jadeedah (47%).

Dissatisfaction with municipal solid waste management services could be explained by respondents’ perception of pest increase in their community. For example, in the two municipalities of Sabha and Dafiane and Al-Mazar Al-Jadeedah a high percentage of respondents reported there had been an increase in pests in the community (86% and 80% respectively) and had a high proportion of households report they were ‘unsatisfied’ or ‘very unsatisfied’ with solid waste management services (51% and 61% respectively). This finding suggests that respondents’ perception of an increase in pests in the community will negatively affect their level of satisfaction with municipal solid waste management services.¹⁶

Figure 5: Proportion of households satisfied with municipal solid waste management services (aggregated by municipality type, disaggregated by nationality)



When disaggregated by sex, amongst seven municipalities, a greater percentage of female respondents (36-75%) were ‘unsatisfied’ or ‘very unsatisfied’ with municipal waste management services than their male counterparts (27-52%). The greatest disparity between satisfaction levels between female and male respondents was in Al-Kfarat municipality where 71% of female respondents stated they were ‘unsatisfied’ or ‘very unsatisfied’ with municipal waste management services compared to 29% of male respondents.

Reasons unsatisfied with waste management services

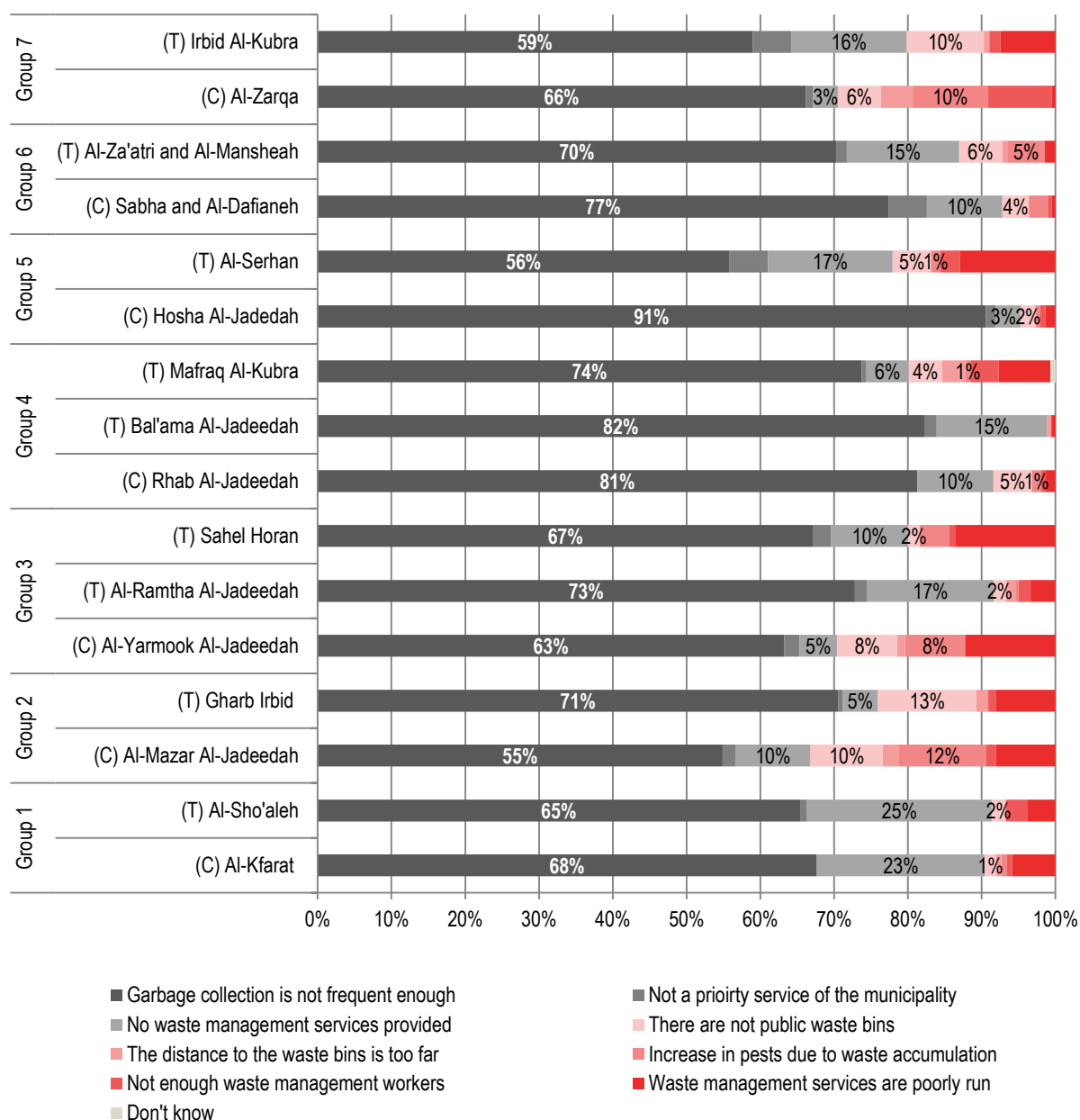
In order to establish the roots of such high levels of dissatisfaction with municipal waste management provision, respondents which reported they were ‘unsatisfied’ or ‘very unsatisfied’ were asked the reasons why they felt dissatisfied. The frequency of garbage collection served as a key factor for household satisfaction levels. **70% of households amongst those that were unsatisfied with solid waste management services said it was because garbage collection was not frequent enough.** This finding held true for a majority of respondents across all 16 municipalities (see Figure 6).

The **second most common reason why respondents were unsatisfied was because no waste management services were provided by the municipality** (11% of unsatisfied households). The two municipalities with the highest proportions of respondents citing this reason were Group 1 municipalities: Al Sho'aleh (25% of unsatisfied households) and Al-Kfarat (23% of unsatisfied households). 5% of households were unsatisfied with municipal waste management services because no public waste bins were provided in the community; Gharb Irbid was the municipality where the highest percentage of households reported this finding at 13%, followed by Al-Mazar Al-Jadeedah (10% of unsatisfied households), and Irbid Al-Kubra (10% of unsatisfied households). The fact that households in Gharb Irbid complained because there were no public waste bins provided, could serve as a feasible explanation as to why a majority of households in this municipality use alternative disposal methods. Lastly, 5% of

¹⁶ A Chi-square test confirmed that perception of pest increase is associated with satisfaction with municipal waste management services at a conventionally accepted level of significance, Chi-square=1833.921,df=25 ,p<0.001, Phi=.545, Cramer's V=.244

respondents were unsatisfied with municipal solid waste management services because these services were reported to be 'poorly run'.

Figure 6: Reported reasons for dissatisfaction with solid waste management services

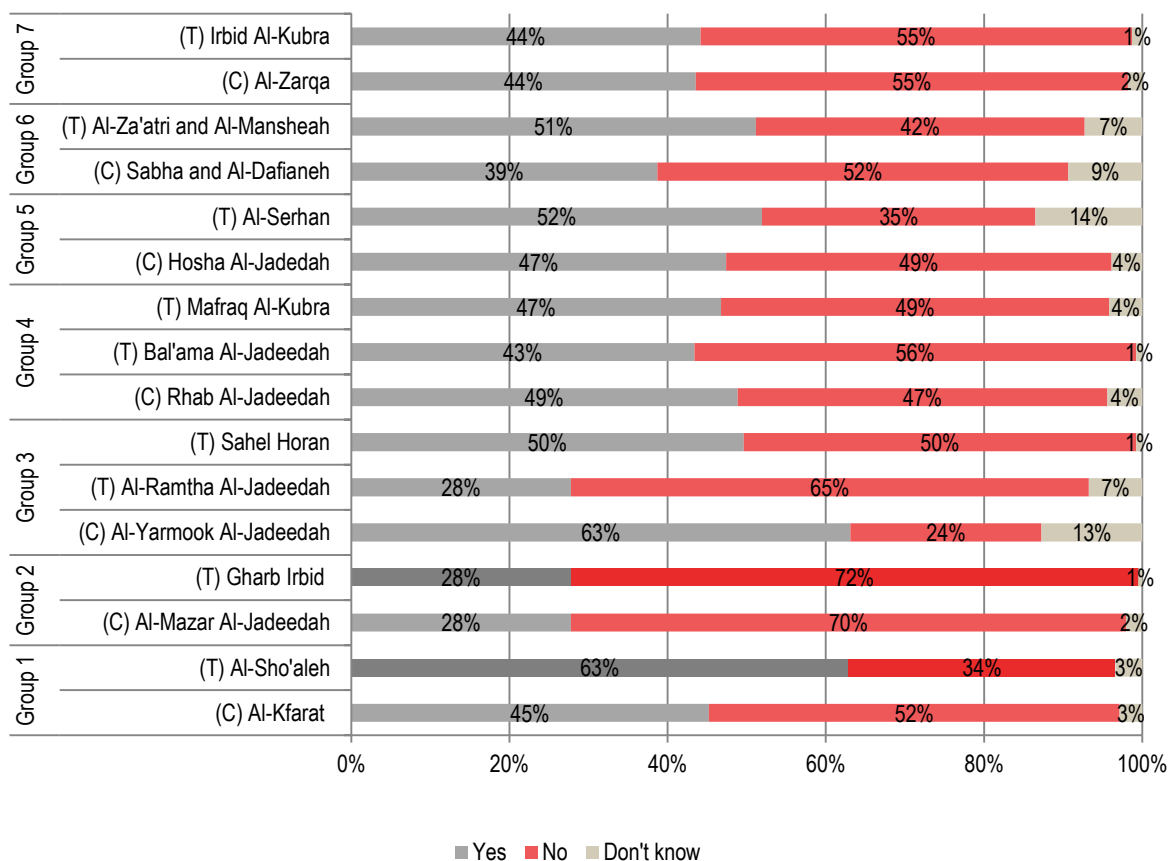


Perceptions of garbage collection

Another indicator which provides greater detail on satisfaction levels is perceptions of garbage collection. **50% of households believed garbage collection in their community was not conducted frequently enough.** The two municipalities with the highest proportion of households reporting garbage collection was not frequent enough were Group 2 municipalities Gharb Irbid (72%), Al-Mazar Al-Jadeedah (70%) (see Figure 7). Poor garbage collection in Gharb Irbid could also explain why a majority of respondents are not utilising public waste bins. Other municipalities where a majority of households reported garbage collection is not frequent enough were: Al-Ramtha Al-Jadeedah (65%), Bal'ama Al-Jadeedah (56%), Al-Zarqa (55%), Irbid Al-Kubra (55%), Al-Kfarat (52%), and Sabha and Dafianeh (52%). However, in four municipalities, the majority of respondents reported garbage collection was conducted frequently enough: Al-Sho'aleh (63%), Al-Yarmook Al-Jadeedah (63%), Al-Serhan (52%) and Al-Za'atri and Al-Mansheah (51%).

The frequency of reported garbage collection and the perception of garbage collection appeared to be related. For example, Bal’ama Al-Jadeedah had the highest proportion of households report garbage collection occurred less than once a week (31%) and had a majority of households report garbage collection is not frequent enough (56%), which suggests that infrequent garbage collection will negatively influence respondents’ perception of garbage collection.¹⁷

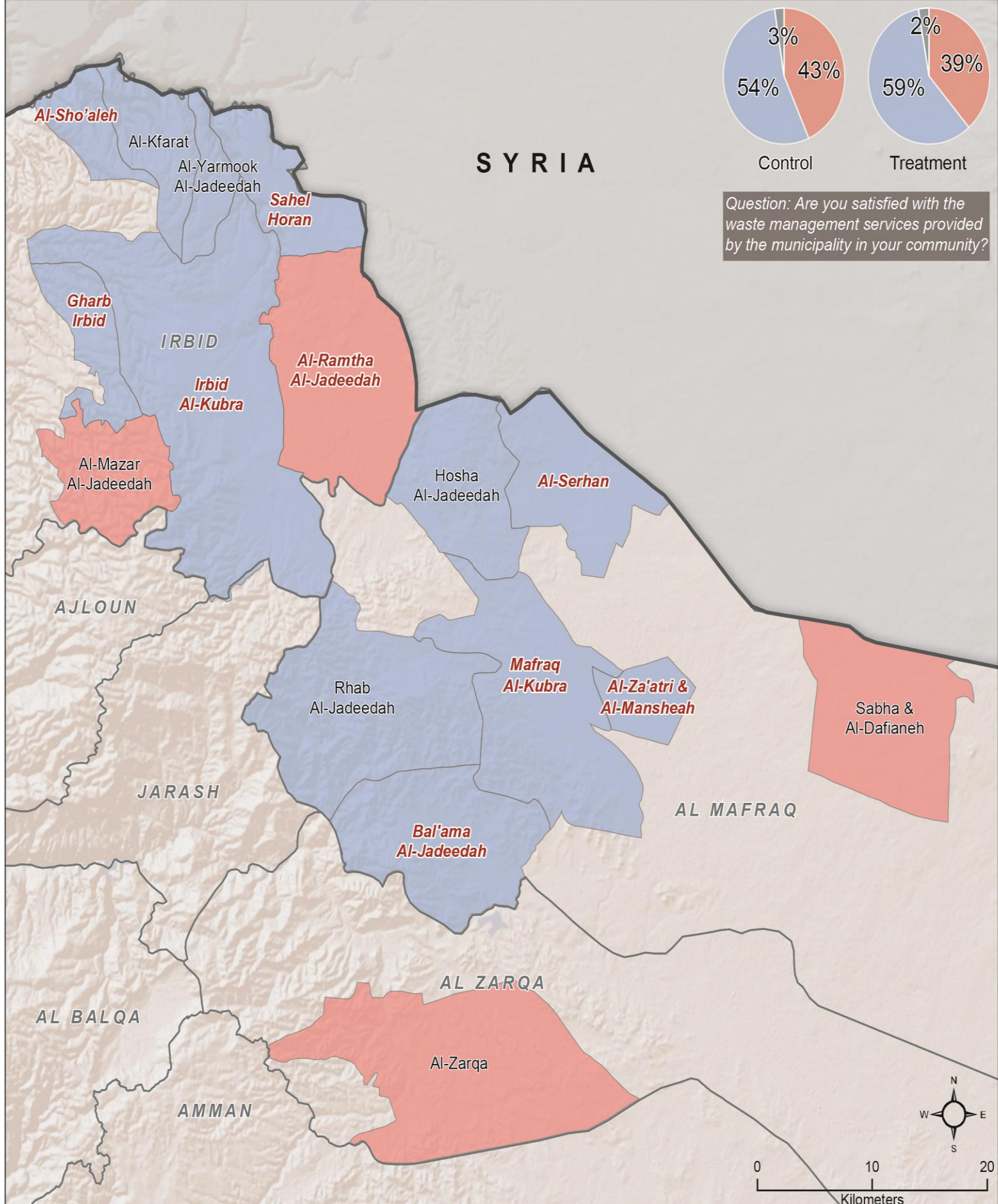
Figure 7: Is garbage collected frequency enough?



Perceptions of pest control

A more specific indicator of satisfaction with municipal services is the perception of municipal pest control. **64% of households perceived the municipality was doing a ‘poor’ or ‘very poor’ job of dealing with pest control.** In all municipalities except Al-Serhan (43%), Mafraq Al-Kubra (49%), and Al-Sho’aleh (50%) the majority of households reported this finding. The highest proportion of households which stated the municipality was doing a ‘poor’ or ‘very poor’ job of dealing with pest control was in Sabha and Dafianeh (82%), followed by Gharb Irbid (80%). High levels of dissatisfaction amongst these two municipalities could be due to the fact that both municipalities had the highest proportion of households reporting that there had been an increase in pests in the community at 86% and 84% respectively.

¹⁷ A Chi-square test confirmed that frequency of garbage collection is associated with perception of garbage collection at a conventionally accepted level of significance, Chi-square=1550.820, df=12, p<0.001, Phi=.520, Cramer’s V=.368



Thematic Data: REACH - October 2014
 Administrative boundaries: UNOCHA
 Background Imagery: Esri

Projection: WGS 1984 UTM Zone 37N

Contact : reach.mapping@impact-initiatives.org

Note: Data, designations and boundaries contained on this map are not warranted to be error-free and do not imply acceptance by the REACH partners, associates or donors mentioned on this map.

SANITATION

According to the Jordan Response Plan for the Syrian Crisis, ‘the influx of Syrian refugees has also increased pressure on already limited sewage and communal waste systems, which only cover 62 percent of the Jordanian population.’¹⁸ While in the long term, the Jordanian government intends to expand coverage of sewerage networks; in the short-term, the National Resilience Plan (2014) states that it is necessary to provide support for alternative ‘excreta disposal options’.¹⁹

An overwhelming majority of households (80%) in the assessed municipalities reported not being connected to the public sewer system. There was huge variation between municipalities in regards to household access to the sewer system. For example, 100% of households in Bal’ama Al-Jadeedah municipality reported not having access to the sewer system compared to just 11% in Al-Zarqa municipality. This finding suggests that households with limited access to the sewer system largely depend on pit latrines which need to be desludged, a service which falls under the auspices of the municipality. However, only 6% of households reported they had benefitted from public desludging services, whereas the majority of households with pit latrine (83%) indicated that they have resorted to using private desludging trucks to address their household needs. This private service is an added expenditure, on average 39JOD (six month time period) that households have had to bare. Households which cannot afford this expense have to resort to coping strategies (33% of all households), such as emptying pit waste into a valley (15%) and digging another pit (12%). These strategies are extremely harmful for the environment and dangerous for households to employ, which suggests that desludging services are a critical area of intervention which needs greater attention amongst Jordan’s northern municipalities.

This section examines key indicators which provide information on household access to municipal sanitation services. The aim is to establish the extent to which households have access to municipal desludging services and highlight gaps in service delivery to enable in interventions aimed to improve municipal sanitation services to be more effectively targeted.

Level of access to municipal sanitation services

80% of households²⁰ in the sampled municipalities reported not having access to the sewer system. In two control municipalities (Al-Mazar Al-Jadeedah and Hoshia Al-Jadeedah) and one treatment municipality (Bal’ama Al-Jadeedah) 100% of households reported not being connected to the sewer system (see Figure 8). The municipalities with the largest proportion of respondents connected to the sewer system were Al-Zarqa (89%) and Irbid Al-Kubra (77%)-Group 7 municipalities, Ramtha Al-Jadeedah (63%), and Mafraq Al-Kubra (55%) all of which have sizable urban populations.

¹⁸ Jordan Response Plan for the Syrian Crisis 2015, December 17, 2014

¹⁹ National Resilience Plan 2014-2016, Proposed priority responses to Mitigate the Impact of the Syrian Crisis on Jordan and Jordanian Host Communities, January 2014, Host Community Support Platform, <http://un.org.jo/sites/default/files/NRP.pdf>, 56

²⁰ Based on reported connected figures

Figure 8: Proportion of households with access to the sewer system

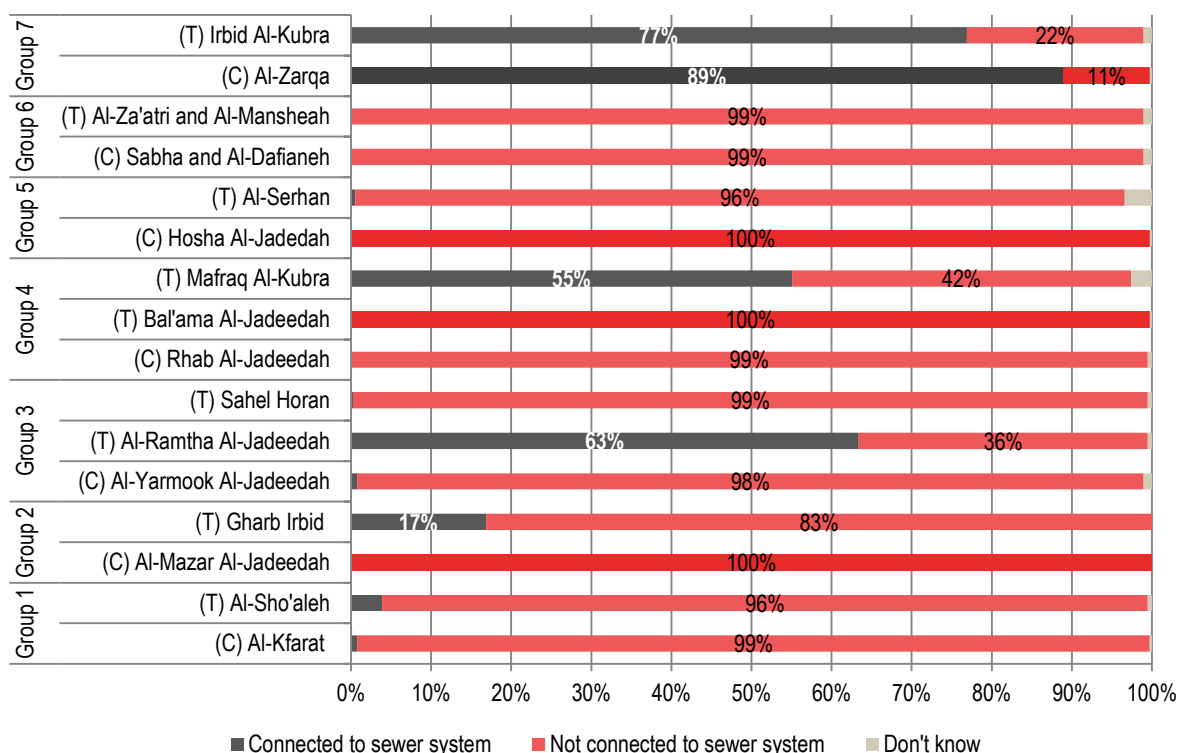
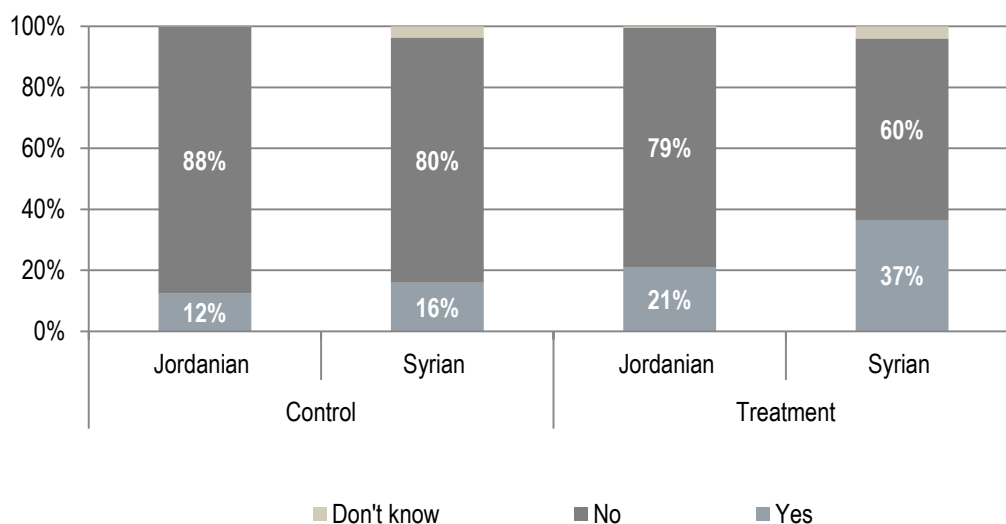


Figure 9: Proportion of households with access to the sewer system (aggregated by municipality type, disaggregated by nationality)



Prominent desludging methods

Based on secondary data REACH collected at the municipal level, it is apparent that municipalities in northern Jordan require support to enhance their capacity to address the sanitation needs of their residents. Out of the fourteen municipalities where REACH was able to collect secondary data on desludging services, only five had a desludging truck at their disposal (see Table 7). No municipality had more than one desludging truck available. Even in the predominately urban municipality of Al-Zarqa there is reportedly only one desludging truck, the same quantity as the rural municipality of Sabha and Dafianeh.

Table 5: Number of desludging trucks²¹

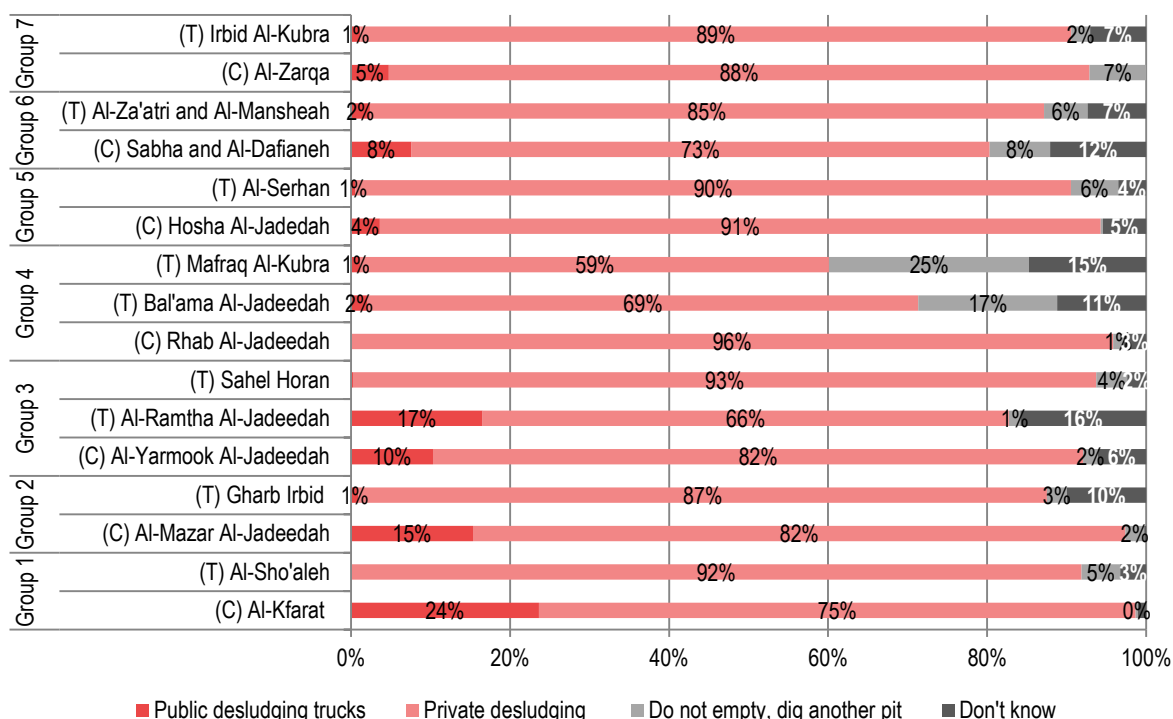
Group	Municipality	# Desludging trucks
Group 1	(C) Al-Kfarat	0
Group 1	(T) Al-Sho'aleh	0
Group 2	(C) Al-Mazar Al-Jadeedah	1
Group 2	(T) Gharb Irbid	0
Group 3	(C) Al-Yarmook Al-Jadeedah	0
Group 3	(T) Al-Ramtha Al-Jadeedah	No data
Group 3	(T) Sahel Horan	0
Group 4	(C) Rhab Al-Jadeedah	0
Group 4	(T) Bal'ama Al-Jadeedah	No data
Group 4	(T) Mafraq Al-Kubra	1
Group 5	(C) Hosha Al-Jadeedah	0
Group 5	(T) Al-Serhan	0
Group 6	(C) Sabha and Al-Dafiane	1
Group 6	(T) Al-Za'atri and Al-Mansheah	1
Group 7	(C) Al-Zarqa	1
Group 7	(T) Irbid Al-Kubra	0
Group Total	Municipality Total	5

Without access to public sewer networks or public desludging trucks, the majority of households have resorted to using alternative methods to desludge their pit latrines. **83% of households not connected to the sewer system reported they used private desludging trucks** to desludge their pit latrine. All municipalities had a majority of households not connected to the sewer system report using this method for their desludging needs (see Figure 10).

6% of households reported to use public desludging trucks to desludge their household pit latrines. At 24%, Al-Kfarat was the municipality in which the highest percentage of households reported using this method, followed by Ramtha Al-Jadeedah (17%). Another 6% of households reported they did not know how they desludged their pit latrine. Ramtha Al-Jadeedah had the highest percentage of households cite this reason at 16%. Overall, 5% of households had not emptied their pit latrines and had in some cases simply 'dug a new pit.' The municipalities in which the highest proportion of respondents reported using this method were Mafraq Al-Kubra at 25%, and Bal'ama Al-Jadeedah at 17%. A feasible explanation as to why a high proportion of respondents did not empty their pit latrine in these municipalities could be due to the fact that pit latrine waste can take years to accumulate, anywhere from 2-10 years. Therefore, given that Mafraq Al-Kubra is the municipality with the highest proportion of Syrian respondents it is likely that they have not resided in the community long enough to have had to desludge their pit latrine.

²¹ For a number municipalities, this data was not available. It should be noted that representatives from municipalities were requested to provide this information. With many municipality focal points reporting that they needed support with information management and to establish reliable records, it was not easy to immediately access this data.

Figure 10: Most prominent method to desludge household pit latrine



Number of times pit latrine overflowed

The average number of times household pit latrines overflowed in the six months preceding the survey was once. In the two control municipalities of Rhab Al-Jadeedah and Sabha and Dafianeh households reported the lowest number of times the household pit latrine overflowed (0) and two treatment municipalities Sahel Horan and Al-Ramtha Al-Jadeedah reported the highest number of times household pit latrines overflowed (2).

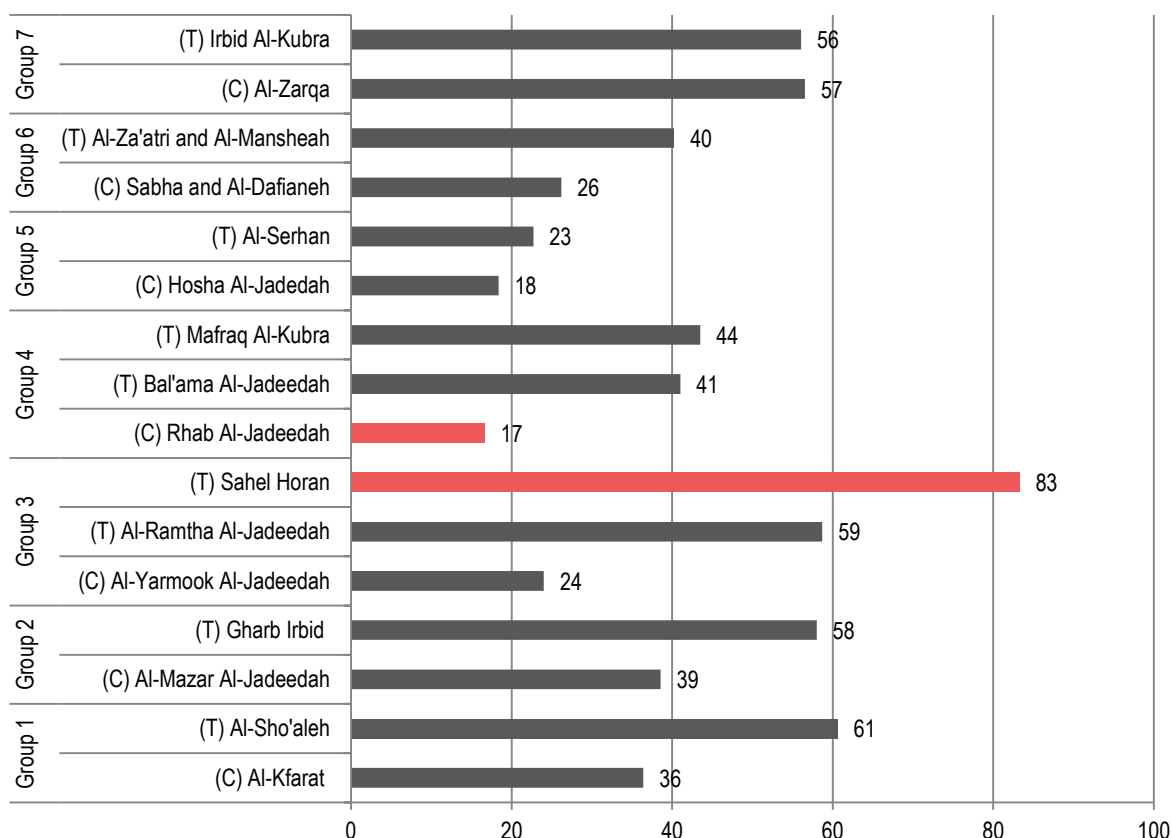
Number of times pit latrine was desludged

The average number of times households reported to desludge their pit latrine in the six months preceding the survey was once. In the control municipality of Rhab Al-Jadeedah, households reported the lowest number of times their pit latrine overflowed (0) and the lowest number of times desludging services were used (0). In Sabha and Dafianeh, where the average number of times a pit latrine was reported to overflow was also zero, the average number of times households reported to desludge their pit latrine was one. In Al-Ramtha Al-Jadeedah, Irbid Al-Kubra and Sahel Horan households reported the highest average number of times pit latrines were desludged (2).

Averages household expenditure for desludging services (six month period)

For those that paid for desludging services, the average household expenditure for such services was 39 JOD (55 USD) over a six month period. The greatest household expenditure was 83 JOD (55 USD) (Sahel Horan) and the lowest was 17JOD (24 USD) (Rhab Al-Jadeedah) (see Figure 11). The average household expenditure for desludging services amongst the treatment municipalities was 52 JOD (73 USD) compared to 31 JOD (43 USD) amongst the control municipalities. The greatest variation, by group, for household expenditure on desludging services was amongst the municipalities Al-Yarmook Al-Jadeedah (24 JOD) and Sahel Horan (83 JOD)–Group 3.

Figure 11: Average cost to desludge pit latrine (cost over a 6 month period in Jordanian dinars, JOD)



Sanitation coping strategies

To better understand the impact of municipal desludging provision on households, respondents were asked to specify the number of times they employed a sanitation-related coping strategy to deal with a lack of municipal desludging services over a six month time period. Overall **33% of sampled households reported using a sanitation coping strategy to address their household desludging needs**. The findings below reflect the responses amongst households which reported to using a sanitation coping strategy.

Of the strategies used, the use of private desludging trucks at 69%, was the most commonly used strategy. Al-Zarqa had the highest proportion of respondents reporting they used this method at 93%, followed by Mafraq Al-Kubra (91%) (see Table 8).

The second most common sanitation coping strategy at 21% of used strategies, was to dig another pit. Al-Kfarat had the highest percentage of respondents report to use this strategy at 45%, followed by Al-Sho'aleh and Al-Mazar-Al-Jadeedah (30%).

Table 6: Proportion of used sanitation strategies, by type of coping strategy

Municipality	Reported sanitation coping strategies					
	Dig another pit	Rely on private desludging trucks	Rely on public desludging trucks	Open to a river valley	Connect to the sewer system	Other
(C) Al-Kfarat	45.0%	49.0%	0.0%	1.0%	0.0%	4.0%
(T) Al-Sho'aleh	30.0%	57.0%	1.0%	4.0%	1.0%	8.0%
(C) Al-Mazar Al-Jadeedah	30.0%	54.0%	2.0%	5.0%	7.0%	3.0%
(T) Gharb Irbid	17.0%	76.0%	1.0%	1.0%	6.0%	0.0%
(C) Al-Yarmook Al-Jadeedah	22.0%	70.0%	0.0%	1.0%	2.0%	4.0%
(T) Al-Ramtha Al-Jadeedah	14.0%	68.0%	2.0%	1.0%	14.0%	1.0%
(T) Sahel Horan	21.0%	72.0%	1.0%	4.0%	1.0%	2.0%
(C) Rhab Al-Jadeedah	23.0%	55.0%	1.0%	15.0%	3.0%	4.0%
(T) Bal'ama Al-Jadeedah	28.0%	68.0%	0.0%	4.0%	0.0%	1.0%
(T) Mafraq Al-Kubra	9.0%	91.0%	0.0%	0.0%	0.0%	0.0%
(C) Hoshia Al-Jadeedah	25.0%	71.0%	1.0%	1.0%	2.0%	1.0%
(T) Al-Serhan	12.0%	81.0%	1.0%	3.0%	2.0%	2.0%
(C) Sabha and Dafiane	23.0%	57.0%	4.0%	9.0%	5.0%	2.0%
(T) Al-Za'atri and Al-Mansheah	20.0%	76.0%	1.0%	3.0%	0.0%	1.0%
(C) Al-Zarqa	7.0%	93.0%	0.0%	0.0%	0.0%	0.0%
(T) Irbid Al-Kubra	16.0%	68.0%	2.0%	2.0%	8.0%	5.0%

Legend	
0%	
1-25%	
26-50%	
51-75%	
76-100%	

Level of satisfaction with municipal sanitation services

This section details levels of satisfaction among assessed households regarding municipal sanitation services. It examines reported levels of satisfaction and the reasons stated for dissatisfaction with municipal sanitation services in order to establish the root causes of dissatisfaction with municipal desludging provision.

52% of sampled households reported that they were 'unsatisfied' or 'very unsatisfied' with municipal desludging services. Sahel Horan had the highest percentage of households reporting they were unsatisfied with municipal desludging services at 75%, followed by Rhab Al-Jadeedah at 65%. High levels of dissatisfaction in Sahel Horan could be attributed to the fact that households in this municipality reported the highest average expenditure for desludging services (83 JOD). Additionally, high levels of dissatisfaction in Rhab Al-Jadeedah could be explained by the fact that this municipality had the second highest proportion of households reporting disposal of latrine waste into a river or valley (30%) and dig another pit (18%).

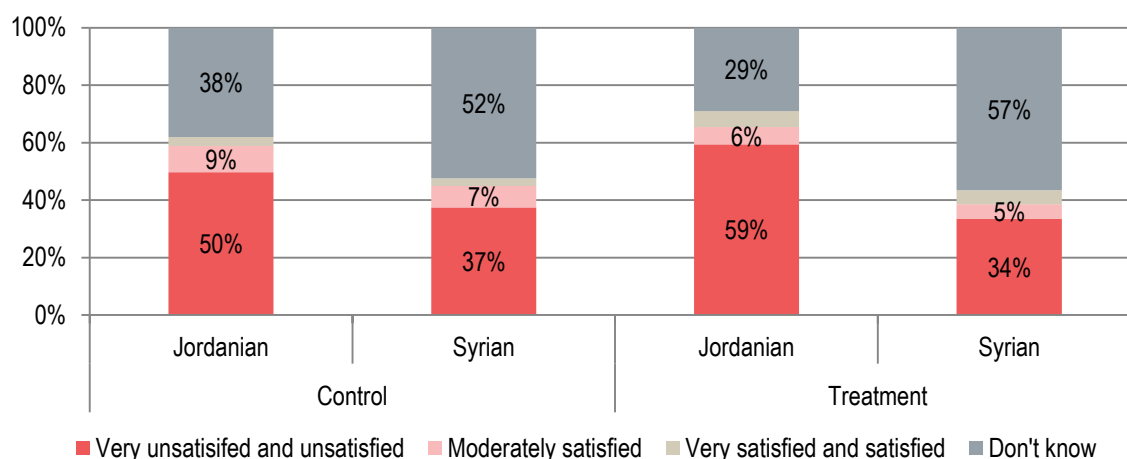
All sampled municipalities had a high percentage (with Al-Yarmook citing the highest percentage at 54% and Sahel Horan the lowest at 17%) of households reporting they did not know if they were satisfied with municipal desludging provision. This finding could be attributed to the fact that the household respondent was not familiar with the

desludging services employed at the household level or that they did not know of the desludging services provided by the municipality. Al-Za'atri and Al-Mansheah had the highest percentage of households report they were 'satisfied' or 'very satisfied' with sanitation services at 12%.

The method of desludging was not associated with level of satisfaction with municipal desludging services. Amongst the three types of desludging methods, private desludging trucks; public desludging trucks; and not emptying and/or digging another pit, similar levels of dissatisfaction with desludging services were reported by respondents at 53%, 54% and 55% respectively.²²

When disaggregated by nationality, **a greater percentage of Jordanian households (55%) were 'unsatisfied' or 'very unsatisfied' with municipal desludging services compared to their Syrian counterparts (35%)**. A majority of Syrian households (52%-57%) amongst both control and treatment municipalities reported they had no alternative option, whether or not they were satisfied with municipal desludging services (see Figure 12). A possible explanation as to why Syrian households reported not to know if they were satisfied with desludging services could be due to the fact that they have not resided in their current accommodation long enough to have had to use such services. For Jordanian respondents, a feasible reason as to why they reported to not know if they were satisfied with desludging services could be associated with the fact they were not aware of any desludging services provided by the municipality.

Figure 12: Proportion of households satisfied with municipal desludging services (aggregated by municipality type, disaggregated by nationality)



When disaggregated by sex, a higher percentage of male respondents, 55%, reported they were 'unsatisfied' or 'very unsatisfied' with municipal desludging services compared to female respondents, 48%. Five municipalities (Al-Sho'aleh, Al-Zarqa, Gharb Irbid, Rhab Al-Jadeedah and Sahel Horan) had a majority of both male and female respondents reporting that they were unsatisfied with municipal desludging services. Sahel Horan was the municipality with the highest percentage of male and female respondents report they were 'unsatisfied' or 'very unsatisfied' with municipal desludging services at 77% and 72% respectively.

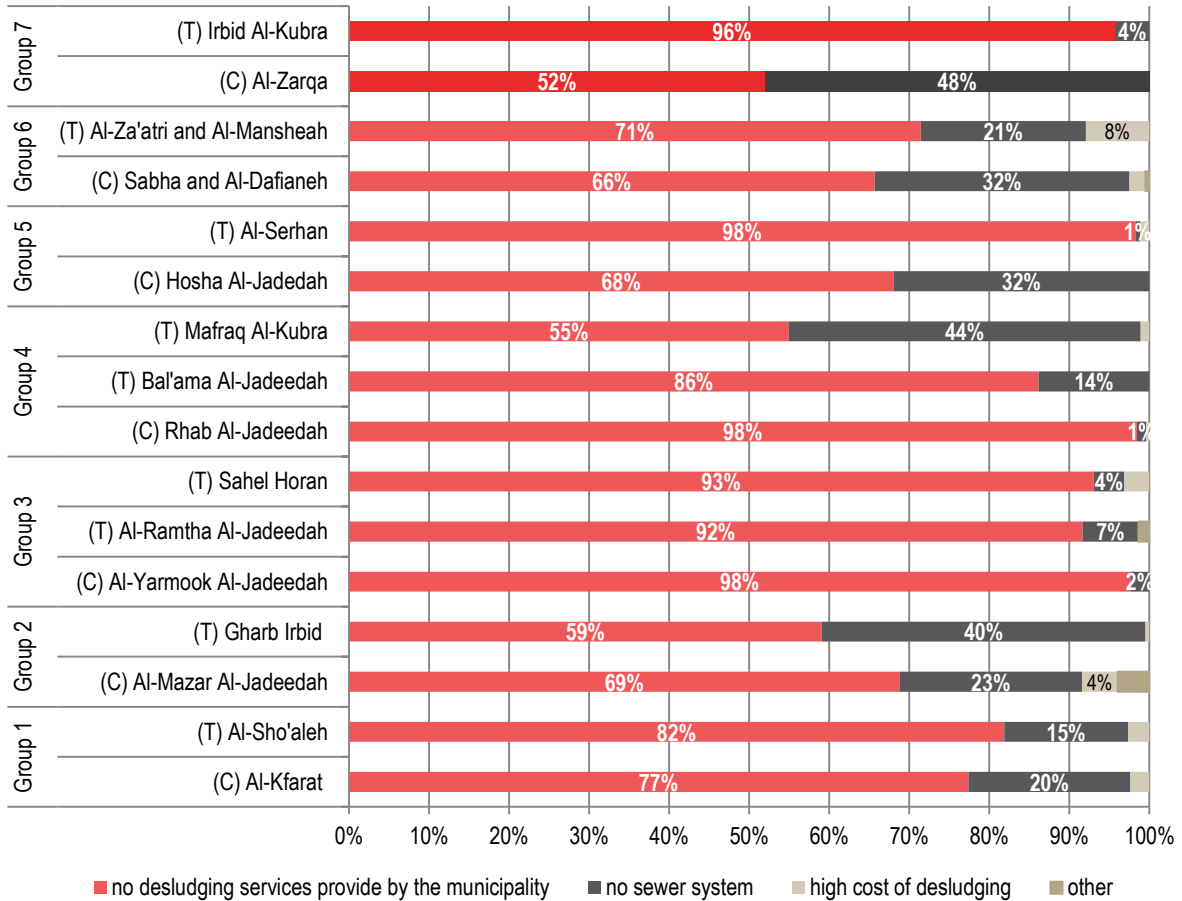
Reasons for dissatisfaction

Amongst all municipalities, the primary reason that the majority of households were unsatisfied with municipal desludging services was because the municipality did not provide these sanitation services (80%) (see Figure 13). Municipalities with the highest proportion of households unsatisfied with municipal desludging services for this reason were Al-Yarmook Al-Jadeedah (98%), Al-Serhan (98%), Rhab Al-Jadeedah (98%), Sahel Horan (93%), and Al-Ramtha Al-Jadeedah (92%). The second most common reason, at 17%, was reported by households who were unsatisfied with municipal desludging services because they did not have access

²² A Chi-square test confirmed that desludging method is associated with satisfaction with municipal desludging services at a convention accepted level of significance, however the relationship is weak, Chi square=387.537, df=20, p<0.001, Phi=.281, Crammer's V=.140

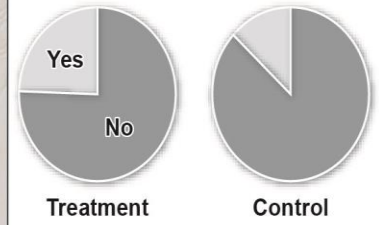
to the sewer system. Al-Zarqa was the municipality with the highest percentage of respondents citing this reason at 48%, followed by Mafraq Al-Kubra (44%) and Gharb Irbid (40%). 8% of respondents in Al-Za'atri and Al-Mansheah were unsatisfied with municipal sanitation services due to the high cost of desludging services.

Figure 13: Reported reasons for being 'unsatisfied' or 'very unsatisfied' with desludging services



SEWER CONNECTIONS

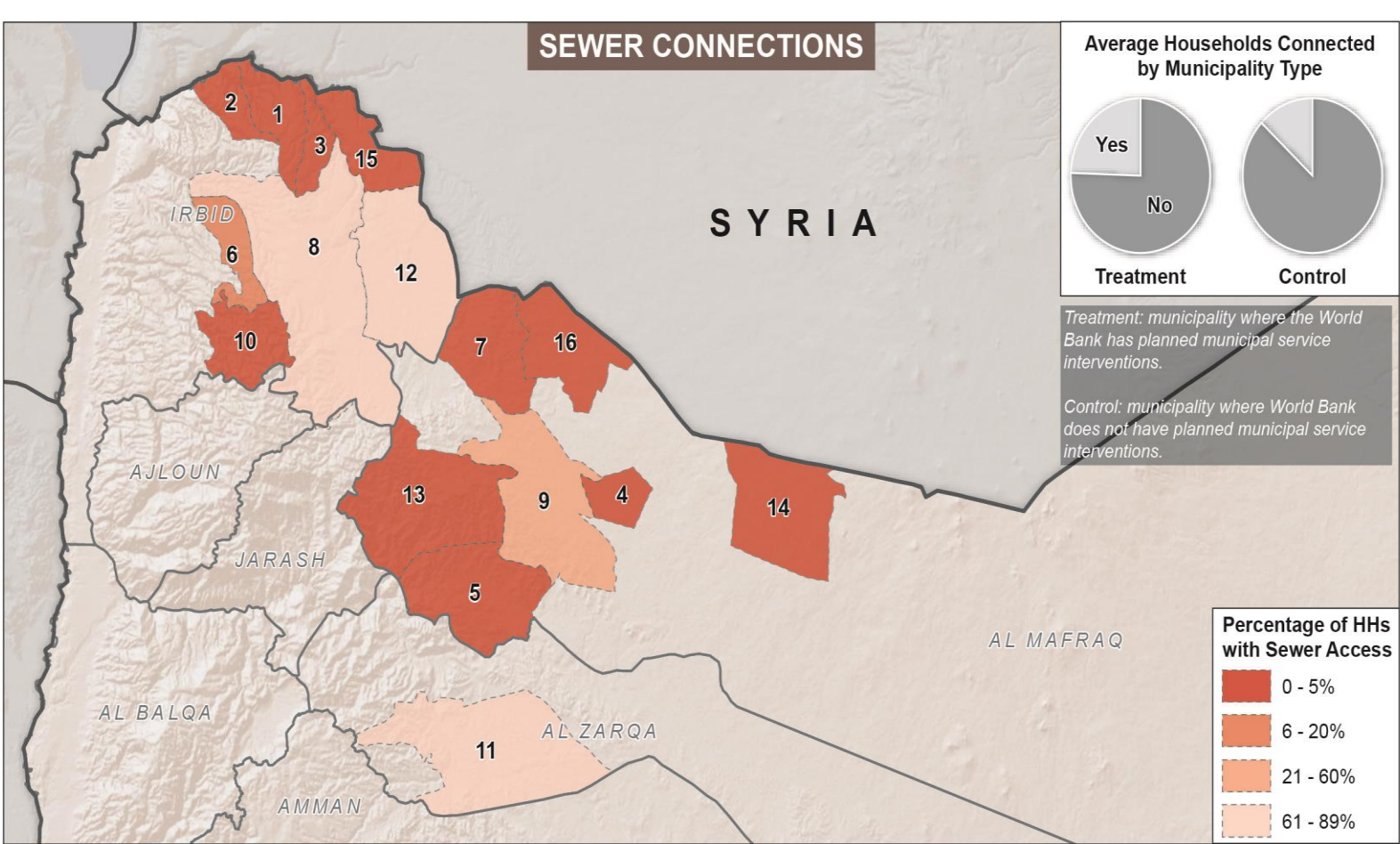
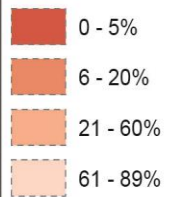
Average Households Connected by Municipality Type



Treatment: municipality where the World Bank has planned municipal service interventions.

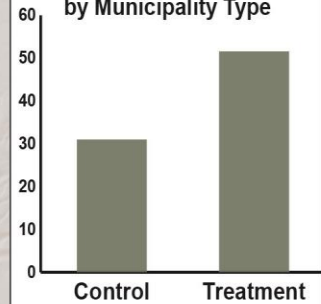
Control: municipality where World Bank does not have planned municipal service interventions.

Percentage of HHS with Sewer Access

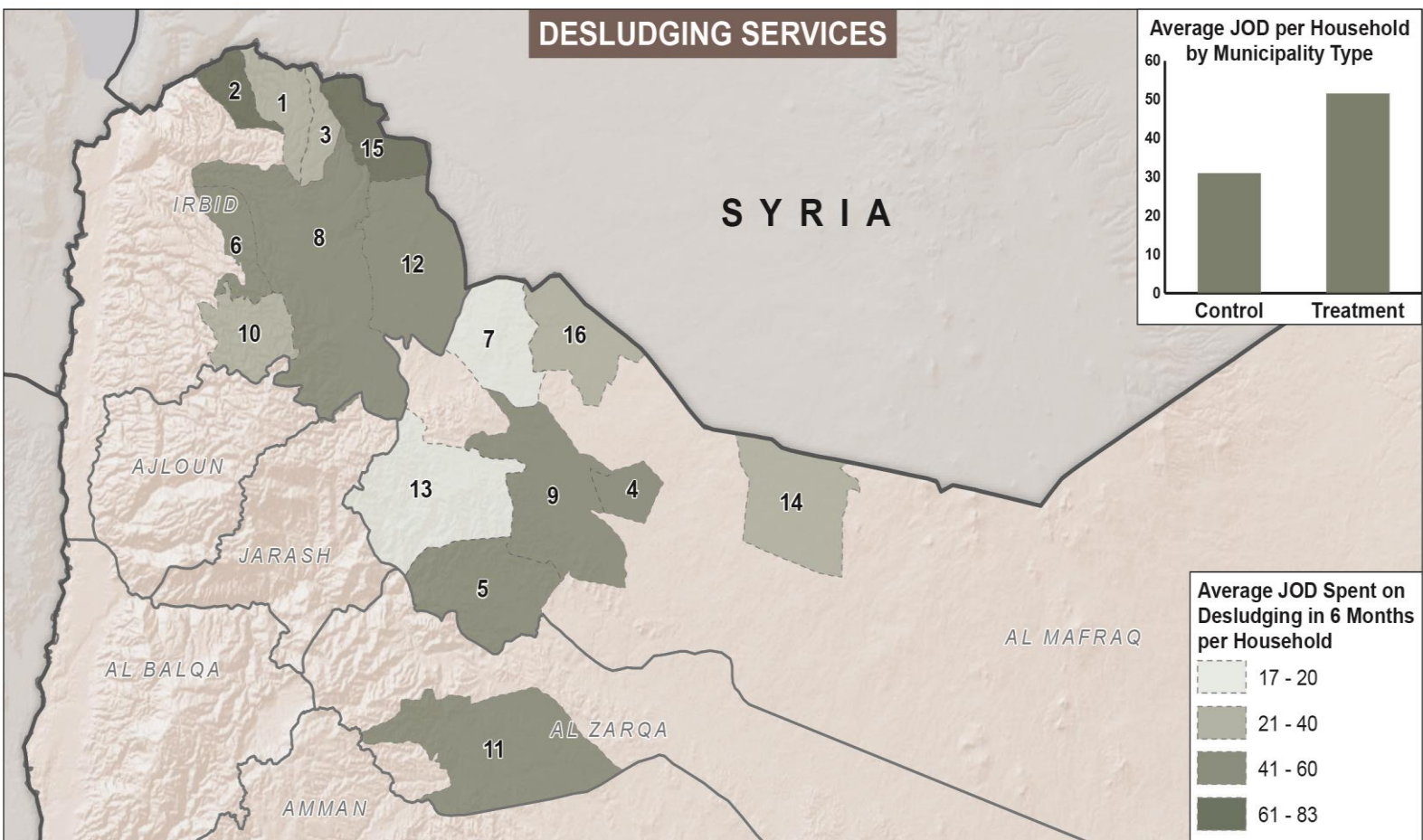
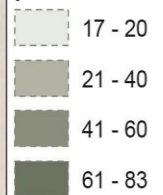


DESLUDGING SERVICES

Average JOD per Household by Municipality Type



Average JOD Spent on Desludging in 6 Months per Household



Municipalities

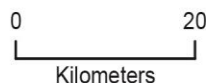
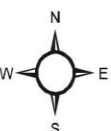
1 Al-Kfarat	Control	9 Mafraq Al-Kubra	Treatment
2 Al-Sho'aleh	Treatment	10 Al-Mazar Al-Jadeedah	Control
3 Al-Yarmook Al-Jadeedah	Control	11 Al-Zarqa	Control
4 Al-Za'atri & Al-Mansheah	Treatment	12 Al-Ramtha Al-Jadeedah	Treatment
5 Bal'ama Al-Jadeedah	Treatment	13 Rhab Al-Jadeedah	Control
6 Gharb Irbid	Treatment	14 Sabha & Al-Dafianeh	Control
7 Hoshal Al-Jadeedah	Control	15 Sahel Horan	Treatment
8 Irbid Al-Kubra	Treatment	16 Al-Serhan	Treatment

Thematic Data: REACH - October 2014
Administrative boundaries: UNOCHA
Background Imagery: Esri

Projection: WGS 1984 UTM Zone 37N

Contact : reach.mapping@impact-initiatives.org

Note: Data, designations and boundaries contained on this map are not warranted to be error-free and do not imply acceptance by the REACH partners, associates or donors mentioned on this map.



PUBLIC LIGHTING, QUALITY OF ROADS AND SIDEWALKS

Public lighting and access to roads and sidewalks are key municipal services which can impact the level of safety and security of community residents. The availability of public lighting can serve as an indicator of community level safety. Limited and or poor quality of public lighting can affect the way in which community residents (host and refugee) interact with one another particularly at night. A UNDP (2014) municipal needs assessment found that street lighting in municipalities needed maintenance, “from repairs to replacing parts and new expansions to cover newly occupied areas.”²³

Data collected here indicates that public lighting was the municipal service which households were least likely to report being unsatisfied with (26%). However, while the majority of respondents (74%) reported that they felt safe at night in their community, 15% indicated that they felt unsafe ‘sometimes’, ‘most of the time’ or ‘always’ at night in their community. In certain communities the issue of poor public lighting has led 22% of respondents to adapt coping strategies such as avoiding going out at night (39%) and avoiding public areas (23%). These strategies can be seen as having a detrimental effect on households’ social engagement in the community. This section explores in further detail the quality and availability of public lighting and how this is affecting perceptions of safety.

Since the onset of the Syrian crisis, municipalities in northern Jordan have experienced a deterioration in the quality of their roads. The increase in the volume of transportation, coupled with the rise in population amongst Jordan’s host communities has placed immense strain on the country’s roads and sidewalks. UNDP (2014) highlights this as a key challenge, stating that many roads need urgent maintenance work and new roads need to be built in recently populated areas.²⁴

A minority of respondents reported they were ‘unsatisfied’ or ‘very unsatisfied’ with the quality of roads (42%) and the municipal maintenance of roads (43%). A greater percentage of respondents reported they were ‘satisfied’ or ‘very satisfied’ with the quality of roads in their community (33%) compared to municipal maintenance of roads (24%). The poor quality of roads has prompted 19% of households to use coping strategies such as the use of alternative transportation (14%); avoiding going out at night due to road safety issues (9%); and incurring additional costs for car repair and maintenance (5%).

Level of access to public lighting and roads

Frequency of feeling unsafe

74% of respondents reported ‘never’ feeling unsafe at night in their community. Overall there was limited variation among the responses when disaggregated by municipality.

Jordanian and Syrian respondents reported relatively similar levels of safety with 73% of Jordanian and 77% of Syrian respondents stating they ‘never’ felt unsafe in their community at night. When the findings are disaggregated by sex, male respondents reported a slightly higher level of safety in their community compared to their female counterparts, with 77% of males indicating they ‘never’ felt unsafe at night in their community compared to 70% of female respondents. When findings are disaggregated by sex and municipality amongst seven municipalities (Al-Kfarat, Al-Sho’aleh-Group1, Al-Ramtha Al-Jadeedah, Al-Yarmook Al-Jadeedah-Group 3), Hosha Al-Jadeedah, Al-Za’atri and Mansheah, Al-Zarqa) a higher percentage (17-27%) of female respondents reported they felt unsafe ‘sometimes’, ‘most of the time’, or ‘always’ in their community at night than their male counterparts (6-18%). Sabha and Dafiane had the highest proportion of female respondents (28%), report they felt unsafe at night in their community ‘sometimes’, ‘most of the time’, or ‘always’: followed by Al-Ramtha Al-Jadeedah (27%) and Al-Sho’aleh (25%).²⁵

²³ UNDP, Mitigating the Impact of the Syrian Refugee Crisis on Jordanian Vulnerable Host Communities, Municipal Needs Assessment Report, 10 April 2014, http://www.jo.undp.org/content/jordan/en/home/library/poverty/publication_3/

²⁴ Ibid.

²⁵ A Chi-square test confirmed that sex is associated with frequency of feeling unsafe at night at a conventionally accepted level of significance, Chi square= 53.133, df=4, p<0.001

Reasons for feeling unsafe

At 44%, the most common reason provided for why respondents felt unsafe at night was due to poor street lighting. In seven municipalities the majority of respondents which reported they felt unsafe at night stated it was due to poor street lighting: Al-Sho'aleh (83%), Al-Mazar Al-Jadeedah (80%), Al-Kfarat (79%), Sahel Horan (63%), Rhab Al-Jadeedah (62%), Bal'ama Al-Jadeedah (61%) and Hosha Al-Jadeedah (58%) (see Table 9). The second most common reason respondents felt unsafe was due to 'fear of criminal activity' at 20%.

Table 7: Reasons for feeling unsafe at night

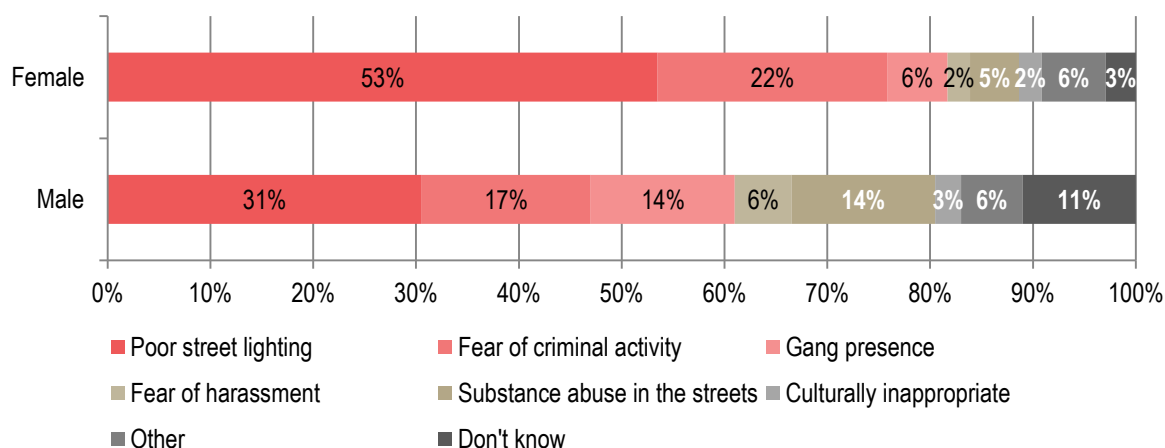
Reported reasons for feeling unsafe at night									
Group	Municipalities	Poor street lighting	Fear of criminal activity	Gang presence	Fear of harassment	Substance abuse in the streets	Culturally inappropriate to be in streets after dark	Other	Don't know
Group 1	(C) Al-Kfarat	79%	9%	0%	0%	0%	2%	5%	5%
Group 1	(T) Al-Sho'aleh	83%	17%	0%	0%	0%	0%	0%	0%
Group 2	(C) Al-Mazar Al-Jadeedah	80%	3%	7%	0%	3%	0%	0%	7%
Group 2	(T) Gharb Irbid	44%	17%	11%	0%	6%	11%	11%	0%
Group 3	(C) Al-Yarmook Al-Jadeedah	36%	42%	8%	0%	0%	0%	11%	3%
Group 3	(T) Al-Ramtha Al-Jadeedah	22%	31%	8%	4%	12%	6%	10%	6%
Group 3	(T) Sahel Horan	63%	0%	25%	13%	0%	0%	0%	0%
Group 4	(C) Rhab Al-Jadeedah	62%	14%	14%	0%	5%	0%	0%	5%
Group 4	(T) Bal'ama Al-Jadeedah	61%	9%	0%	0%	0%	0%	17%	13%
Group 4	(T) Mafraq Al-Kubra	14%	19%	5%	3%	19%	5%	8%	27%
Group 5	(C) Hosha Al-Jadeedah	58%	15%	4%	0%	0%	4%	15%	4%
Group 5	(T) Al-Serhan	27%	14%	8%	18%	24%	0%	2%	8%
Group 6	(C) Sabha and Dafiane	40%	26%	16%	2%	10%	0%	6%	0%
Group 6	(T) Al-Za'atri and Al-Mansheah	38%	27%	8%	0%	15%	0%	0%	12%
Group 7	(C) Al-Zarqa	41%	24%	19%	5%	8%	0%	3%	0%
Group 7	(T) Irbid Al-Kubra	8%	25%	33%	8%	8%	17%	0%	0%

Other common reasons given by respondents to explain why they felt unsafe at night included 'gang presence' (9%) and 'substance abuse in the streets' (9%). Irbid Al-Kubra had the highest proportion of respondents report they felt unsafe due to the presence of gangs at 33%. This was also reported as a problem by 25% of respondents in Sahel Horan. Al-Serhan had the highest percentage of respondents reporting that they felt unsafe because of the presence of substance abuse in the streets at 24%, followed by Mafraq Al-Kubra at 19%. 6% of respondents indicated 'other' as a reason for feeling unsafe. These reasons included close proximity to the border area, the presence of stray dogs, disputes with neighbours and theft. These responses were most commonly referenced in the municipalities of Bal'ama Al-Jadeedah, Hosha Al-Jadeedah, Gharb Irbid, Al-Yarmook Al-Jadeedah and Mafraq Al-Kubra.

4% of respondents felt unsafe at night because of ‘fear of harassment’. Al-Serhan had the highest proportion of respondents cite this reason at 18%, followed by Sahel Horan at 13%.

Of those respondents who reported feeling unsafe, a higher percentage of female respondents (53%) than male respondents (31%) felt unsafe because of poor street lighting (see Figure 14). However, disaggregated by municipality, in Al-Mazar Al-Jadeedah, Al-Sho’aleh, Bal’ama Al-Jadeedah and Rhab Al-Jadeedah a majority of both male and female respondents reported they felt unsafe at night due to poor street lighting. A larger proportion of female respondents were concerned with criminal activity at 22% compared to their male peers at 17%. Whereas, a greater proportion of male respondents felt unsafe due to gang presence (14%) and substance abuse (14%) than their female counterparts (at 6% and 5% respectively).

Figure 14: Reasons for feeling unsafe, by sex



Coping Strategies to deal with poor public lighting and poor quality of roads

To further understand what households do to cope with limited availability of public lighting and poor quality of roads in their community, respondents were asked to indicate the number of times they used a coping strategy in the 30 days preceding the survey. **22% of respondents reported they used a coping strategy to deal with the limited availability of public lighting and 19% of respondents reported they used a coping strategy to deal with the poor quality of roads.** The findings below reflect the responses amongst households which reported to use water-related coping strategies.

At 29% of strategies, the most common coping strategy to deal with poor public lighting in the community was to incur additional costs to fix ones car. Al Yarmook Al Jadeedah municipality had the highest percentage of households report they used this coping strategy at 56% (see Table 10). **The second most common strategy to deal with limited public lighting was to avoid public areas at 24%.** Al-Za’atri and Al-Mansheah and Rhab Al-Jadeedah had the greatest proportion of respondents report they used this strategy at 46% and 45% respectively.

21% of respondents reported they did not go out at night due to poor lighting. Al-Za’atri and Al-Mansheah had the highest proportion of respondents report using this strategy at 32%, followed by Al Serhan (31%) and Bal’ama Al-Jadeedah (27%). 10% of respondents reported using alternative transportation due to poor quality of roads and did not go out at night because of road safety issues. Al-Kfarat and Al-Mazar Al-Jadeedah had the highest percentage of respondents reporting that they used alternative transportation, at 27% and 19% respectively. Al-Sho’aleh and Irbid Al-Kubra had the highest percentage of respondents reporting to not go out at night because of road safety issues, at 16% and 13% respectively. Overall, only 7% of respondents installed additional lighting around their accommodation, Al Sho’aleh had the greatest proportion of respondents report to use this strategy at 25%.

Table 8: Proportion of used strategies to cope with insufficient street lighting, by strategy type

Municipalities	Coping Strategy Type					
	Did not go out at night	Avoided public areas	Did not go out at night because road safety issues	Used alternative transportation (walking/animals)	Incurred additional costs to fix car	Installed additional lighting around accommodation
(C) Al-Kfarat	19.0%	13.0%	9.0%	27.0%	29.0%	3.0%
(T) Al-Sho'aleh	23.0%	21.0%	16.0%	8.0%	6.0%	25.0%
(C) Al-Mazar Al-Jadeedah	17.0%	22.0%	9.0%	19.0%	32.0%	1.0%
(T) Gharb Irbid	14.0%	33.0%	12.0%	7.0%	31.0%	2.0%
(C) Al-Yarmook Al-Jadeedah	17.0%	6.0%	7.0%	0.0%	56.0%	14.0%
(T) Al-Ramtha Al-Jadeedah	14.0%	7.0%	12.0%	9.0%	35.0%	22.0%
(T) Sahel Horan	13.0%	23.0%	9.0%	19.0%	29.0%	7.0%
(C) Rhab Al-Jadeedah	23.0%	45.0%	8.0%	2.0%	20.0%	2.0%
(T) Bal'ama Al-Jadeedah	27.0%	18.0%	11.0%	10.0%	30.0%	3.0%
(T) Mafraq Al-Kubra	22.0%	22.0%	5.0%	7.0%	22.0%	20.0%
(C) Hosha Al-Jadeedah	21.0%	35.0%	9.0%	3.0%	30.0%	1.0%
(T) Al-Serhan	31.0%	35.0%	11.0%	5.0%	16.0%	1.0%
(C) Sabha and Dafiane	25.0%	25.0%	13.0%	9.0%	26.0%	3.0%
(T) Al-Za'atri and Al-Mansheah	32.0%	46.0%	6.0%	1.0%	14.0%	1.0%
(C) Al-Zarqa	16.0%	13.0%	9.0%	12.0%	42.0%	8.0%
(T) Irbid Al-Kubra	15.0%	17.0%	13.0%	13.0%	36.0%	5.0%

Legend	
0%	
1-25%	
26-50%	
51-75%	
75-100%	

Level of satisfaction with public lighting

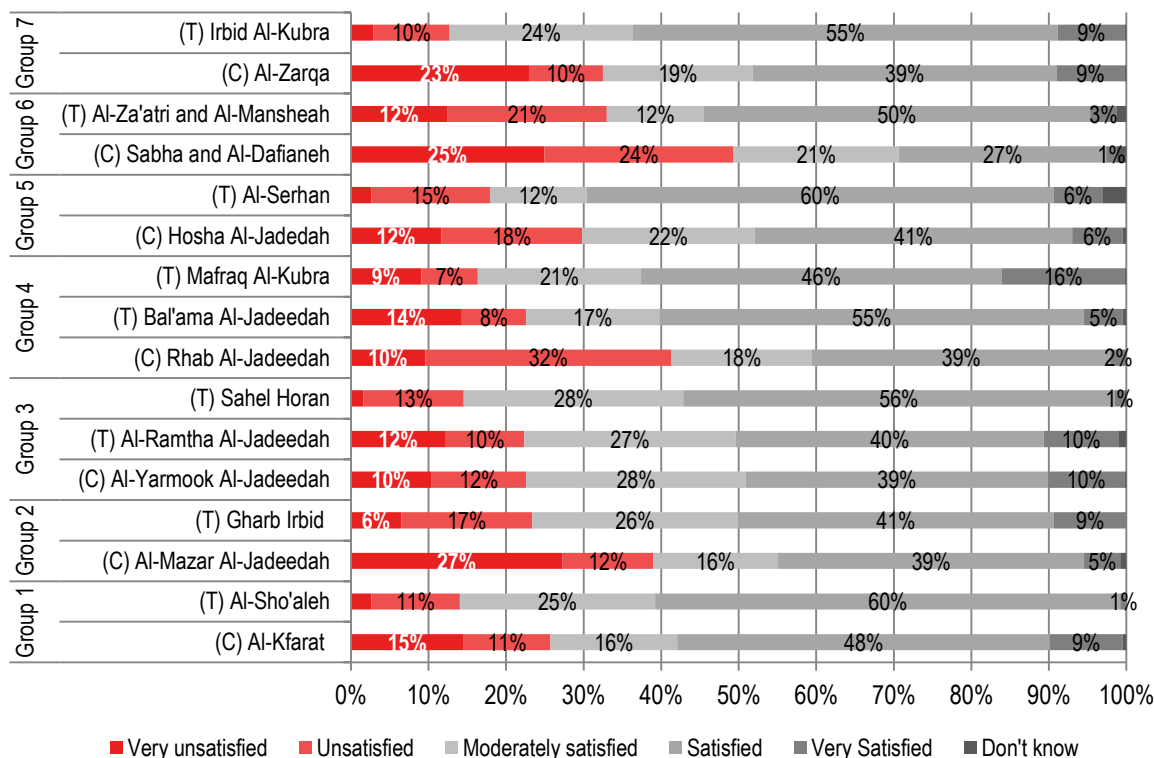
The majority of respondents (52%) reported that they were either 'satisfied' or 'very satisfied' with the availability of public lighting in the community. No municipality had a majority of respondents report that they were 'unsatisfied' or 'very unsatisfied' with the availability of public lighting.

Respondents that reported 'never' or 'rarely' feeling unsafe at night had high levels of satisfaction with public lighting in the community, both options reported by 57% respectively of respondents. Conversely, amongst respondents that reported feeling unsafe at night 'always', or 'most of the time', these respondents also had high levels of dissatisfaction with public lighting, at 56% and 54% respectively.²⁶ This finding indicates that respondents' level of safety at night is associated to their level of satisfaction with public lighting.

²⁶ A Chi-square test confirmed that frequency of feeling unsafe at night is associated with level of satisfaction with public lighting at night at a conventionally accepted level of significance, Chi square=539.200, df=20, p<0.001, Cramer's V=.296

The municipality with the highest satisfaction levels was Al-Serhan, at 66%. Interestingly, this municipality also had one of the highest proportions of respondents reporting that they felt unsafe at night “sometimes”, “most of the time” or “always”, which suggests that street lighting is one of several factors that affect perceptions of safety.

Figure 15: Proportion of respondents reporting satisfaction with public lighting



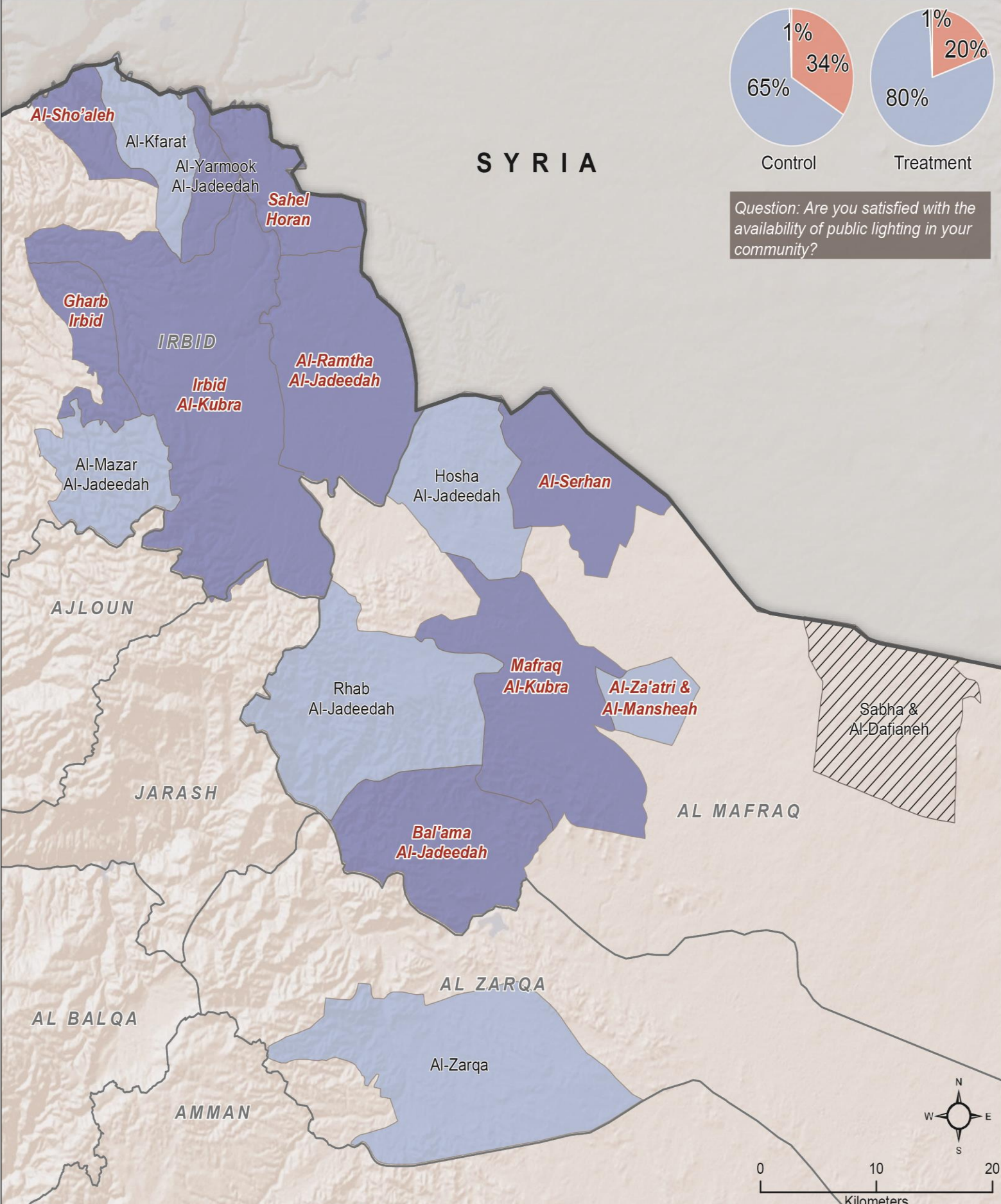
When disaggregated by sex, there was minimal variation amongst reported satisfaction levels (54% males, 51% females). When disaggregated by nationality, a majority of Syrian (61%) and Jordanian (51%) respondents and were ‘satisfied’ or ‘very satisfied’ with the availability and or quality of public lighting in their community. Amongst the treatment municipalities Jordanian and Syrian households reported higher levels of satisfaction (56%,68%) compared to the control municipalities (45%, 44%).

Reasons for dissatisfaction with public lighting

The majority of respondents (54%) that reported they were ‘unsatisfied’ or ‘very unsatisfied’ with the availability or quality of public lighting stated it was because no public lighting was available in the community.

The second most common reason that respondents reported they were ‘unsatisfied’ or ‘very unsatisfied’ was because public lighting needed maintenance (reported by 30% of unsatisfied households). Al-Zarqa had the highest proportion of respondents cite this reason, at 63%, followed by Mafraq Al-Kubra (51% of unsatisfied households).

The third most common reason households reported to be ‘unsatisfied’ or ‘very unsatisfied’ with public lighting was due to the poor quality of public lighting available (15% of unsatisfied households) in their community. Ramtha Al-Jadeedah and Irbid Al-Kubra had the highest proportion of respondents cite this reason at 67% respectively.



Municipality Type

Treatment

Control

Treatment: municipality where the World Bank has planned municipal service interventions.

Control: municipality where World Bank does not have planned municipal service interventions.

**Note: "No majority" represents a municipality where the percentage of respondents for both "satisfied" and "unsatisfied" were under 50%.*

Thematic Data: REACH - October 2014
 Administrative boundaries: UNOCHA
 Background Imagery: Esri

Projection: WGS 1984 UTM Zone 37N

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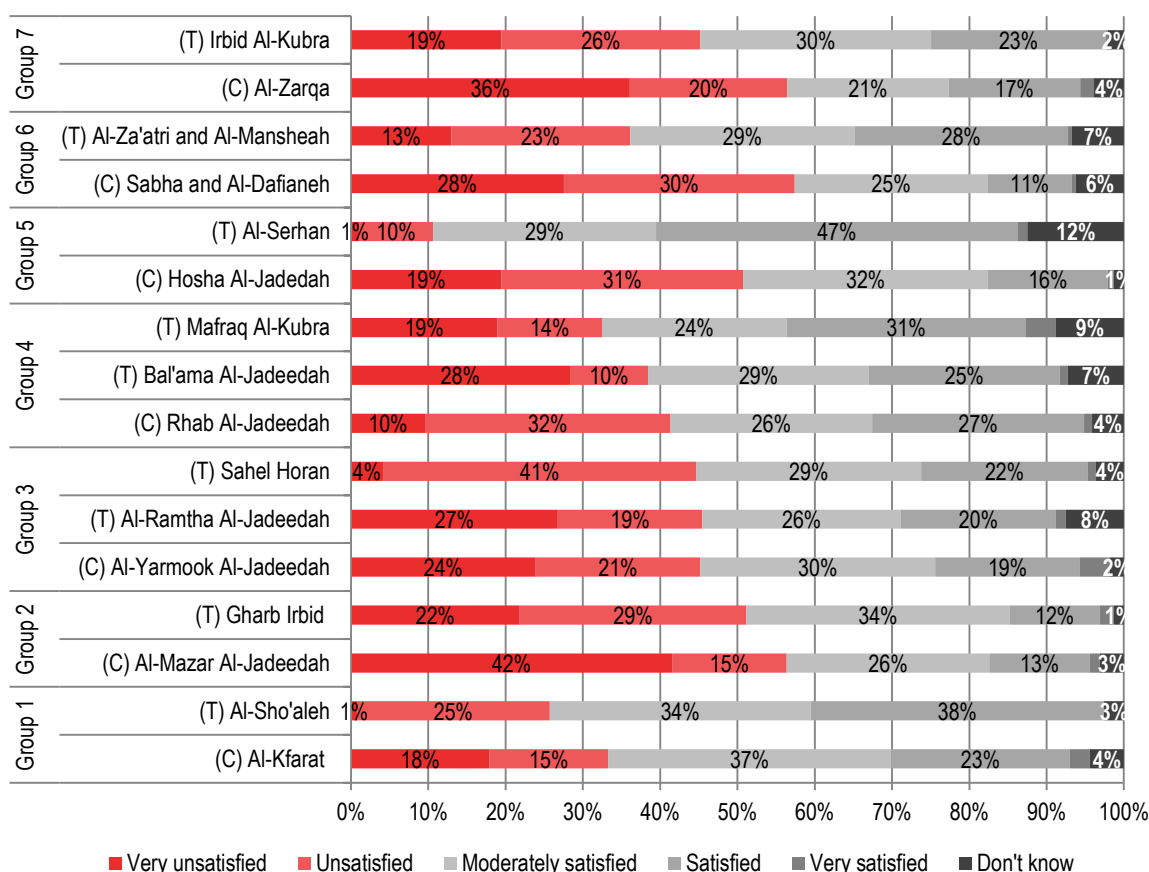
Note: Data, designations and boundaries contained on this map are not warranted to be error-free and do not imply acceptance by the REACH partners, associates or donors mentioned on this map.

Level of satisfaction with roads

A minority (43%) of households reported they were ‘unsatisfied’ or ‘very unsatisfied’ with the quality of roads in the community. Al-Serhan was the only municipality where a majority of respondents (61%) reported they were ‘satisfied’ or ‘very satisfied’ with the quality of roads in the community.

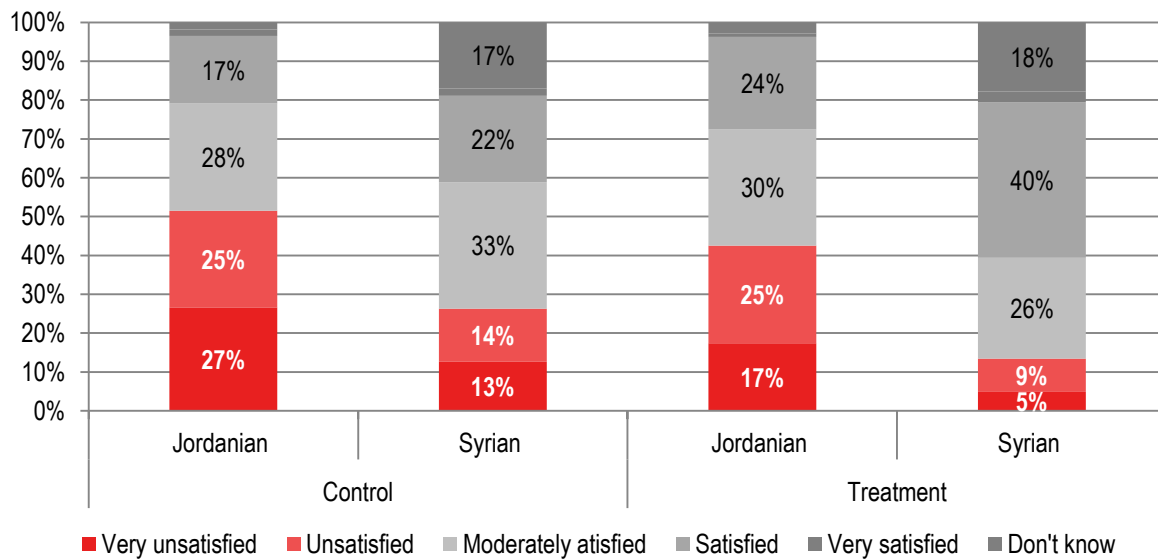
Similarly only a minority of households (42%) reported that they were ‘unsatisfied’ or ‘very unsatisfied’ with municipal maintenance of roads in the community. There was a relationship between satisfaction with the quality of roads and satisfaction with municipal road maintenance. In general, the municipalities where a majority of respondents were ‘unsatisfied’ or ‘very unsatisfied’ with the quality of roads also had a majority of respondents ‘unsatisfied’ or ‘very unsatisfied’ with municipal maintenance of roads in the community: Sabha and Dafianeh (58%), Al-Mazar Al-Jadeedah (57%), Al-Zarqa (56%), Gharb Irbid (51%) in addition to Hosha Al-Jadeedah (53%) (see Figure 16). In the other eleven municipalities the majority of respondents stated they were either ‘moderately satisfied,’ ‘satisfied,’ or ‘very satisfied’ with the municipal maintenance of roads in the community.

Figure 16: Proportion of households satisfied with municipal maintenance of roads



Disaggregated by sex, male and female respondents reported similar levels of dissatisfaction with municipal maintenance of roads, at 44% and 39% respectively.²⁷ **When disaggregated by nationality, a higher percentage of Jordanian respondents were ‘unsatisfied’ or ‘very unsatisfied’ with municipal maintenance of roads, 47% compared to their Syrian counterparts at 17%.** Overall a greater percentage of Syrian respondents (18%) did not know if they were satisfied with municipal maintenance of roads compared to their Jordanian counterparts (2%). Amongst the control municipalities 52% of Jordanian respondents reported they were ‘unsatisfied’ or ‘very unsatisfied’ with municipal maintenance of roads compared to 27% of Syrian respondents; likewise amongst the treatment municipalities 42% of Jordanian respondents reported they were ‘unsatisfied’ or ‘very unsatisfied’ compared to only 14% of Syrian respondents (see Figure 17).

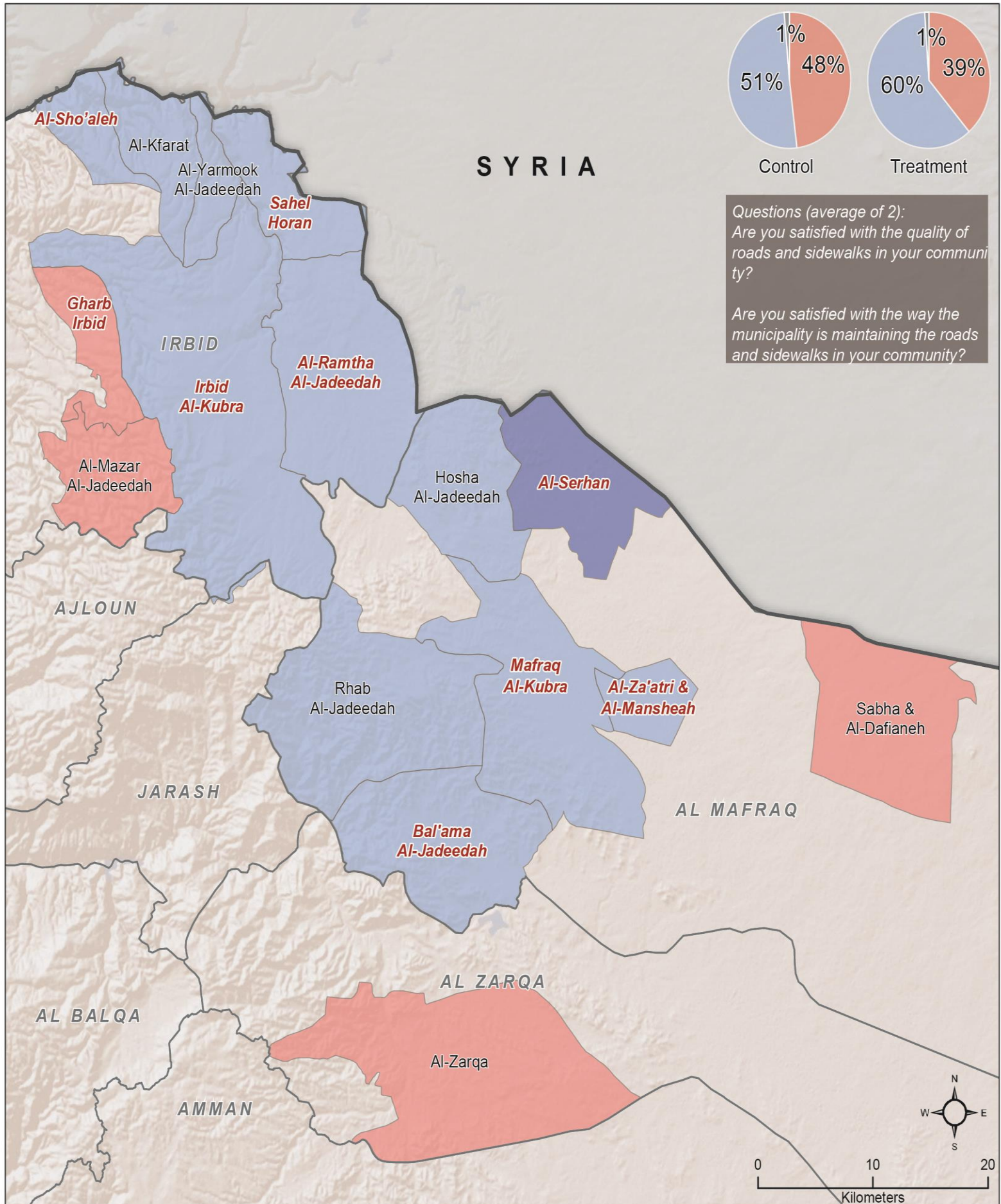
Figure 17: Levels of reported satisfaction with municipal maintenance of roads, by municipality type and nationality



Reasons unsatisfied with municipal maintenance of roads

Among dissatisfied respondents, the majority (74%) reported they were unsatisfied with maintenance of roads in their community because there was no road maintenance provided by the municipality. The second most common reason (16%) was ‘poor maintenance’ of roads. The third most common reason respondents were unsatisfied was due to ‘irregular road maintenance’ (9%).

²⁷ A Chi-square test confirmed that sex is associated with satisfaction with municipal maintenance of roads at a conventionally accepted level of significance, but the relationship is weak, Chi square=38.955, df=5, p<0.001, Phi./Crammers=.079



Municipality Type

Treatment
 Control

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Control: municipality where World Bank does not have planned municipal service interventions.

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*Note: "No majority" represents a municipality where the percentage of respondents for both "satisfied" and "unsatisfied" were under 50%.
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PUBLIC LEISURE SPACES

Public leisure spaces are a vital part of a community's social and physical infrastructure, allowing residents to engage in recreational activities and interact with members of the community. In the municipal services section of the Jordan Response Plan there is no mention of public leisure space in communities. The absence of this municipal service in the response plan signifies that other municipal services such as waste management and sanitation are a more pressing concern for national and international actors. However, findings from data collection suggest that there is a clear need to improve residents' level of access to public leisure spaces across the assessed municipalities. Therefore improving the quality and availability of public leisure spaces has the opportunity to strengthen social cohesion amongst refugee and host population in the assessed municipalities of northern Jordan.

In terms of access to public leisure spaces in the assessed communities, the shortest average distance to the nearest public leisure space was 10 minutes and the farthest distance 33 minutes. Amongst all public leisure spaces, the majority of respondents reported to either never use them or that these spaces do not exist in their community. Without the availability of public leisure spaces 90% of households have been forced to adopt alternative coping strategies such as socialising at home (47%), having youth/children use unsafe public spaces as playgrounds (17%); or having youth/children roam around the streets (13%). It is possible that the prevalence of unsafe coping mechanisms across the assessed municipalities explains why this municipal service has the highest levels of dissatisfaction (58%).

Level of access to public leisure spaces and frequency of usage

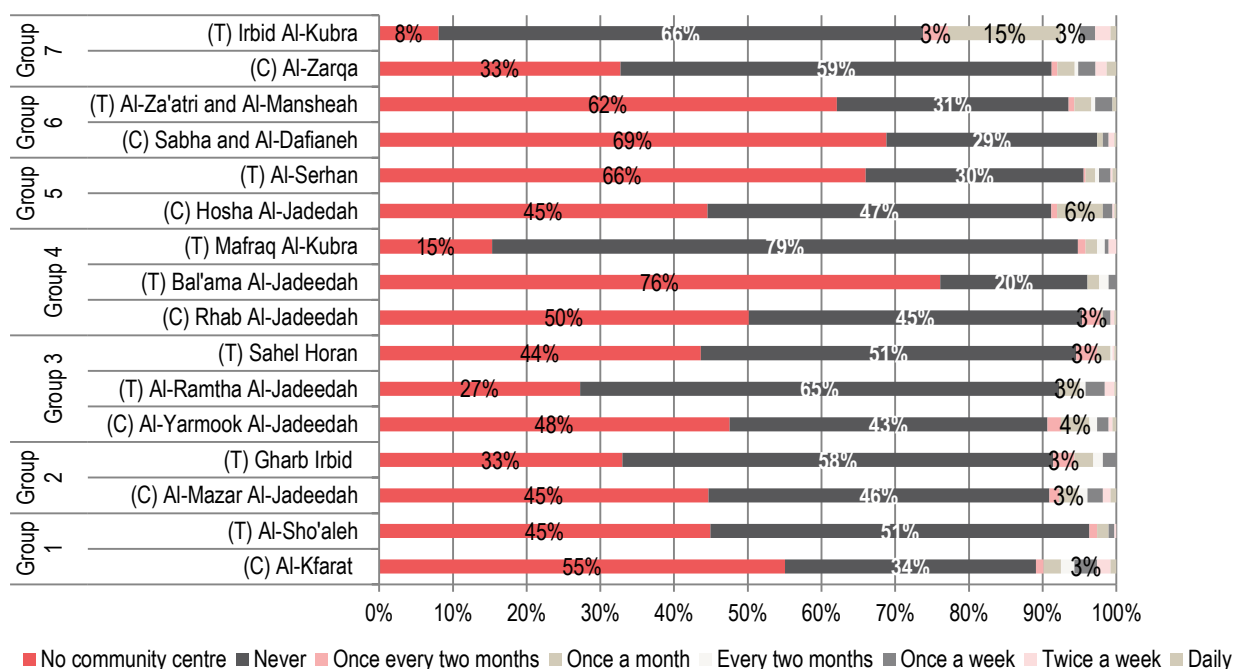
This section of the report examines the household level access to public leisure spaces. The questionnaire asked respondents about the average distance to public leisure spaces, including community centres, parks, libraries and sports centres, and their frequency of use of these spaces.

Community centre usage and distance

92% of respondents reported that either they 'never' visit their community centre or there is 'no community centre' in the community. When disaggregated by municipality, the majority of households reported the same finding. The municipality with the highest proportion of respondents report to use a community centre most frequently²⁸ was Irbid Al-Kubra at 26% (see Figure 18).

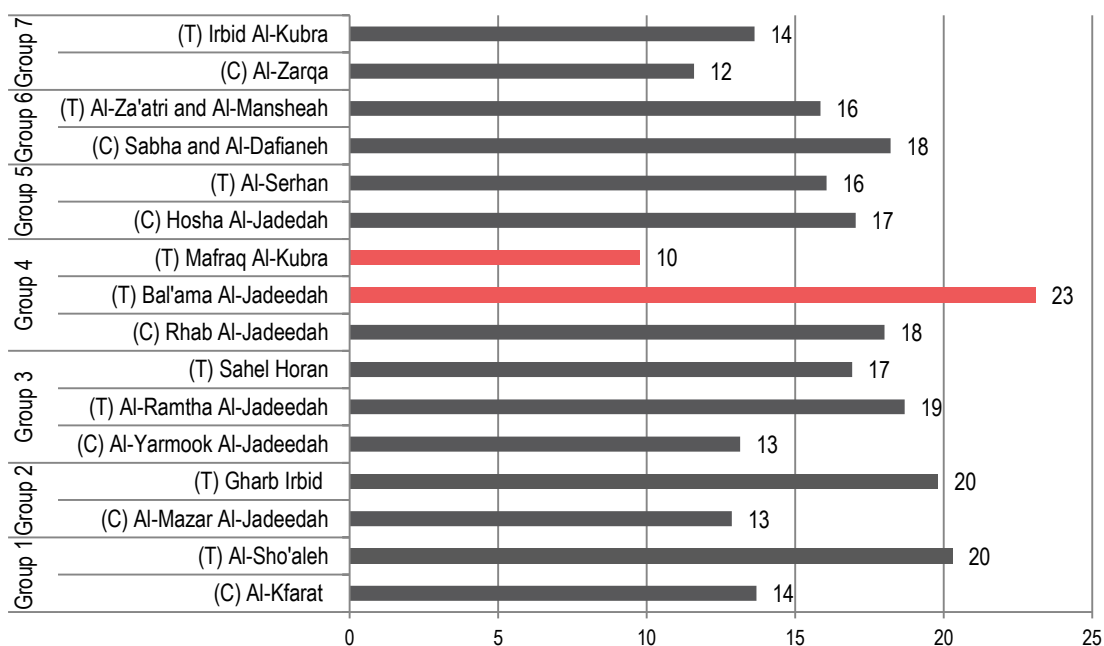
²⁸ Respondent did not indicate 'never' or there is 'no community centre'

Figure 18: Reported frequency of community centre usage



The average distance from the household to the nearest community centre ranged from between 10-23 minutes (see Figure 19), including households that had to travel to nearby communities to access their nearest community centre. The two municipalities where respondents reported the shortest and the farthest distance to the nearest community centre were both in Group 4 (Mafraq Al-Kubra and Bal'ama Al-Jadeedah). Amongst treatment municipalities, the average distance to the nearest community centre was 17 minutes, and amongst control municipalities 15 minutes.

Figure 19: Average distance to the nearest community centre (in minutes)



Park usage and distance

The majority of respondents, 89%, reported that they ‘never’ go to the park or that there is ‘no park’ in their community. Irbid Al-Kubra was the municipality where respondents reported the highest level of park usage at 34%, followed by Gharb Irbid at 24%.

The average distance to the nearest park ranged between 11-33 minutes, with respondents in Mafrq Al-Kubra reporting the shortest distance and respondents in Bal’ama Al-Jadeedah reporting the farthest distance. The average distance to the nearest park amongst treatment municipalities was 22 minutes, and among control municipalities, 19 minutes.

Library usage and distance

56% of respondents overall indicated that there is no library in their community. In ten municipalities the majority of respondents reported there is no library in the community.

The average distance to the nearest library ranged from between 10-32 minutes, with respondents in Mafrq Al-Kubra reporting the shortest distance, and respondents in Bal’ama Al-Jadeedah reporting the farthest distance. The average distance to the nearest library amongst treatment municipalities was 22 minutes and amongst control municipalities 18 minutes.

Sports centre usage and distance

93% of respondents stated there is no sports centre in the community or that they never use one. The highest percentage of respondents reporting to have used a sports centre was 13% in Bal’ama Al-Jadeedah, followed by Al-Sho’aleh and Al-Kfarat, both at 12%.

The average distance to the nearest sports centre ranged from between 11-24 minutes. The average distance to the nearest sports centre amongst treatment municipalities was 17 minutes, and amongst control municipalities, 18 minutes.

Secondary data collected by REACH suggests that across the 16 sampled municipalities there are more community centres than youth centres, sports centres, parks and libraries. However, selected municipalities have more public leisure spaces than others. For example, Irbid Al-Kubra has 170 parks and Al-Zarqa has 136 community, sports and youth centres compared to Sabha and Dafianeh and Rhab Al-Jadeedah which have 8 public leisure spaces respectively (see Table 9).

Table 9: Number of public leisure centres²⁹

Group	Municipality	Community centers	Youth centers	Sport centers	Parks	Libraries
Group 1	(C) Al-Kfarat	14	0	3	5	2
Group 1	(T) Al-Sho'aleh	4	0	2	1	2
Group 2	(C) Al-Mazar Al-Jadeedah	No data	2	3	3	2
Group 2	(T) Gharb Irbid	14	3	4	2	0
Group 3	(C) Al-Yarmook Al-Jadeedah	6	0	2	3	2
Group 3	(T) Al-Ramtha Al-Jadeedah	No data	No data	No data	No data	No data
Group 3	(T) Sahel Horan	11	4	3	2	1
Group 4	(C) Rhab Al-Jadeedah	0	3	3	1	1
Group 4	(T) Bal'ama Al-Jadeedah	No data	No data	No data	No data	No data
Group 4	(T) Mafraq Al-Kubra	4	6	10	N/A	4
Group 5	(C) Hosha Al-Jadeedah	12	1	1	1	0
Group 5	(T) Al-Serhan	25	1	3	0	2
Group 6	(C) Sabha and Dafianeh	2	2	0	3	1
Group 6	(T) Al-Za'atri and Al-Mansheah	10	0	1	3	2
Group 7	(C) Al-Zarqa	136 (community, sport and youth centers)			13	3
Group 7	(T) Irbid Al-Kubra	No data	No data	No data	170	11
Group Total	Municipality Total	102	22	35	207	33

Public leisure coping strategies

Most residents reported that they either did not have access to or did not use public leisure spaces, therefore it was important to establish how families spent their leisure time. **Without the availability of public leisure spaces, 90% of households have adopted alternative coping strategies.** The findings below reflect the responses among households which reported to use a coping strategy.

Representing 36% of reported strategies, socialising more inside the home was the most commonly used coping strategy. This coping strategy while referenced amongst all municipalities was most prominent in Al-Yarmook Al-Jadeedah (49%), followed by Al-Ramtha Al-Jadeeda (42%) and Hosha Al-Jadeedah (42%). (see Table 12). The second most common strategy (22%) used to deal with a lack of public leisure spaces was to have women socialise more inside the home. Al-Yarmook Al-Jadeedah had the highest percentage of respondents adapt this coping strategy at 32% followed by Al Serhan (30%).

The third most common coping strategy, reported by 16%, was to have children use inappropriate and or unsafe public spaces as playgrounds to deal with a lack of public leisure spaces. Gharb Irbid had the highest proportion of respondents report to use this coping strategy at 25%, followed by Irbid Al-Kubra (21%), and Hosha Al-Jadeedah (20%). **The fourth most common strategy to deal with lack of public leisure spaces at 15% was to have children/youth roam around the streets.** This strategy was most frequently cited in Irbid Al-Kubra (19%), followed by Al-Kfarat (17%), and Gharb Irbid (17%). Overall, travelling to other areas was not a common coping strategy (11%) however, disaggregated by municipality; Al-Mazar Al-Jadeedah had the highest proportion of respondents reporting to use this strategy at 23%.

²⁹ It should be noted that representatives from Municipalities were requested to provide this information, with many indicating that they needed support with information management and establishing reliable records as it was not easy to immediately access this data. For a number of municipalities, this data was not available.

Table 10: Proportion of used strategies by type of coping strategy

Municipality	The family socialises more in the home	Women socialise more inside the home	Youth roam around the streets	Youth children use inappropriate/unsafe public spaces as playgrounds	Travel to other areas to visit leisure spaces
(C) Al-Kfarat	34.0%	22.0%	17.0%	11.0%	16.0%
(T) Al-Sho'aleh	36.0%	18.0%	16.0%	15.0%	15.0%
(C) Al-Mazar Al-Jadeedah	31.0%	20.0%	14.0%	12.0%	23.0%
(T) Gharb Irbid	38.0%	11.0%	17.0%	25.0%	9.0%
(C) Al-Yarmook Al-Jadeedah	49.0%	32.0%	8.0%	8.0%	3.0%
(T) Al-Ramtha Al-Jadeedah	42.0%	27.0%	15.0%	13.0%	13.0%
(T) Sahel Horan	38.0%	16.0%	9.0%	16.0%	19.0%
(C) Rhab Al-Jadeedah	37.0%	22.0%	10.0%	15.0%	15.0%
(T) Bal'ama Al-Jadeedah	28.0%	24.0%	17.0%	18.0%	13.0%
(T) Mafraq Al-Kubra	34.0%	27.0%	16.0%	16.0%	8.0%
(C) Hosha Al-Jadeedah	42.0%	19.0%	13.0%	20.0%	6.0%
(T) Al-Serhan	32.0%	30.0%	16.0%	14.0%	8.0%
(C) Sabha and Al-Dafianeh	38.0%	23.0%	13.0%	17.0%	8.0%
(T) Al-Za'atri and Mansheah	39.0%	25.0%	15.0%	17.0%	4.0%
(C) Al-Zarqa	33.0%	23.0%	17.0%	13.0%	15.0%
(T) Irbid Al-Kubra	35.0%	12.0%	19.0%	21.0%	12.0%

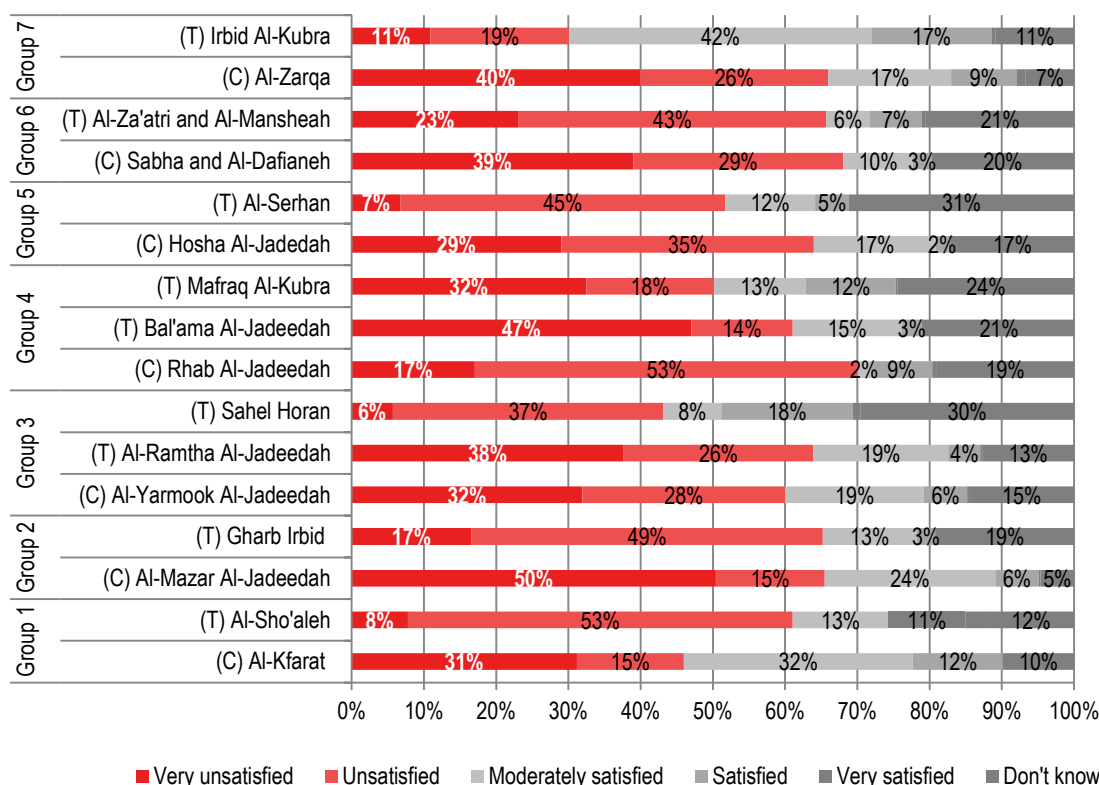
Legend	
1-25%	
26-50%	
51-75%	
76-100%	

Level of satisfaction with available public leisure space

Since the majority of respondents reported they never used public leisure spaces, or that these spaces did not exist in the community, it was essential to measure households' level of satisfaction with this municipal service.

The majority of respondents, 58%, reported that they were 'unsatisfied' or 'very unsatisfied' with the availability or quality of public leisure spaces in the community. Rhab Al-Jadeedah had the highest proportion of respondents unsatisfied with public leisure spaces at 70%, followed by Sabha and Dafianeh at 68%. Sahel Horan had the highest percentage of respondents 'satisfied' or 'very satisfied' with the availability or quality of public leisure spaces at 19% (see Figure 20).

Figure 20: Proportion of respondents satisfied with public leisure spaces



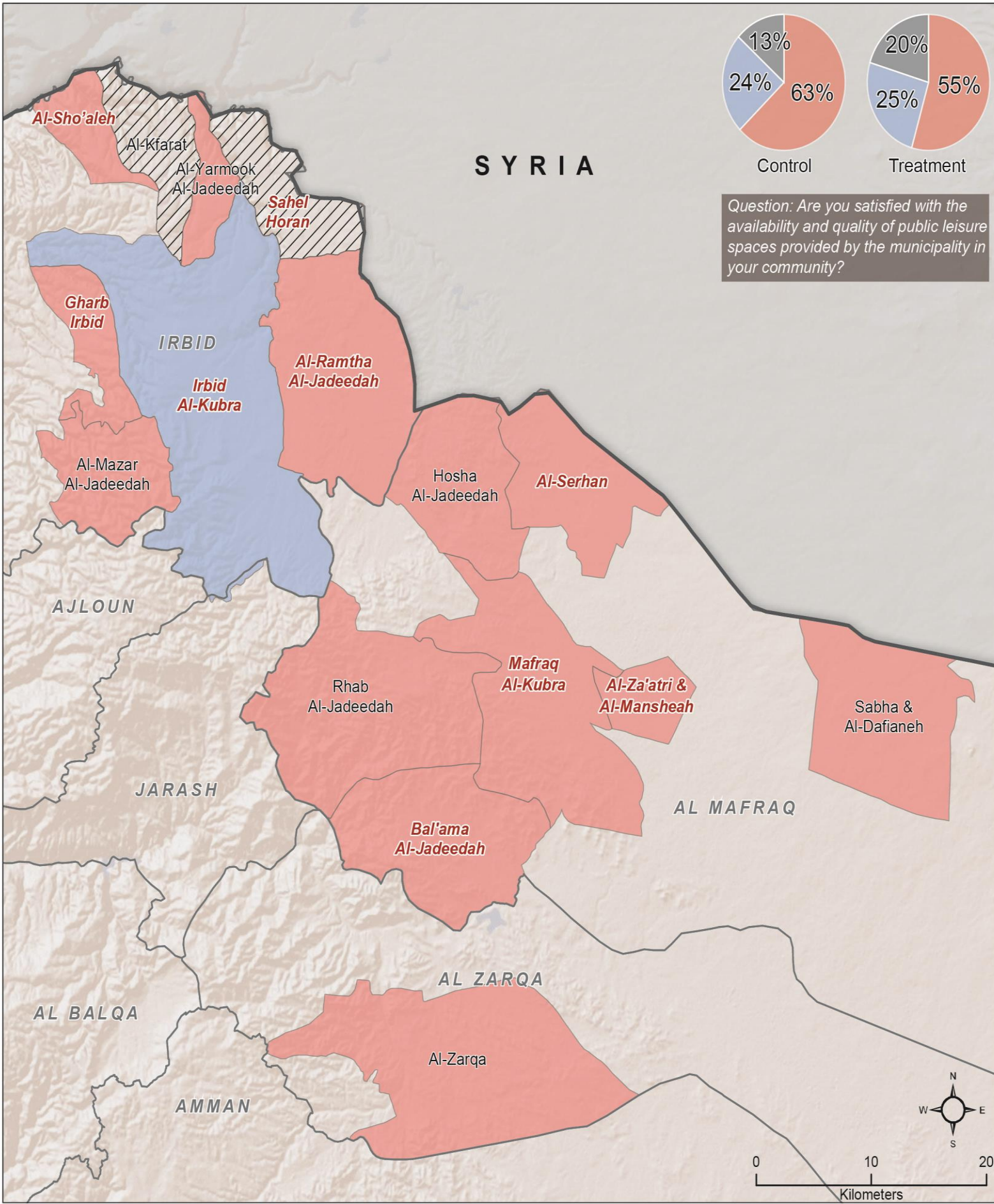
When disaggregated by sex, male and female respondents reported similar levels of dissatisfaction with public leisure spaces, at 59% and 58% respectively. However, among five municipalities, male and female respondents reported varying levels of satisfaction (Al-Mazar Al-Jadeedah, Al-Sho'aleh, Gharb Irbid, Hosha Al-Jadeedah and Sahel Horan). For example, in Sahel Horan 53% of male respondents were 'unsatisfied' or 'very unsatisfied' with the availability and/or quality of public leisure spaces compared to 31% of female respondents and in Al-Sho'aleh 72% of female respondents were 'unsatisfied' or 'very unsatisfied' in comparison to just 52% of male respondents.

Reasons for dissatisfaction with public leisure spaces

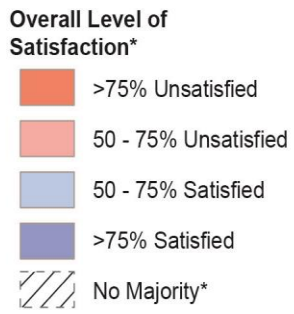
The most commonly cited reason respondents reported they were 'unsatisfied' or 'very unsatisfied' with public leisure spaces in the community was because there were no public leisure spaces available (82% of unsatisfied households) (see Table 11). 5% of unsatisfied respondents reported they were dissatisfied with public leisure spaces because these spaces are located too far away. Irbid Al-Kubra had the highest proportion of respondents cite this reason at 18%, followed by Hosha Al-Jadeedah (14%), and Al-Yarmook Al-Jadeedah (13%). 4% of respondents were unsatisfied with public leisure spaces because they are overcrowded, Sahel Horan had the highest percentage of respondents report this reason at 20%, followed by Irbid Al-Kubra (15%). A further 4% of respondents stated they were dissatisfied with public leisure spaces because these spaces are poorly equipped. Al-Ramtha Al-Jadeedah had the highest percentage of respondents cite this reason at 11%. 3% of respondents reported they were unsatisfied with the availability and or quality of public leisure spaces because these spaces are poorly maintained. This finding was most prevalent in Mafrq Al-Kubra, where 10% of respondents citing this reason for dissatisfaction.

Table 11: Reasons for reporting 'unsatisfied' or 'very unsatisfied' with the availability/quality of public leisure spaces

Municipalities	Reported reasons for dissatisfaction with the availability and quality of public leisure spaces						
	No public leisure spaces available	Not a priority service for the municipality	Overcrowded public leisure spaces	Public leisure spaces are poorly equipped	Public leisure spaces are far away	Poorly maintained public leisure spaces	Don't know
(C) Al-Kfarat	82%	2%	4%	6%	5%	2%	0%
(C) Al-Mazar Al-Jadeedah	85%	7%	1%	3%	2%	4%	0%
(C) Al-Yarmook Al-Jadeedah	73%	0%	1%	8%	13%	6%	0%
(C) Al-Zarqa	79%	4%	6%	5%	6%	0%	0%
(C) Hosha Al-Jadeedah	75%	1%	3%	4%	14%	2%	0%
(C) Rhab Al-Jadeedah	91%	1%	1%	1%	6%	1%	0%
(C) Sabha and Al-Dafianeh	93%	0%	0%	3%	2%	2%	0%
(T) Al-Ramtha Al-Jadeedah	74%	1%	5%	11%	6%	1%	2%
(T) Al-Serhan	96%	1%	1%	1%	0%	1%	0%
(T) Al-Sho'aleh	86%	0%	6%	4%	0%	0%	3%
(T) Al-Za'atri and Al-Mansheah	92%	0%	1%	1%	3%	2%	0%
(T) Bal'ama Al-Jadeedah	96%	1%	2%	0%	0%	1%	0%
(T) Gharb Irbid	71%	1%	9%	5%	9%	5%	0%
(T) Irbid Al-Kubra	51%	6%	15%	2%	18%	9%	0%
(T) Mafraq Al-Kubra	87%	2%	2%	1%	0%	10%	0%
(T) Sahel Horan	55%	4%	20%	4%	8%	9%	1%
Grand Total	82%	2%	4%	4%	5%	3%	0%



Question: Are you satisfied with the availability and quality of public leisure spaces provided by the municipality in your community?



Municipality Type

Treatment

Control

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Control: municipality where World Bank does not have planned municipal service interventions.

**Note: "No majority" represents a municipality where the percentage of respondents for both "satisfied" and "unsatisfied" were under 50%.*

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COMMUNITY OUTREACH

The way in which local government interacts with its residents (both refugee and host population) has the potential to severely impact community level social cohesion. In 2013, Mercy Corps highlighted the importance of municipal services, stating that Jordanian households' resentment towards 'unresponsive municipalities' is 'on the rise', and could have a strong detrimental impact on social cohesion between refugees and host communities.³⁰ The National Resilience Plan (2014) lays out objectives to improve municipal service delivery, noting that the challenges for municipal services, prior to the crisis, was already great, and subsequently the capacity of municipal services to respond to both the needs of host communities and refugees has been overwhelmed.³¹

While a majority (62%) of respondents overall said they knew how and where to make a complaint regarding municipal services when disaggregated by nationality the majority of Syrian respondents (91%) were unaware compared to a minority of their Jordanian counterparts (28%).

Complaints mechanisms are vital channels which allow community residents to express their concerns and serve as a critical tool which permits local government to better understand vital issues affecting residents' daily lives. Complaints mechanisms can serve as a tool to build greater trust amongst local government and its residents. The assessed municipalities in northern Jordan demonstrated low levels of community outreach and community engagement.

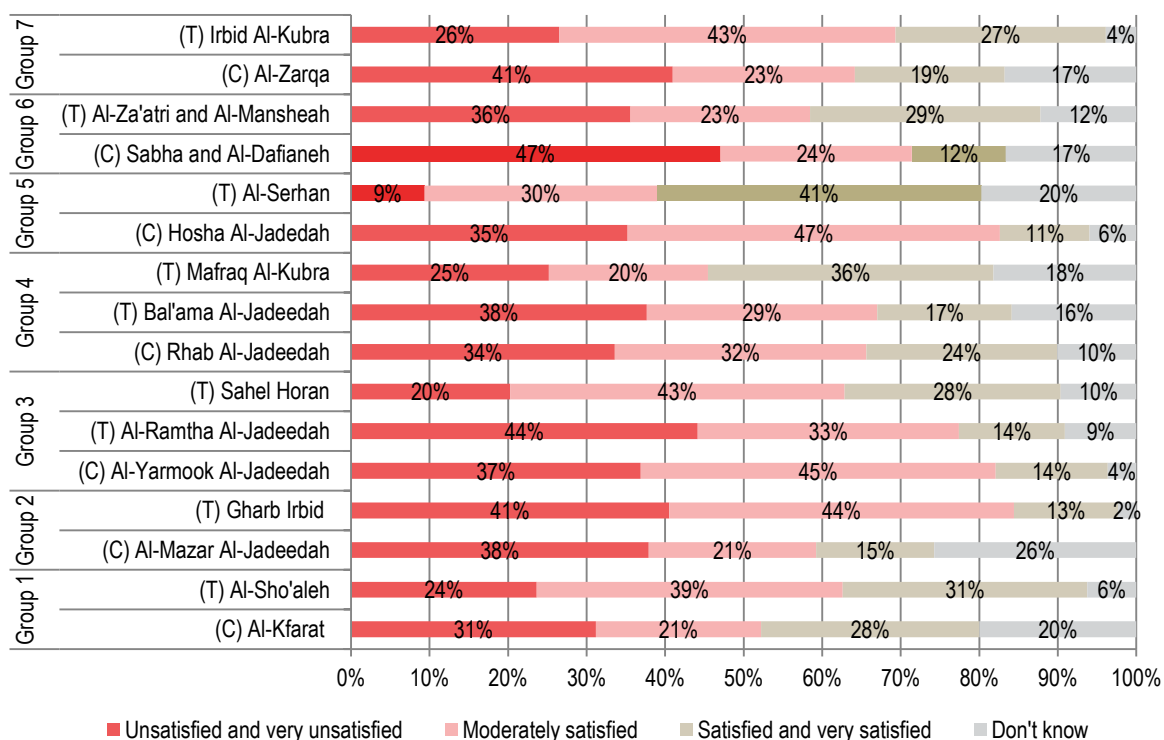
Level of satisfaction with community outreach

A higher percentage of respondents reported they were 'unsatisfied' or 'very unsatisfied' (33%) with the way the municipality is handling key issues compared to those which reported they were 'satisfied' or 'very satisfied' (23%) – while the highest proportion of households overall, 44%, reported that they felt neutral or had no opinion. The municipalities where respondents reported the highest level of satisfaction were amongst four treatment municipalities and one control municipality: Al-Serhan (41%), Mafraq Al-Kubra (36%), Al-Za'atri and Mansheah (29%), Sahel Horan and Al-Kfarat (both 28%) (see Figure 21).

³⁰ Mercy Corps, Mapping of Host Community-Refugee Tensions in Mafraq and Ramtha, Jordan, May, 2013, data.unhcr.org/syrianrefugees/download.php?id=2958

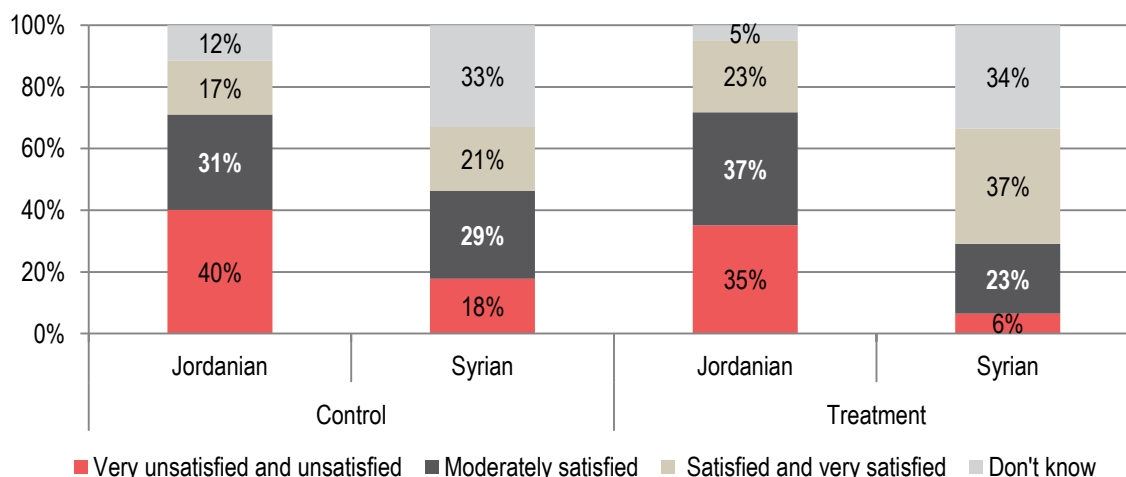
³¹ National Resilience Plan, Brief on the Impact of the Syrian Crisis by Sector, 1st June, 2014, accessed at http://jordanembassyus.org/sites/default/files/NRP_Sector_Impacts_01.06.2014.pdf

Figure 21: Proportion of households satisfied with community outreach within their municipality



When disaggregated by nationality, a greater percentage of Jordanian respondents (37%) reported they were 'unsatisfied' or 'very unsatisfied' with the way in which the municipality is dealing with the main issues in the community compared to their Syrian counterparts (10%). Overall, a significant percentage of Syrian respondents (33%) did not have an opinion regarding how the municipality is handling the main issues in the community compared to their Jordanian counterparts (8%)(see Figure 22).

Figure 22: Proportion of households satisfied with the municipality's ability to deal with community issues, by municipality type and nationality



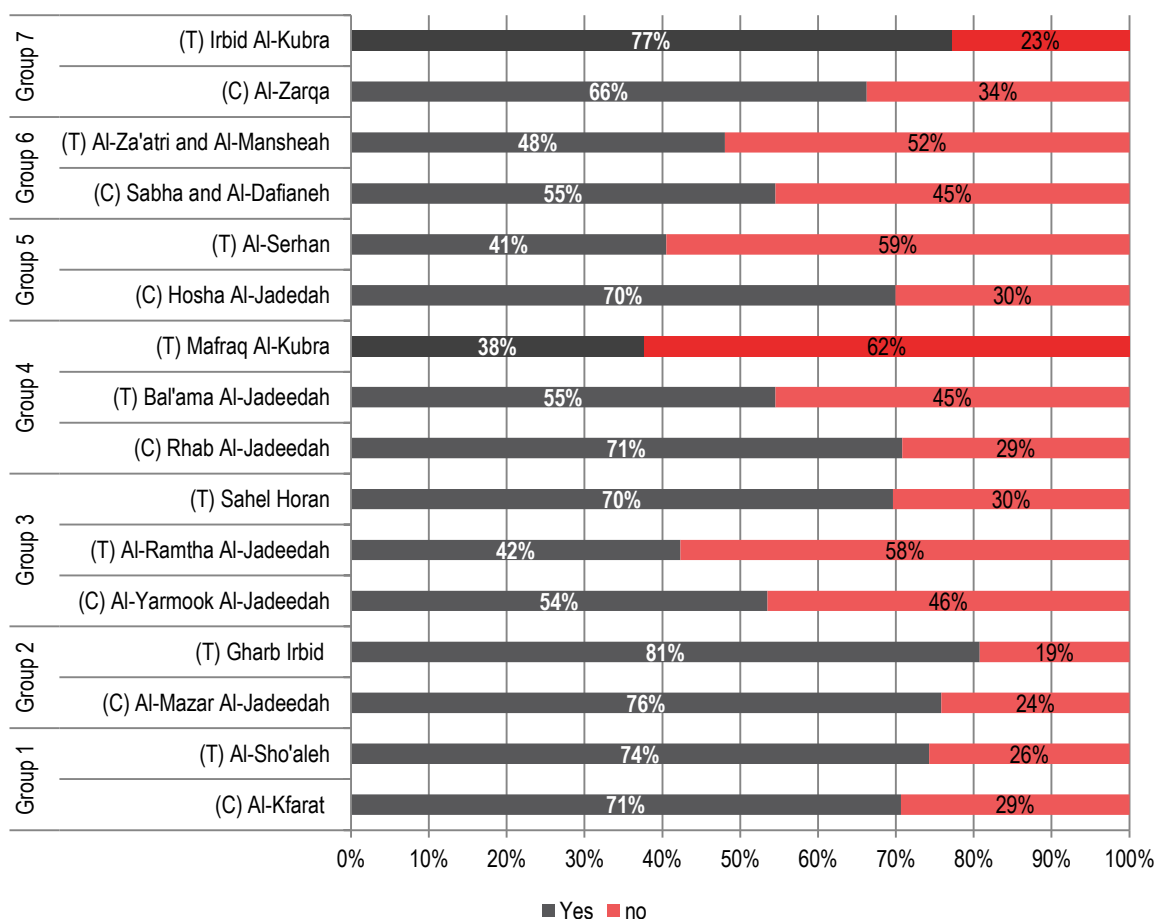
When disaggregated by sex, male and female respondents reported similar levels of satisfaction with the municipality, at 34% and 31% respectively. However, when disaggregated by municipality, among six municipalities (Al-Kfarat, Al-Sho'aleh-Group 1, Al-Mazar Al-Jadeedah, Al-Ramtha Al-Jadeedah, and Al-Zarqa and Irbid Al-Kubra-Group 7) male and female respondents reported differing levels of satisfaction. For example, in Al-Zarqa 52% of male respondents were 'unsatisfied' or 'very unsatisfied' with the way the municipality is handling

the main issues compared to 28% of female respondents. Whereas, in Al-Sho'aleh 36% of female respondents were 'unsatisfied' or 'very unsatisfied' compared to just 13% of male respondents.

Complaint mechanisms

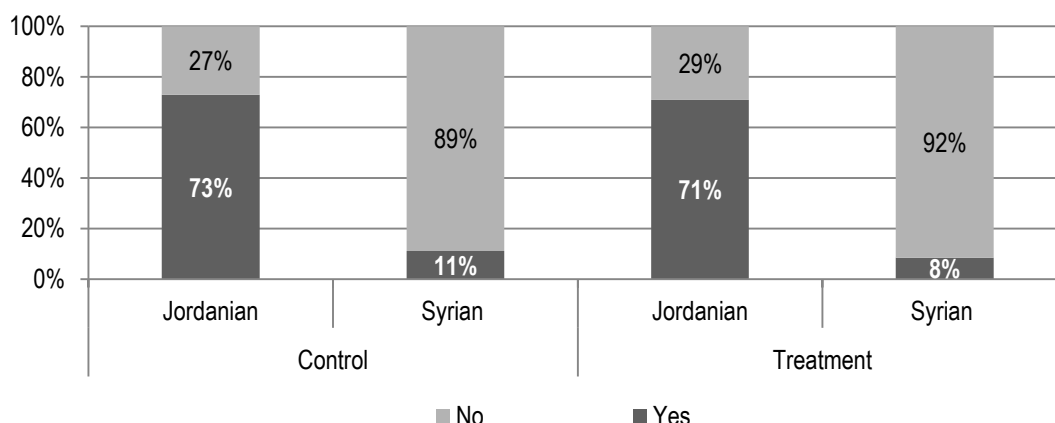
A majority (62%) of respondents knew how and where to make a complaint regarding municipal services (see Figure 23). The four municipalities where the majority of respondents did not know where to make a complaint were: Mafraq Al-Kubra (62%), Al-Serhan (59%), Al-Ramtha Al-Jadeedah (58%) and Al-Za'atri and Al-Mansheah (52%).

Figure 23: Proportion of households aware of where to make a complaint regarding municipal services



Similar percentages of Jordanian respondents amongst both the control and treatment municipalities reported they know how and where to make a complaint regarding municipal services, 73% and 71% respectively. Similarly there was limited variation among Syrian respondents between the control and treatment municipalities, as 89% of Syrian respondents reported they did not know how and where to make a complaint amongst the control municipalities compared to 92% amongst the treatment municipalities (see Figure 24).

Figure 24: Proportion of households aware of where to make a complaint (aggregated by municipality type, disaggregated by nationality)

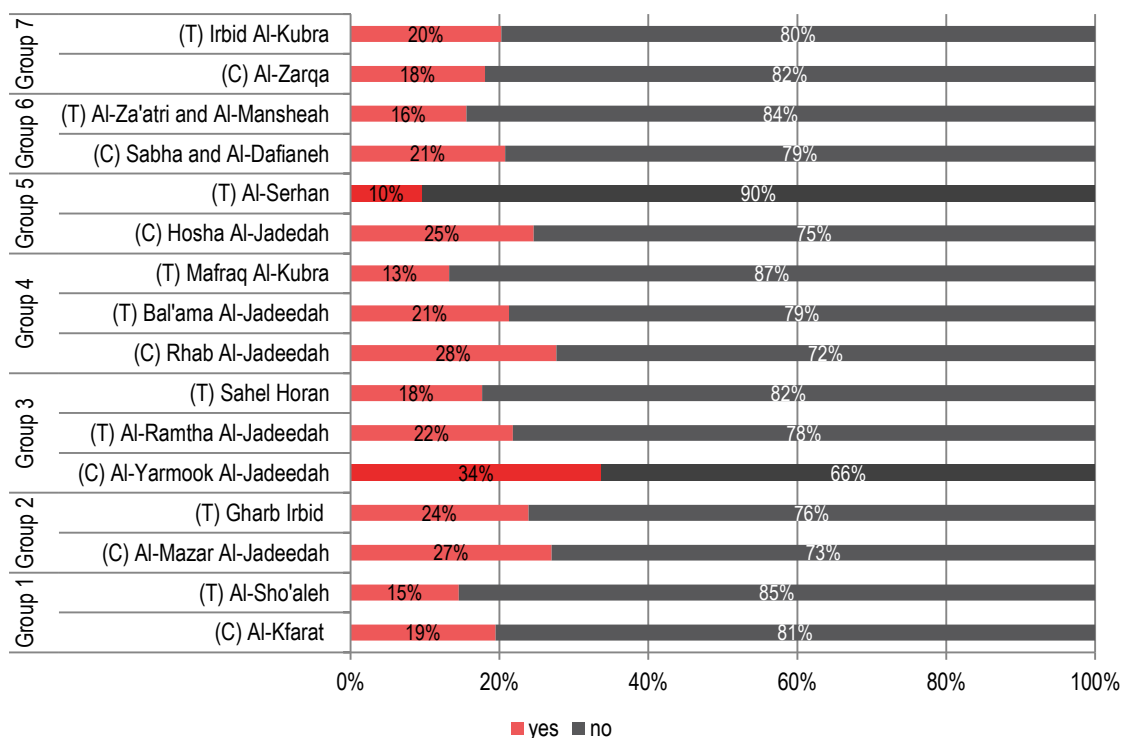


When disaggregated by sex, municipalities with the lowest percentage of male and female respondents reporting to be aware of how and where to make a complaint were Mafraq Al-Kubra (43%,33%), Al-Ramtha Al-Jadeedah (47%, 36%), and Al-Serhan (44%,36%). The municipalities with the highest proportion of female respondents aware of how and where to make a complaint were Gharb Irbid and Al-Mazar Al-Jadeedah (85% respectively). Whereas, the municipality with the highest percentage of male respondents aware of how and where to make a complaint was Irbid Al-Kubra (84%).

Proportion of respondents that made a complaint

Out of all those respondents that knew how and where to make a complaint, only 21% reported having made a complaint (see Figure 25).

Figure 25: Proportion of households reporting having made a complaint regarding municipal services



When disaggregated by sex, across half of the municipalities assessed (Al-Kfarat, Al-Mazar Al-Jadeedah, Al-Ramtha Al-Jadeedah, Al-Yarmook Al-Jadeedah, Bal'ama Al-Jadeedah, Hosha Al-Jadeedah, Rhab Al-Jadeedah and Sabha and Al-Dafianeh) a **higher percentage of female respondents reported they had made a complaint than their male counterparts.**

Municipalities were asked to share the number of community outreach meetings held per year, with responses ranging from one per day to one per year. However, it was not possible to establish a comprehensive overview of outreach meetings held across municipalities as there was often no data available, no records, or inconsistencies in reporting. This reflects support required for municipalities to enhance data and information management.

Reasons for complaints

Amongst the majority of municipalities, the primary cause for complaint, at 49%, was waste accumulation, followed by poor quality of roads (14% of submitted complaints), lack of public lighting (14%) and water-related issues (13%) (see Table 12). Al-Zarqa and Bal'ama Al-Jadeedah had the highest percentage of respondents report they made a complaint regarding waste accumulation at 77% and 71% respectively. The municipalities where the greatest proportion of respondents reported to make a complaint in regards to water were Al-Yarmook Al-Jadeedah (35%), Al-Sho'aleh (34%), and Al-Ramtha Al-Jadeedah (30%). The municipalities where the highest percentage of respondents reported to place a complaint due to a lack of public leisure space were Al-Serhan (30%), followed by Sahel Horan (24%).

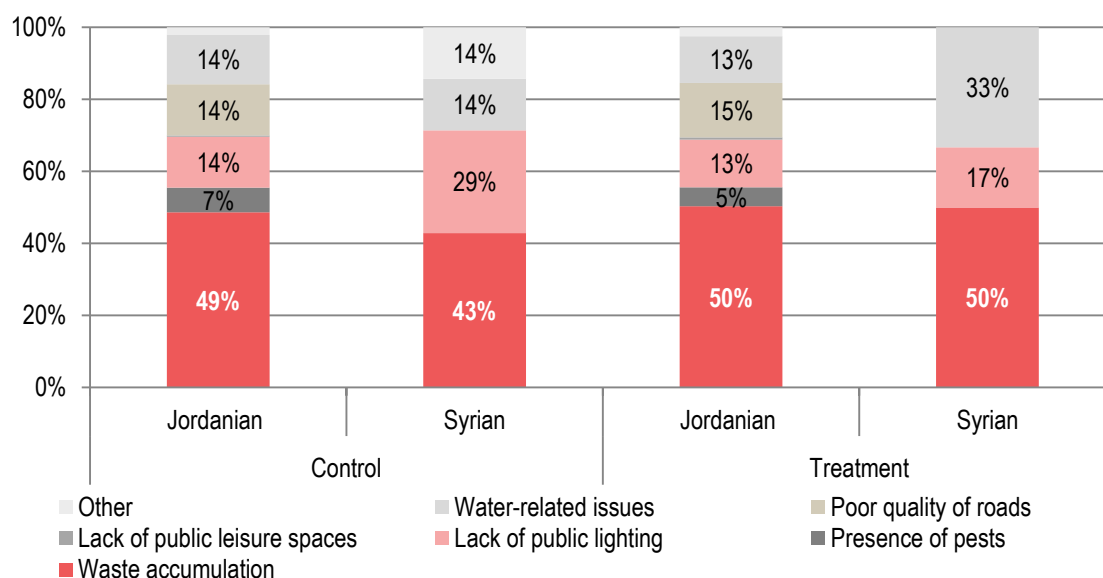
Table 12: Reasons for municipal complaints

Municipality ³²	Waste accumulation	Increase in pests	Lack of public leisure space	Lack of public lighting	Poor quality of roads	Water-related issues	Don't know
(C) Al-Kfarat	52%	7%	8%	0%	9%	19%	5%
(T) Al-Sho'aleh	43%	4%	4%	0%	13%	34%	4%
(C) Al-Mazar Al-Jadeedah	62%	6%	13%	1%	14%	3%	2%
(T) Gharb Irbid	45%	8%	16%	1%	20%	5%	5%
(C) Al-Yarmook Al-Jadeedah	16%	7%	10%	0%	29%	35%	3%
(T) Al-Ramtha Al-Jadeedah	52%	4%	5%	0%	6%	30%	4%
(T) Sahel Horan	35%	1%	24%	0%	24%	15%	1%
(C) Rhab Al-Jadeedah	52%	12%	21%	1%	7%	5%	2%
(T) Bal'ama Al-Jadeedah	71%	4%	15%	1%	5%	4%	1%
(T) Mafrag Al-Kubra	69%	2%	10%	0%	14%	4%	2%
(C) Hosha Al-Jadeedah	40%	5%	20%	0%	16%	17%	2%
(T) Al-Serhan	35%	3%	30%	0%	27%	5%	0%
(C) Sabha and Dafianeh	61%	9%	15%	0%	9%	5%	1%
(T) Al-Za'atri and Al-Mansheah	43%	7%	23%	0%	17%	10%	0%
(C) Al-Zarqa	77%	0%	11%	0%	7%	4%	0%
(T) Irbid Al-Kubra	53%	12%	3%	3%	17%	12%	3%
Total	49%	6%	14%	0%	14%	13%	2%

³² It should be noted that representatives from Municipalities were requested to provide this information, with many indicating that they needed support with information management and establishing reliable records as it was not easy to immediately access this data. For a number of municipalities, this data was not available.

When disaggregated by nationality, the primary cause for complaints amongst both Jordanian (49%) and Syrian (47%) respondents was waste accumulation. After waste accumulation, Jordanian respondents amongst both control and treatment groups cited poor quality of roads (15%), a lack of public lighting (14%), and water-related issues (13%) as the subject of their complaint. 29% of Syrian respondents amongst the control municipalities which made a complaint, stated the complaint was in regards to a lack of public lighting compared to just 17% of Syrian respondents in the treatment municipalities (see Figure 26).

Figure 26: Subject of complaint, by municipality type, disaggregated by nationality



When findings were disaggregated by sex, across six municipalities (Al-Sho'aleh, Al-Yarmook Al-Jadeedah, Al-Serhan, Hoshah Al-Jadeedah, Irbid Al-Kubra and Sahel Horan) a higher percentage (19-49%) of male respondents made a complaint regarding the poor quality of roads in the community compared to their female counterparts (4-15%). Al-Yarmook Al-Jadeedah had the highest percentage of male respondents (49%) report to have made a complaint regarding the poor quality of roads compared to 15% of female respondents. Amongst seven municipalities (Al-Ramtha Al-Jadeedah, Al-Sho'aleh, Al-Yarmook Al-Jadeedah, Al-Za'atri and Al-Mansheah Hoshah Al-Jadeedah, Irbid Al-Kubra, Sahel Horan) a greater percentage of female respondents (15-53%) cited water-related issues as the subject of their complaint than male respondents (2-25%). This finding was most notably seen in Sahel Horan where 53% of female respondents which made a complaint stated it was in regards to water-related issues compared to only 2% of their male counterparts. This subject of complaint was similarly cited by a large proportion of females in Al-Yarmook Al-Jadeedah (52%), Al-Ramtha Al-Jadeedah (48%) and Al-Sho'aleh (46%).

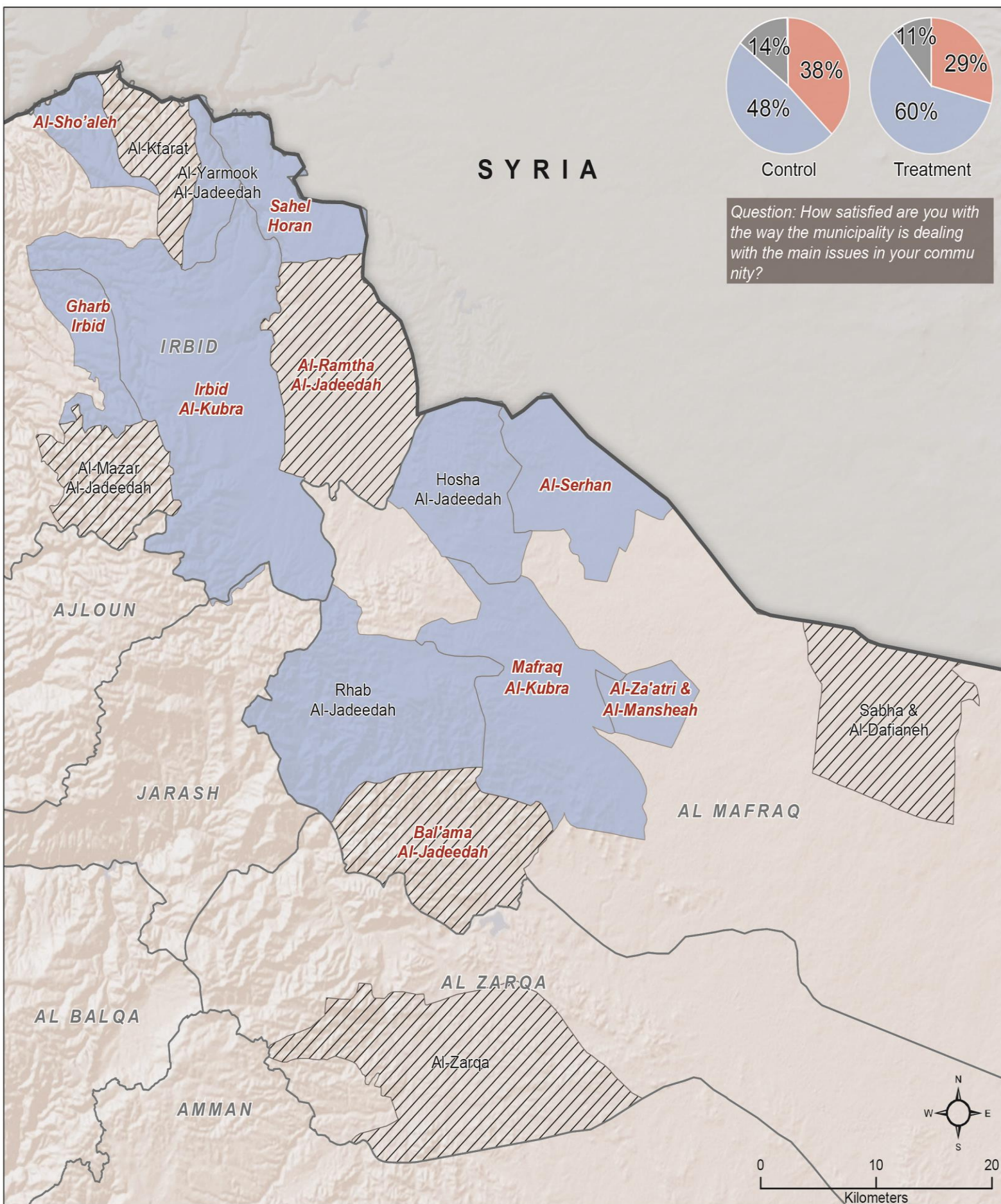
Levels of satisfaction with the outcome of the complaint

Across all municipalities, of those respondents who made a complaint, the majority (74%) reported they were 'unsatisfied' or 'very unsatisfied' with the outcome of the complaint. Respondents that were unsatisfied with the outcome of the complaint were predominately unsatisfied because there was no response from the authorities (75%). The second most common reason households were unsatisfied with the outcome of their complaint was because they felt they did not receive a response that was trustworthy.

When disaggregated by sex, in seven municipalities 75% or more of male and female respondents were unsatisfied with the outcome of the complaint: Al-Zarqa, Hoshah Al-Jadeedah, Al-Rhab Al-Jadeedah, Al-Mazar Al-Jadeedah, Al-Yarmook Al-Jadeedah, Al-Za'atri and Al-Mansheah and Bal'ama Al-Jadeedah.

Community consultation

A minority (5%) of respondents had participated in a community consultation. The municipalities with the highest percentage of respondents report they had participated in a consultation were Al-Serhan (10%), Al-Kfarat (9%), Al-Sho'aleh (9%) and Al-Mazar Al-Jadeedah (9%). 41% of respondents which participated in a community consultation were 'unsatisfied' or 'very unsatisfied' with the outcome of the consultation because there was no response and or follow-up from the authorities.



Municipality Type

Treatment

Control

Treatment: municipality where the World Bank has planned municipal service interventions.

Control: municipality where World Bank does not have planned municipal service interventions.

*Note: "No majority" represents a municipality where the percentage of respondents for both "satisfied" and "unsatisfied" were under 50%.

Thematic Data: REACH - October 2014
 Administrative boundaries: UNOCHA
 Background Imagery: Esri
 Projection: WGS 1984 UTM Zone 37N
 Contact : reach.mapping@impact-initiatives.org

Note: Data, designations and boundaries contained on this map are not warranted to be error-free and do not imply acceptance by the REACH partners, associates or donors mentioned on this map.

WATER

Jordan is one of the most water scarce countries in the world.³³ The National Resilience Plan (2014) states that ‘even a modest increase in population has a dramatic effect on the supply of water’, given the large influx of Syrian refugees into the country, this supply has been placed under high demand. Multiple sources, including reports by UNDP (2014), Oxfam (2013), Becker (2013), state that there has been an increase in water shortages and while municipal water infrastructure has been deteriorating rapidly.³⁴ A primary reason for water shortages is reportedly due to aging infrastructure coupled with poor water conservation practices employed at the household level especially amongst refugee populations.³⁵

While the majority of households (81%) in all assessed municipalities reported to be connected to the public water network, more than a third of those connected (37%) said the frequency of water delivery via pipes was not sufficient enough to meet household water needs. Overall, water shortages and or the poor quality of water have forced an overwhelming majority (95%) of households to adopt unsustainable strategies to cope with limited water supply and or the poor quality of water, including reducing water consumption (32% out of the 95%), purchasing bottled water from shops (26%), relying on well water (21%), using water purification methods (8%) sharing water resources with neighbours (4%), buying water from private trucks (4%) and collecting rain water (3%).

Level of access and frequency of delivery

Access

81% of households reported that they were connected to the public water network.³⁶ The highest proportion of households connected to the public water network were found in the two predominately urban municipalities that constituted Group 7: Irbid Al-Kubra (99%) and Al-Zarqa (98%) (see Figure 27). Al-Za’atri and Al-Mansheah had the lowest percentage of households connected to the public water network at 55%, followed by Al-Serhan (60%), and Sabha and Dafianeh (62%).

³³TAPPED OUT: Water Scarcity and Refugee Pressures in Jordan, March 2014, p.4

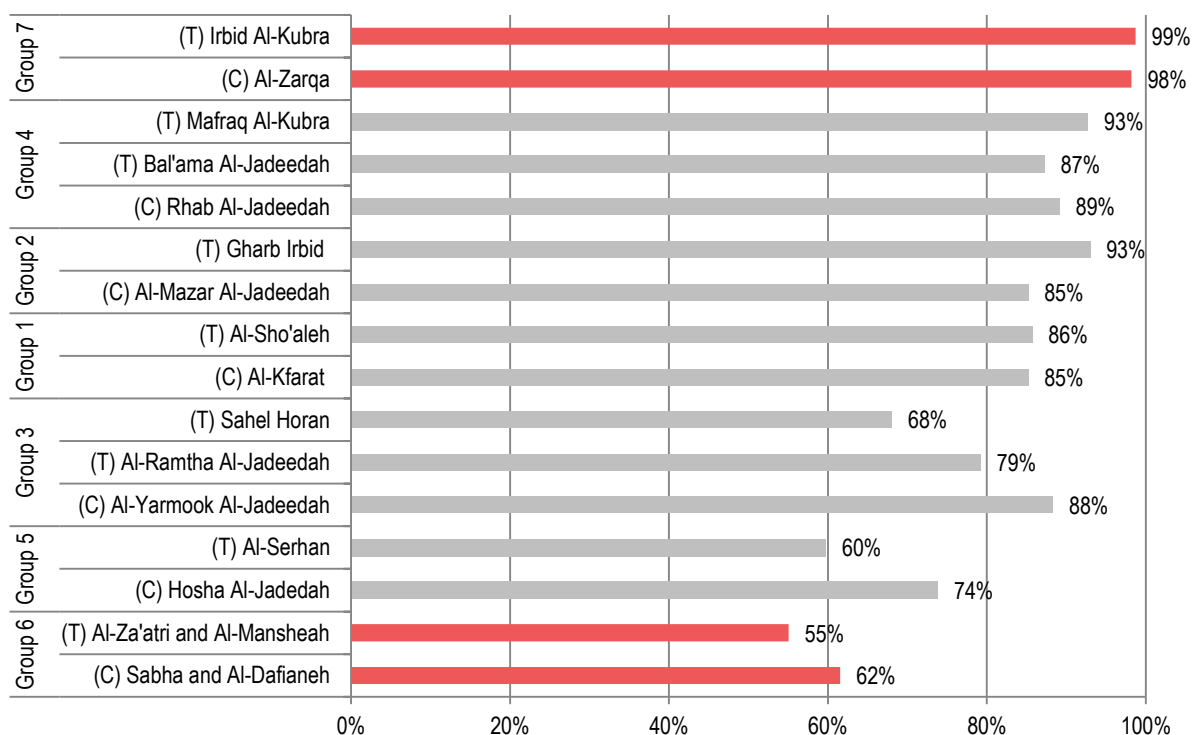
https://www.mercycorps.org/sites/default/files/MercyCorps_TappedOut_JordanWaterReport_March204.pdf<<18 January 2015>>

³⁴UNDP, Mitigating the Impact of the Syrian Refugee Crisis on Jordanian Vulnerable Host Communities, Municipal Needs Assessment Report, 10 April 2014, http://www.jo.undp.org/content/jordan/en/home/library/poverty/publication_3/

³⁵ UNDP, Mitigating the Impact of the Syrian Refugee Crisis on Jordanian Vulnerable Host Communities, Municipal Needs Assessment Report, 10 April 2014, http://www.jo.undp.org/content/jordan/en/home/library/poverty/publication_3/; Becker, David “The past, present and future of transnational conflict in Jordan: A study of Syrian refugees in the Hashemite Kingdom” Masters Capstone Paper Project, Illinois State University, 8 May, 2013

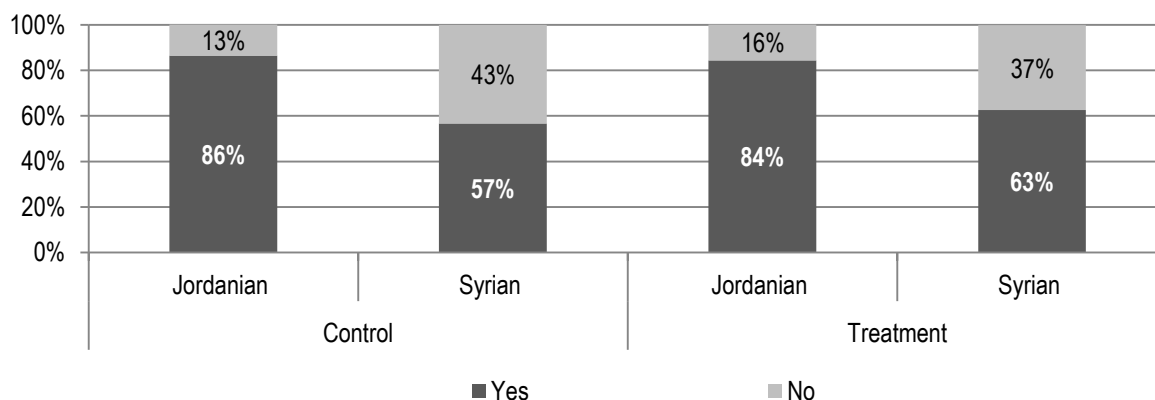
³⁶ This data is based on reported connection figures

Figure 27: Proportion of households with access to public water network



When disaggregated by nationality a majority of Jordanian (85%) and Syrian (61%) households reported they were connected to the public water network (see Figure 28).

Figure 28: Proportion of households connected to the public water network (aggregated by municipality type, disaggregated by nationality)



Frequency of delivery via public water network (hot season)

88% of households connected to the public water network reported they received water through the public water network at least once a week during the hot season. Delivery of water via the public water network appeared to be most frequent in Mafrq Al-Kubra where 67% of households connected to the public water network reported delivery via pipes occurred at least twice a week. The municipality with the least frequent delivery of water via the public water network was reported in Sahel Horan, where a majority of households (74%) connected to the public water network reported they received water only once every two weeks, followed by a further 10% which reported they received water only once a month.

Frequency of delivery via the public water network (cold season)

Amongst the majority of households connected to the public water network (92%), water delivery via the public water network during the cold season was at least once a week. Similarly, as seen in the hot season Mafraq Al-Kubra had the highest proportion of households (65%) report they received water at least twice a week. The least frequent delivery of water was in Sahel Horan (as seen in the hot season), where only 31% of households reported they received water once every two weeks.

Change in frequency between hot and cold seasons

Connected households were more likely to receive water at least once a week in the cold season (92%) compared to the hot season (88%). A greater percentage of households connected to the public water network reported they received water twice a week during the cold season (20%) compared to the hot season (11%). The delivery of water via the public water network was reported to be more frequent during the cold season. For example, in Al-Kfarat 45% of households reported they received water at least twice a week during the cold season compared to only 2% of households during the hot season. This finding was also prominent in Al-Sho'aleh (Al-Kfarat's control counterpart), Al-Mazar Al-Jadeedah and Gharb Irbid-Group 2, Al-Ramtha Al-Jadeedah and Al-Yarmook Al-Jadeedah-Group 3.

Municipal water trucks

When water is not accessible or not delivered frequently enough through the piped water network, some households resort to alternative options, including the delivery of water via public water trucks financed by the municipality. However, overall only 4% of households reported they received water from these trucks. Al-Sho'aleh (18%), Sahel Horan (16%), and Irbid Al-Kubra (7%) municipalities contained the highest proportion of households that received water from public trucks, compared to only 3% of households in Gharb Irbid and Hosha Al-Jadeedah municipalities and none in Al-Zarqa.

Secondary data collected from municipalities demonstrates that almost half of the assessed municipalities do not have a public water truck.³⁷ The municipality with the greatest number of water trucks was the control municipality of Rhab Al-Jadeedah (10). Al-Za'atri and Al-Mansheah municipality had the greatest number of wells (12), followed by Rhab Al-Jadeedah (8). The large number of wells (see Table 13) observed in Al-Za'atri and Al Mansheah could be associated with the fact that this municipality had the smallest proportion of households reported to be connected to the public water network (45%).³⁸

³⁷ It should be noted that Municipalities were requested to provide this information, with many indicating that they needed support with information management and establishing reliable records as it was not easy to immediately access this data.

³⁸This table only contains the water trucks provided by the municipality and excludes additional trucks managed by the Water Authority of Jordan

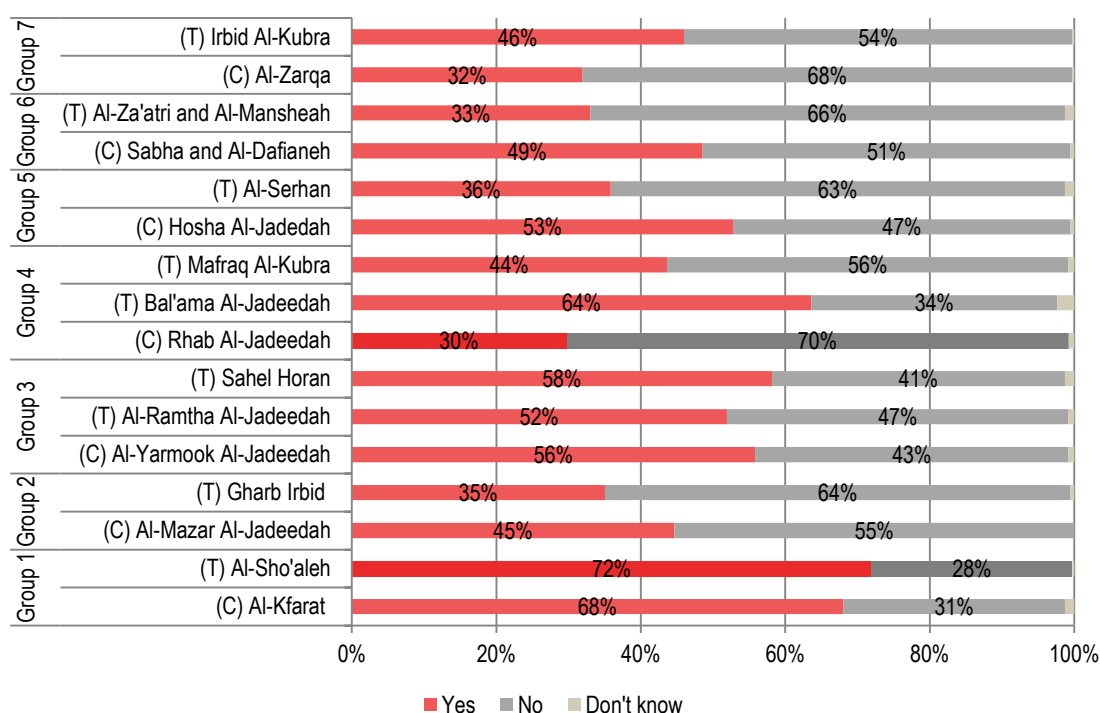
Table 13: Number of municipal water trucks and wells

Group	Municipality	# Water trucks	# Wells
Group 1	(C) Al-Kfarat	3	0
Group 1	(T) Al-Sho'aleh	0	0
Group 2	(C) Al-Mazar Al-Jadeedah	1	1
Group 2	(T) Gharb Irbid	4	7
Group 3	(C) Al-Yarmook Al-Jadeedah	0	4
Group 3	(T) Al-Ramtha Al-Jadeedah	No data	No data
Group 3	(T) Sahel Horan	1	0
Group 4	(C) Rhab Al-Jadeedah	10	8
Group 4	(T) Bal'ama Al-Jadeedah	No data	No data
Group 4	(T) Mafraq Al-Kubra	2	No data
Group 5	(C) Hosha Al-Jadeedah	No data	3
Group 5	(T) Al-Serhan	0	No data
Group 6	(C) Sabha and Dafiane	0	7
Group 6	(T) Al-Za'atri and Al-Mansheah	1	12
Group 7	(C) Al-Zarqa	3	No data
Group 7	(T) Irbid Al-Kubra	5	0
Group Total	Municipality Total	30	42

Water shortages (hot season)

48% of households faced a water shortage in the 30 days preceding the survey, which was conducted during the hot season. Al-Sho'aleh had the highest percentage of households report they faced a water shortage during the hot season at 72%, followed by Al-Kfarat (68%), both Group 1 municipalities. Rhab Al-Jadeedah had the lowest levels of shortage at 30%, followed by Al-Zarqa (32%) and Al-Za'atri and Al-Mansheah (33%) (see Figure 29).

Figure 29: Proportion of households reporting having faced water shortages (hot season)



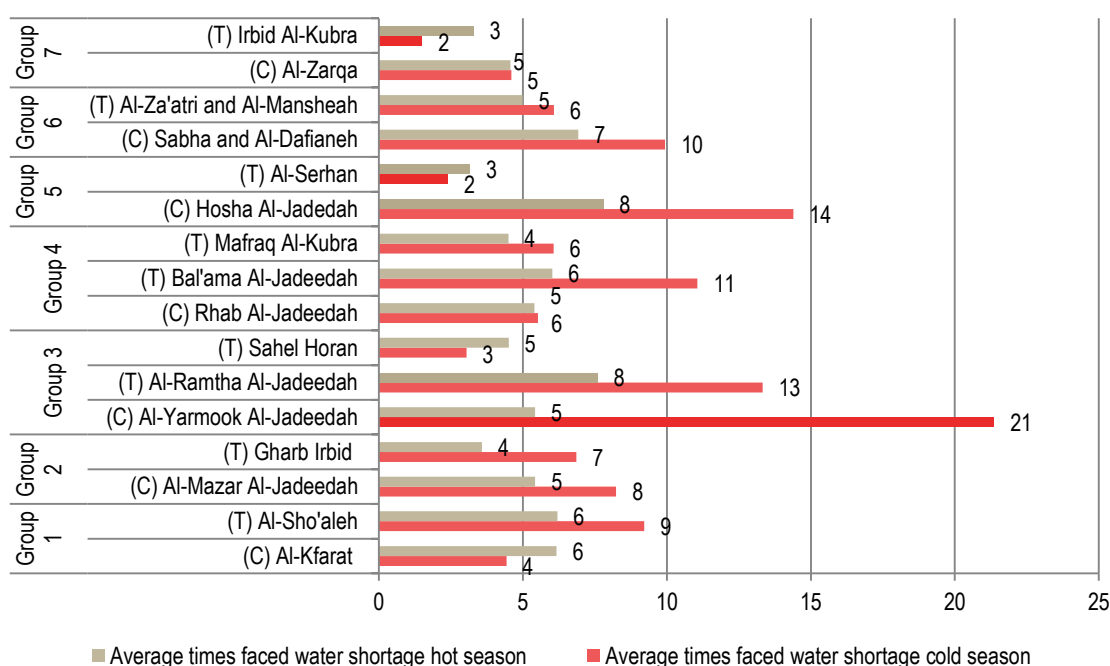
Water shortages (cold season)

Only 8% of households reported they faced a water shortage during the cold season. Shortages were most commonly experienced in the two control municipalities Sabha and Dafianeh (17%) and Hosha Al-Jadeedah (15%) and two treatment municipalities Al-Ramtha Al-Jadeedah (15%) and Sahel Horan (13%). The municipalities where the smallest proportion of respondents reported water shortages during the cold season were Irbid Al-Kubra (2%) and Gharb Irbid (2%).

Change in shortages between hot and cold seasons

Although a much smaller proportion of households faced water shortages in the cold season (8%) than the hot season (48%), the overall average number of water shortages amongst households which reported they had faced a water shortage was higher during the cold (9) than the hot (6) season. In eleven municipalities, amongst households which experienced a water shortage in both seasons, reported an increase in the average number of times they experienced water shortages during the cold season compared to the hot season. For example, in Al-Yarmook Al-Jadeedah the average number of reported water shortages during the hot season was 5 and in the cold season 21 (see Figure 30). Al-Yarmook Al-Jadeedah's treatment counterpart (Group 3), Al-Ramtha Al-Jadeedah also reported an increase in the number of water shortages households faced from the hot season (8) to the cold season (13).

Figure 30: Average number of household water shortages over one month, amongst households facing shortages



Reasons for water shortages

The two most commonly reported main reasons for household water shortages were **weak flow or pressure (39% of households)**, followed by **infrequent delivery of water via the public water supply (37%)**. Weak water flow was most commonly reported in Al-Yarmook Al-Jadeedah indicated by 64% of households facing water shortages. Infrequent delivery in water network was most common in Irbid Al-Kubra by 67% of households facing shortages, followed by 56% of households in Gharb Irbid and Al-Mazar Al-Jadeedah, respectively. **The third most common reason households faced a water shortage was because they were not connected to the public water network (12%)**. Hosha Al-Jadeedah had the highest percentage of households report this reason at 29%, followed by Al-Za'atri and Al-Mansheah (22%), Sabha Al-Dafianeh (18%), Ramtha Al-Jadeedah (18%), and Al-Yarmook Al-Jadeedah (17%), Groups 4 and 6.

Water coping strategies

Households were asked which specific coping strategies they have adapted to deal with a shortage of water and or the poor quality of water and the number of times these strategies were used in the 30 days preceding the survey. **An overwhelming 95% of households reported they had used a water coping strategy to meet their household water needs**. The findings below reflect the responses amongst households which reported using water-related coping strategies.

Among households that used strategies, the most commonly used coping strategy to deal with water shortages and or the poor quality of water was to buy bottled water from shops at 26% of the strategies used (see Table 14). Mafraq Al-Kubra had the highest proportion of strategies used that were said to be buying bottled water (38%), followed by Sahel Horan (34%) and Bal'ama Al-Jadeedah (34%).

Table 14: Proportion of used strategies to cope with insufficient water access/quality, by strategy type

Municipality	Reduce water consumption	Buy bottled water from shops	Rely on well water	Buy water from private trucks	Use travel to other communities to receive water	Collect water from unsafe water sources	Share water tanks with neighbour, borrow water from neighbour	Tap into the public water network	Collect rainwater	Use water purifying tablets chemicals	Other
(C) Al-Kfarat	18.0%	14.0%	28.0%	28.0%	0.0%	0.0%	6.0%	0.0%	2.0%	3.0%	0.0%
(T) Al-Sho'aleh	17.0%	19.0%	19.0%	20.0%	0.2%	1.0%	5.0%	9.0%	8.0%	3.0%	0.2%
(C) Al-Mazar Al-Jadeedah	22.0%	11.0%	39.0%	17.0%	0.0%	0.0%	5.0%	0.0%	2.0%	4.0%	0.0%
(T) Gharb Irbid	28.0%	19.0%	21.0%	13.0%	0.0%	0.0%	8.0%	0.0%	2.0%	9.0%	0.0%
(C) Al-Yarmook Al-Jadeedah	32.0%	14.0%	11.0%	20.0%	0.0%	0.0%	4.0%	0.0%	11.0%	9.0%	0.0%
(T) Al-Ramtha Al-Jadeedah	27.0%	30.0%	10.0%	21.0%	0.0%	0.0%	4.0%	0.0%	1.0%	7.0%	0.0%
(T) Sahel Horan	17.0%	34.0%	18.0%	19.0%	0.1%	0.0%	2.0%	7.0%	1.0%	2.0%	0.0%
(C) Rhab Al-Jadeedah	20.0%	32.0%	17.0%	13.0%	0.2%	0.0%	3.0%	9.0%	0.0%	6.0%	0.2%
(T) Bal'ama Al-Jadeedah	21.0%	34.0%	8.0%	26.0%	0.3%	0.0%	4.0%	0.0%	0.0%	6.0%	0.0%
(T) Mafraq Al-Kubra	25.0%	38.0%	4.0%	22.0%	0.0%	0.0%	4.0%	0.0%	0.0%	7.0%	0.0%
(C) Hoshia Al-Jadeedah	29.0%	23.0%	13.0%	23.0%	0.0%	0.0%	4.0%	1.0%	0.0%	7.0%	0.0%
(T) Al-Serhan	23.0%	29.0%	8.0%	28.0%	0.0%	0.0%	4.0%	1.0%	0.0%	7.0%	0.0%
(C) Sabha and Al-Dafianeh	26.0%	25.0%	13.0%	27.0%	0.4%	0.0%	6.0%	1.0%	0.0%	3.0%	0.0%
(T) Al-Za'atri and Al-Mansheah	27.0%	25.0%	3.0%	33.0%	0.0%	0.0%	5.0%	1.0%	0.0%	6.0%	0.0%
(C) Al-Zarqa	29.0%	35.0%	3.0%	10.0%	0.0%	0.0%	3.0%	0.0%	0.0%	20.0%	0.1%
(T) Irbid Al-Kubra	20.0%	33.0%	14.0%	15.0%	0.0%	0.0%	7.0%	0.0%	3.0%	9.0%	0.0%

Legend	
0%	
1-25%	
26-50%	
51-75%	
76-100%	

The second most frequent strategy used amongst households that used coping strategies was to reduce water consumption, at 24%. Al-Yarmook Al-Jadeedah had the highest percentage of households report they used this coping strategy at 32%, followed by Hoshia Al-Jadeedah (29%) and) Al-Ramtha Al-Jadeedah (27%). The third most common coping strategy was to buy water from private trucks, at 21%. Al-Za'atri and Al-Mansheah and Al-Kfarat were the two municipalities which had the highest proportion of respondents reporting that they used this strategy, at 33% and 28% respectively.

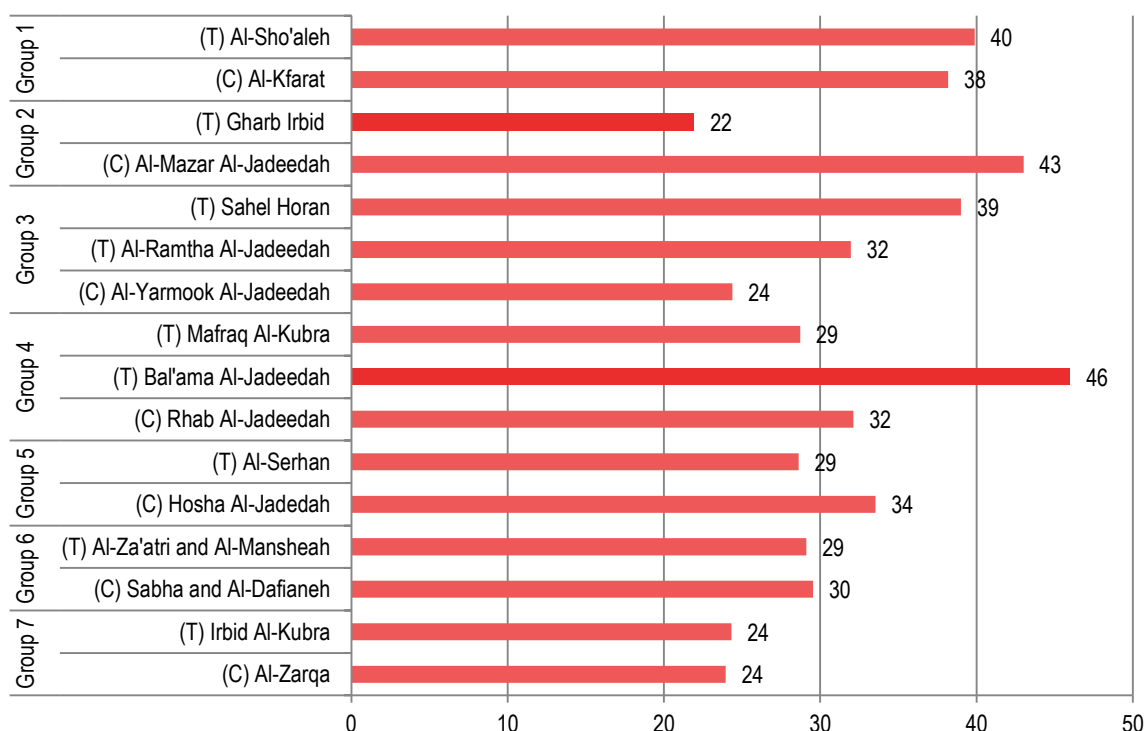
The fourth most common coping strategy was to rely on well water, at 15%. In Al-Mazar Al-Jadeedah 39% of households reported they used well water to meet their water needs. The percentage of households that tapped into the public water network and collected rainwater to meet household water needs was extremely low, at 2%

respectively; however, in the municipality of Al-Yarmook Al-Jadeedah 11% of households reported they collected rain water.

Average household expenditure on private water (one month)

Households that purchased water either from shops or private water truck companies were asked to quantify their average household expenditure on private water over the 30 days preceding the survey. The overall average household expenditure amongst households that purchased private water was 32JOD. Bal'ama Al-Jadeedah municipality had the highest reported average expenditure at 46JOD and Gharb Irbid had the lowest reported average at 22JOD (see Figure 31).

Figure 31: Average household expenditure on private water - amongst households that bought water (30 days in Jordanian Dinars, JOD)



Level of satisfaction with public water services

This section will examine key indicators pertaining to level of satisfaction with municipal water services provided in the community. The majority of households, 51%, reported they were 'unsatisfied' or 'very unsatisfied' with water municipal services. Al-Sho'aleh municipality had the highest proportion of households report they were 'unsatisfied' or 'very unsatisfied' with water services at 78% followed by Al-Kfarat (68%), both Group 1 municipalities (see Figure 32). High levels of dissatisfaction amongst these municipalities could be due to the fact that these two municipalities both had the highest proportion of households face a water shortage in the 30 days preceding the survey, 72% and 68% respectively. Al-Zarqa had the highest proportion of respondents report they were 'satisfied' or 'very satisfied' with water services at 52%. High level of satisfaction amongst households in Al-Zarqa could be explained by the fact that this municipality had the lowest proportion of households reporting that they faced a water shortage in the 30 days prior to the survey at 32%.³⁹ High levels of dissatisfaction in the municipalities of Al-Yarmook Al-Jadeedah (64%) and Hosha Al-Jadeedah (60%) could be explained by the fact that these municipalities had the highest reported average of water shortages in the cold season, at 21% and 14% respectively. Similarly,

³⁹ A Chi-square test confirmed that water shortages are associated with level of satisfaction with water service at a conventionally accepted level of significance; Chi square=1603.034, df=10, p<0.05, Phi=.510, Cramer's V=.361

households in Sabha and DafianeH reported the second highest number of water shortages during the hot season (7) which can explain the high proportion of households unsatisfied with water services in this municipality (65%).

Figure 32: Proportion of households reporting they were ‘unsatisfied’ or ‘very unsatisfied’ with water services

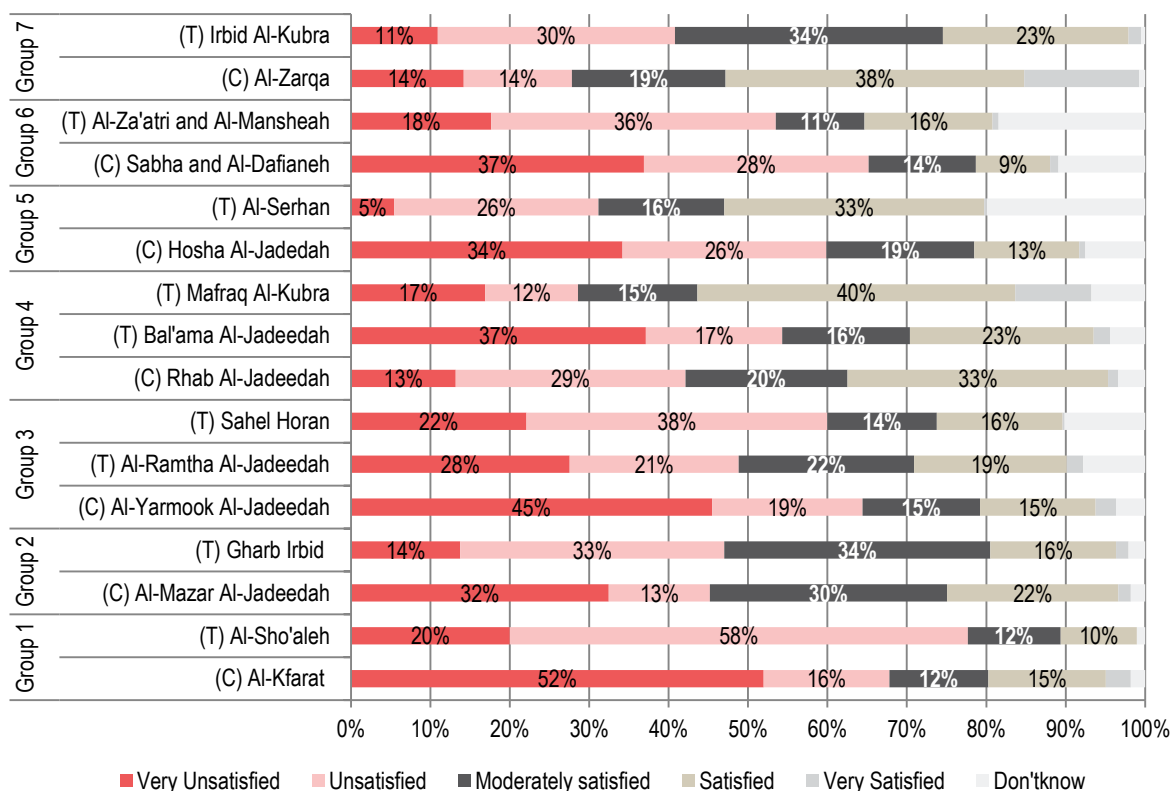
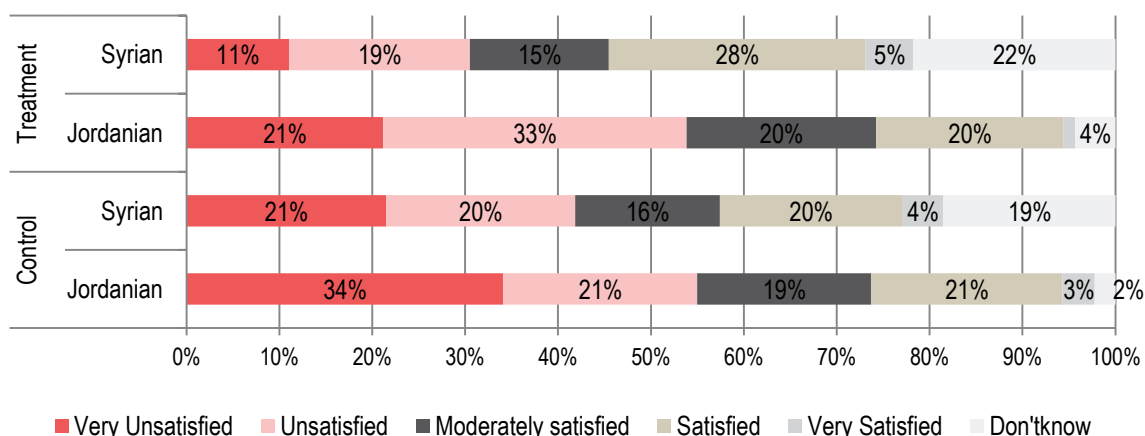


Figure 33: Proportion of households satisfied with water services (aggregated by municipality type, disaggregated by nationality)



Reasons for dissatisfaction

Households unsatisfied with public water services reported they were dissatisfied with these services for the same reasons which were provided to explain household water shortages, with the most common reason being **poor management of water services (32%)**, followed by **weak water flow and or pressure (26%)**, and **not being connected to the public water network (16%)**. Al-Serhan had the highest proportion of households unsatisfied

with water services because they were not connected to the public water network at 36%, followed by Al-Za’atri and Al-Mansheah (34%), and Sabha and Al-Dafianeh (31%) - Group 6 municipalities.

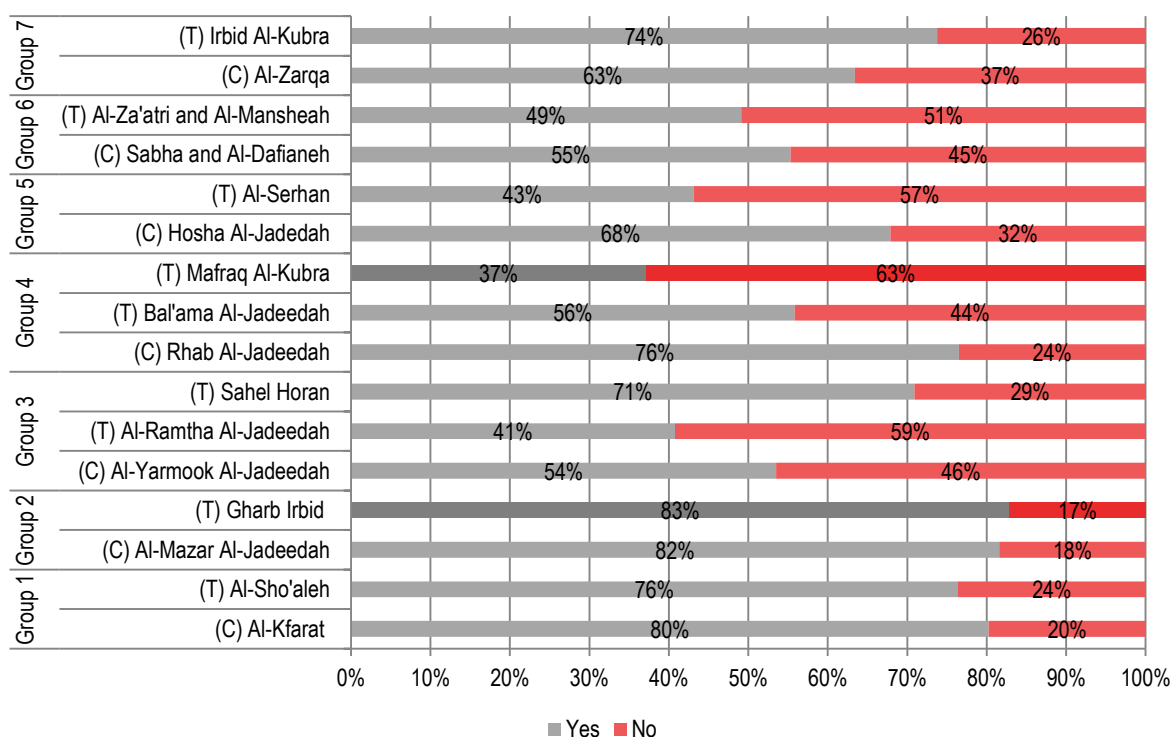
Jordanians and Syrians reported dissatisfaction with water services for different reasons. **A higher percentage of Syrian respondents were ‘unsatisfied’ or ‘very unsatisfied’ because they were not connected to the public water network at 37% compared to 14% of Jordanian respondents.** Whereas, Jordanians appeared more concerned with the poor management of water services, 33% of Jordanians cited this as the reason for their dissatisfaction compared to 23% of Syrian respondents.

Complaint mechanisms

Respondents were asked if they knew how and where to make a complaint regarding water services, in order to better understand if community residents were informed about the complaint processes for household water needs. Further, if respondents reported that they knew how and where to make a complaint, they were asked if they had made a complaint and if so, what their level of satisfaction was with the outcome of their complaint.

A majority (59%) of households reported they knew how and where to make a complaint regarding public water services (see Figure 34). In twelve municipalities a majority of respondents were aware of how to make a complaint, however, in four municipalities Mafrag Al-Kubra (63%), Al-Ramtha Al-Jadeedah (59%), Al-Serhan (57%) and Al-Za’atri and Al-Mansheah (51%) the majority of respondents did not know how and where to make a complaint for water-related issues.

Figure 34: Proportion of households aware of where and how to make a complaint regarding water services



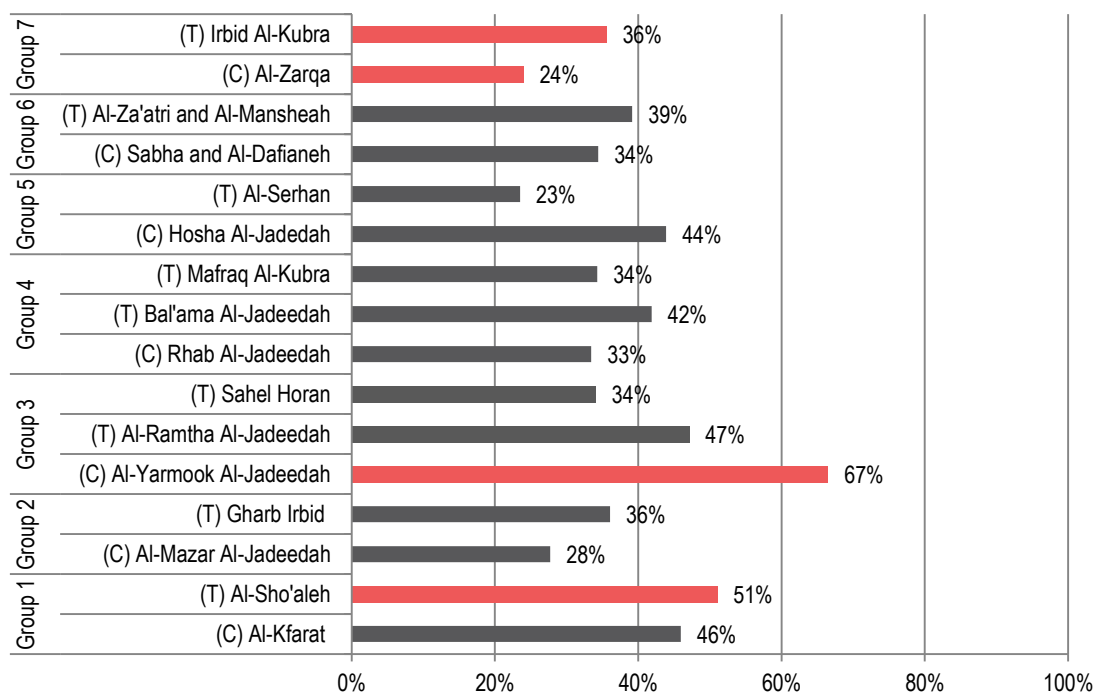
A greater proportion of Syrian households reported that they were unaware of how and where to make a complaint, than their Jordanian counterparts. Only 11% of Syrians were aware of the complaints process, compared to 63% of Jordanians.⁴⁰ A majority of Jordanian respondents in the control (75%) and treatment (71%) municipalities reported they knew how and where to make a complaint compared to a minority of Syrian respondents in the control (14%) and treatment (10%) municipalities.

40 A Chi-square test confirmed that nationality is associated with awareness of water complaints mechanism at a conventionally accepted level of significance; Chi square=1361.707, df=2, p<0.001, Phi=.470, Crammer's V.470

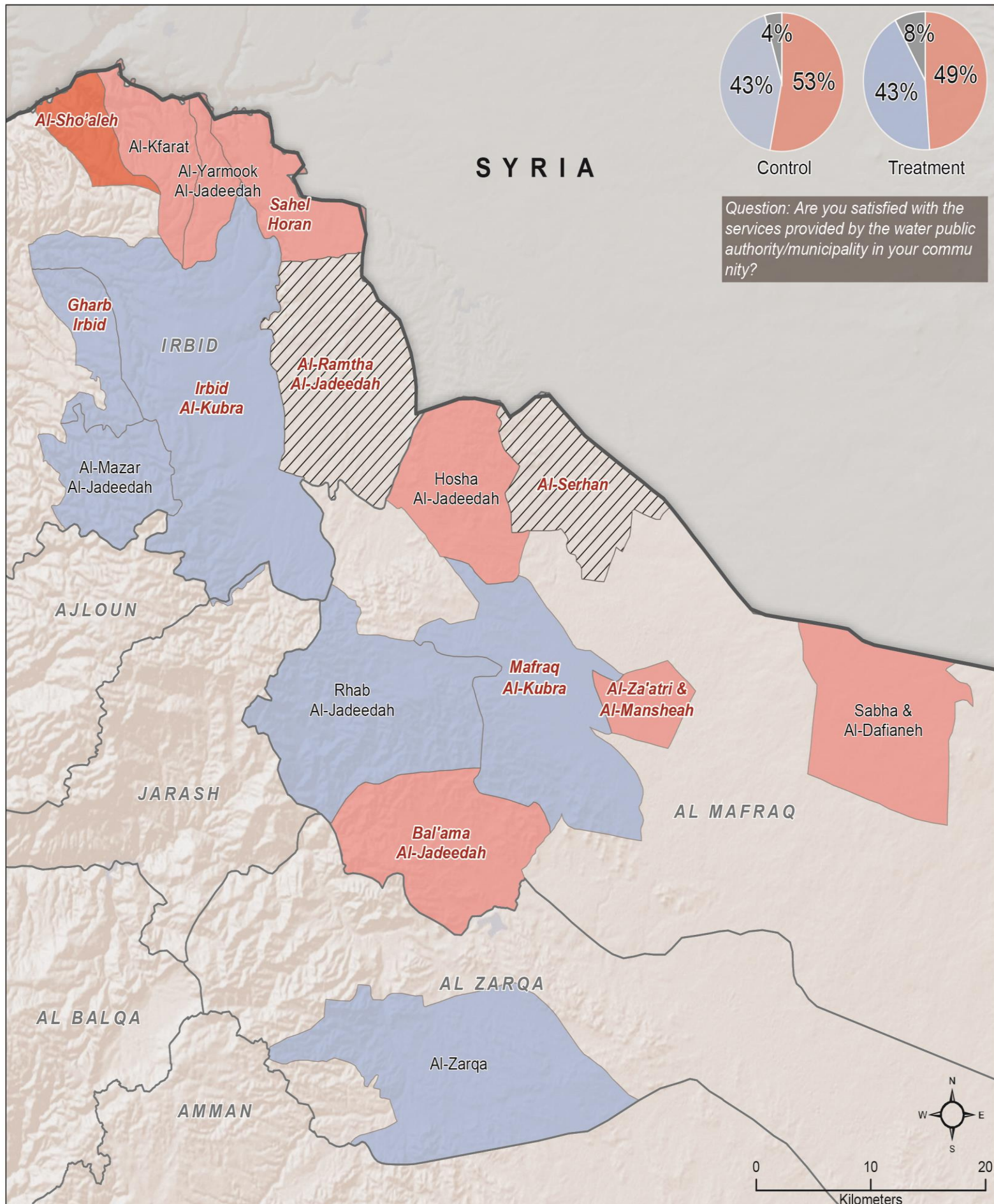
When disaggregated by sex, male and female respondents reported nearly equal levels of awareness, at 62% and 64% respectively. However, when disaggregated by municipality, amongst six municipalities: Al-Kfarat, Al-Mazar Al-Jadeedah, Al-Zarqa, Bal'ama Al-Jadeedah, Hosha Al-Jadeedah, and Sabha and Dafiane, a higher proportion of female respondents (63-85%) were aware of how and where to make a complaint regarding water services compared to their male counterparts (48-77%).

A minority of respondents (39%) reported they made a complaint regarding water services. The only municipalities where a majority of respondents had made a complaint were two control municipalities: Al-Yarmook Al-Jadeedah (67%) and Al-Sho'aleh (51%) (see Figure 35). Plausible explanations as to why these municipalities had the highest percentage of complaints could be attributed to the fact that in Al-Yarmook respondents faced the highest average number of water shortages during the cold season. In Al-Sho'aleh there are several possible reasons why a majority of households made a complaint, highest percentage of households that received water via public water trucks was found here. This municipality also had the largest percentage of households reported they faced a water shortage in the 30 days prior to the survey, and had the third highest household expenditure for private water at 40JOD. Al-Yarmook Al-Jadeedah also had a high percentage (34%) of respondents had also made a complaint regarding municipal services.

Figure 35: Proportion of households that made a complaint regarding water services



The majority of those respondents who complained (86%) were **unsatisfied with the outcome of the complaint** because there was **no response from the authorities**. 6% were unsatisfied because they felt that they did not receive a trustworthy response from authorities, and a further 5% because the authorities took a long time to respond.



Municipality Type

Treatment

Control

Treatment: municipality where the World Bank has planned municipal service interventions.

Control: municipality where World Bank does not have planned municipal service interventions.

**Note: "No majority" represents a municipality where the percentage of respondents for both "satisfied" and "unsatisfied" were under 50%.*

Thematic Data: REACH - October 2014
 Administrative boundaries: UNOCHA
 Background Imagery: Esri

Projection: WGS 1984 UTM Zone 37N

Contact : reach.mapping@impact-initiatives.org

Note: Data, designations and boundaries contained on this map are not warranted to be error-free and do not imply acceptance by the REACH partners, associates or donors mentioned on this map.

CONCLUSION

The findings from the data collected indicate that there is an overall need to improve household level access to key municipal services: water, solid waste management, sanitation (specifically desludging services), public leisure space, public lighting, public roads, and the quality of community outreach amongst both refugee and host populations, across all the municipalities assessed. Overall, satisfaction with municipal services was found to be associated with the level of services provided.

Solid waste management is a municipal service that has been particularly affected by the increase in population in Jordan's northern municipalities.⁴¹ Findings indicate that the assessed municipalities were not sufficiently equipped to deal with the increasing amount of solid waste, which has affected the level of cleanliness in these communities and household level satisfaction with waste management services.

The frequency of garbage collection was found to vary between the different location types, with solid waste collection reported to occur most frequently in the two predominately urban municipalities in Group 7, Al-Zarqa and Irbid Al-Kubra. Across all assessed municipalities, coping strategies were employed by 35% of households to deal with limited solid waste management services. Among these households, dumping waste by the roadside or in a landfill was the most common coping strategy reported. The municipalities of Al-Yarmook Al-Jadeedah and Irbid Al Kubra were found to have the highest proportion of respondents reporting that they coped with lack of waste management services by disposing of waste in a landfill or by the roadside, reported by 67% and 64% respectively.

While an increase in the presence of pests was reported by the majority of respondents in all assessed municipalities, this finding was most prevalent in Group 2 municipalities, Gharb Irbid (84%) and Mazar Al-Jadeedah (80%), and in Group 6 municipalities, Sabha and Dafianeh (86%) and Al-Za'atri and Mansheah (83%). The high prevalence of pests noted in Group 2 municipalities was found to correlate with the low reported frequency of garbage collection. Of all assessed municipalities, households in Gharb Irbid and Al-Mazar Al-Jadeedah were most likely to report that garbage collection was not conducted frequently enough.

In three out of seven control municipalities the majority of respondents were 'unsatisfied' or 'very unsatisfied' with municipal solid waste management; these were Al-Mazar Al-Jadeedah (61%), Al-Zarqa (54%) and Sabha and Dafianeh (51%). Conversely, a majority dissatisfied with services was witnessed in only one out of nine treatment municipalities, Al-Ramtha Al-Jadeedah (62%).

Syrian households appeared to be more likely to be dissatisfied with services if they lived in control municipalities: 34% of Syrian households in control municipalities were said to be 'unsatisfied' or 'very unsatisfied', compared to only 19% of Syrian households living in treatment municipalities. By contrast, no variation in dissatisfaction levels was observed among Jordanian respondents when comparing control and treatment municipalities: in both types, 44% of Jordanian households reported they were dissatisfied.

As with garbage collection, access to the public sewer system was reportedly most common in the urban municipalities in Group 7, Al-Zarqa (89%) and Irbid Al-Kubra (77%). The most frequent use of desludging services and the highest expenditure on services over the six months preceding the assessment was witnessed in Sahel Horan (83 JOD) and Al-Ramtha Al-Jadeedah (59 JOD).

A high proportion of respondents across the assessed municipalities had no opinion as to their level of satisfaction with public desludging services (37%). This finding indicates that respondents are either unaware of the desludging services provided by the municipality – or do not have access to services. This is corroborated by secondary data obtained from municipalities, which indicated limited availability of public desludging trucks. The municipalities of Al Kfarat and Al Shoaleh, and Al-Mazar Al-Jadeedah had the highest proportion of respondents reporting that they did not empty their pit latrine at all (45%), and at times dug another pit (30%).

Overall, dissatisfaction with public lighting was found to be more common in control than in treatment municipalities. This finding was also observed in regards to levels of satisfaction with the **municipal road maintenance**, where 49% reported being dissatisfied with road maintenance in control municipalities, compared to 37% in treatment municipalities. The primary reason respondents gave for being dissatisfied with municipal

⁴¹ UNDP Municipal Needs Assessment Report Mitigating the Impact of the Syrian Refugee Crisis on Jordanian Vulnerable Host Communities <http://www.jo.undp.org/content/dam/jordan/docs/Poverty/UNDPReportmunicipality.pdf>, p.31

maintenance of roads and public lighting was because these services were not currently provided by the municipality.

The majority of respondents in all assessed municipalities were found either not to use public leisure spaces, or to live in communities where such spaces were not available.⁴² Households in Group 4 municipality Mafraq Al-Kubra reported the shortest average distance to all four types of spaces, while households in Bal'ama Al-Jadeedah in the same group reported the furthest average distance to three out of the four spaces – community centres, parks and sport centres. After water, public leisure spaces was the municipal service for which the highest proportion of households reported using a coping strategy to deal with limited access. The primary reason that respondents gave for being dissatisfied with the availability of public leisure spaces was because these spaces are not available in the community (82%). An additional 7% of respondents reported they were dissatisfied because these spaces were 'poorly maintained' and 'not properly equipped'.

Dissatisfaction with availability and quality of public leisure spaces was highest in control municipalities, with highest levels reported in Rhab Al-Jadeedah (70%) and Sabha and Dafianeh (68%). Jordanian respondents were found to be more dissatisfied with the availability and quality of public leisure spaces in both the control and treatment municipalities (65% and 61% respectively) compared to their Syrian counterparts (45% and 32% respectively).

Nationality stood out as a key trend associated with differences in perceptions of community outreach. A higher proportion of Jordanian respondents in the control and treatment municipalities (40% and 35% respectively) reported that they were 'unsatisfied' or 'very unsatisfied' with the way the municipality is dealing with the main problems facing the community, compared to their Syrian counterparts (18% and 7% respectively).

Nationality was also found to be a factor in the level of awareness of how and where to make a complaint regarding municipal services. The majority (91%) of Syrian respondents were not aware of any complaints mechanism, compared to a minority (28%) of Jordanian respondents. Amongst respondents that made a complaint regarding municipal services, the majority reported that they were 'unsatisfied' or 'very unsatisfied' with the outcome of the complaint. The primary reasons that respondents were unsatisfied was because they perceived there to be no follow-up provided by local government, a reason cited by 75% of households.

Water is a key resource which amongst the assessed municipalities is becoming increasingly stretched in the host communities in northern Jordan.⁴³ Baseline findings suggest that like frequency of garbage collection and connection to the sewer system, location type can serve as an indicator as to the level of connectivity to the public water network. The two predominately urban municipalities in Group 7, Al-Zarqa and Irbid Al-Kubra, had the highest proportion of households connected to the public water network across all assessed municipalities. In contrast, the two largely rural municipalities in Group 6, Al-Za'atri and Al-Mansheah and Sabha and Dafianeh, had the lowest proportion of households reporting to be connected to the public water network.

Water shortages were found to be much less likely to have been experienced in the cold season, compared to the hot season. Households in Group 1 municipalities Al-Sho'aleh and Al-Kfarat were most likely to have faced water shortages during the hot season, reported by 72% and 68% of households respectively. Households in these municipalities were also the most likely overall to report being 'unsatisfied' or 'very unsatisfied' with public water services (78% and 68%). It should be noted that overall, satisfaction levels were lower in control municipalities, compared to treatment municipalities. Syrian households were found to be less aware than Jordanians of how to make a complaint about their dissatisfaction with public water services: only 11% knew about the complaints process, compared to 63% of Jordanians.

Among households that faced water shortages, the highest number of shortages was experienced in municipalities in Group 3. Al-Ramtha Al-Jadeedah and Al-Yarmook Al-Jadeedah municipalities also had among the highest proportions of households reporting that they reduced water consumption to deal with poor quality or shortages of water. Households in these two municipalities and also in Hoshia Al-Jadedah, the municipality suffering the third greatest number of shortages, were most likely report that shortages were due to lack of connection to the public water network.

⁴² Public leisure spaces include community centres, parks, sports centres and libraries.

⁴³ National Resilience Plan, p.84

ANNEX 1

Table 15: Number of households assessed by nationality and municipality

Group	Municipalities	Jordanian	Syrian	Other Nationalities
Group 1	(C) Al-Kfarat	353	27	5
Group 1	(T) Al-Sho'aleh	362	20	3
Group 2	(C) Al-Mazar Al-Jadeedah	371	10	4
Group 2	(T) Gharb Irbid	359	26	0
Group 3	(C) Al-Yarmook Al-Jadeedah	352	30	3
Group 3	(T) Al-Ramtha Al-Jadeedah	299	80	6
Group 3	(T) Sahel Horan	337	47	1
Group 4	(C) Rhab Al-Jadeedah	338	35	14
Group 4	(T) Bal'ama Al-Jadeedah	346	33	6
Group 4	(T) Mafraq Al-Kubra	181	189	15
Group 5	(C) Hoshah Al-Jadeedah	331	51	4
Group 5	(T) Al-Serhan	284	91	10
Group 6	(C) Sabha and Dafiane	306	72	7
Group 6	(T) Al-Za'atri and Al-Mansheah	259	124	2
Group 7	(C) Al-Zarqa	328	45	15
Group 7	(T) Irbid Al-Kubra	324	52	9

Figure 36: Number of male and female respondents

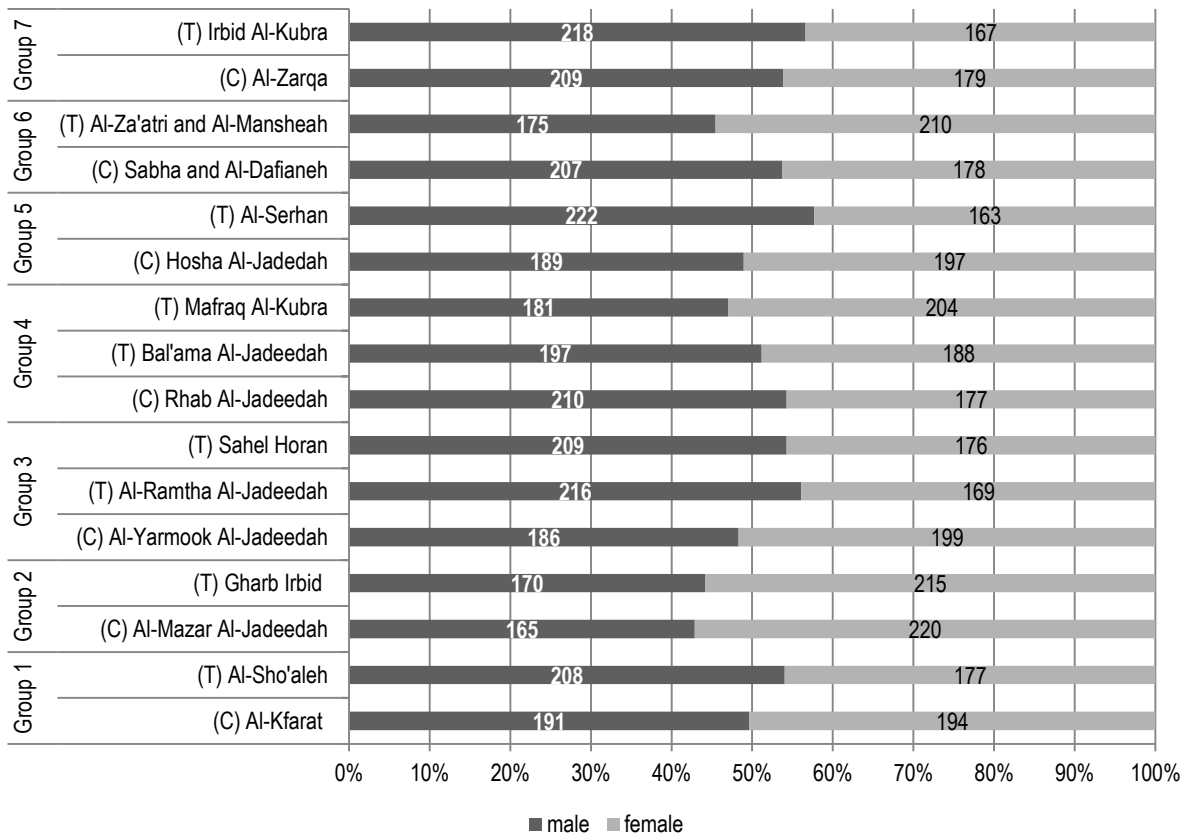
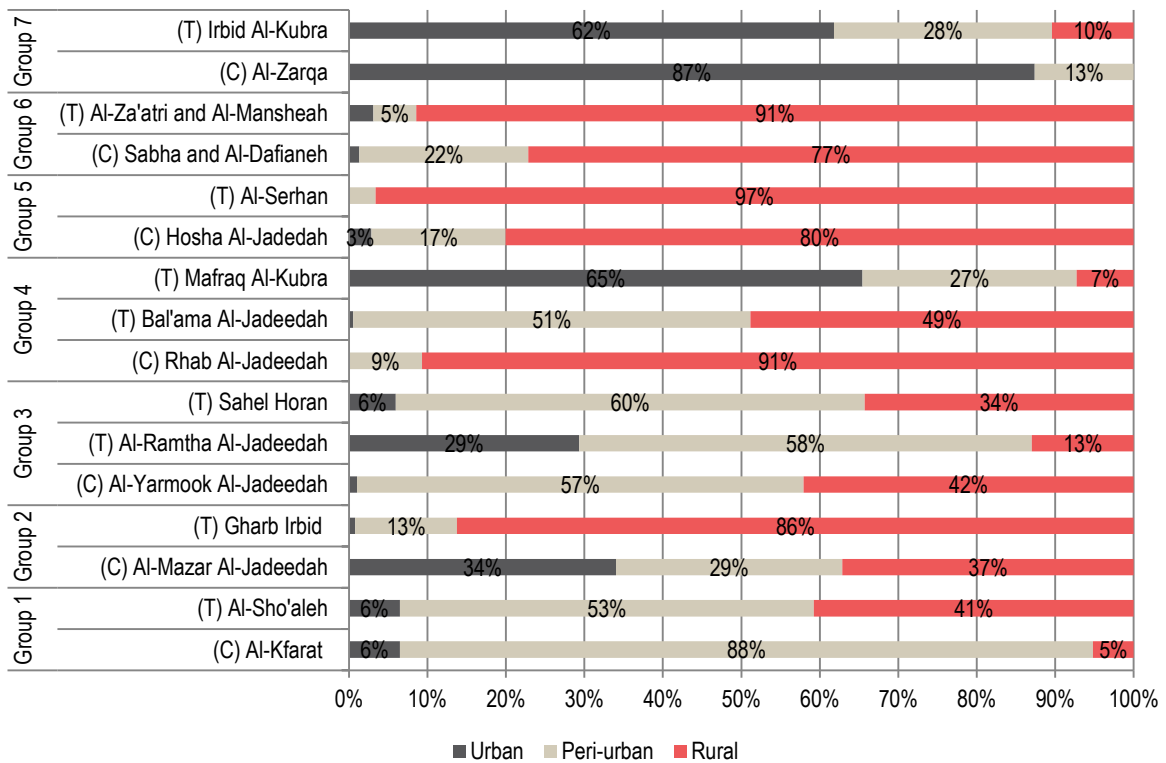


Figure 37: Proportion of households by location type



ANNEX 2

Municipal services – baseline assessment tool

Introduction:

Hello, my name is _____ and I am working for REACH. We are conducting a survey of households in your community. We would like to ask you some questions about general satisfaction with public services on behalf of FCO/DFID/the World Bank. What you will say will be kept confidential and will not be revealed to any other group. This survey will take around 30 minutes to complete.

GPS Location (coordinates): _____

Date (DD/MM/YY): _____

Respondent's sex: 1 Male 2 Female

Demographics:

1.1 Governorate

- 1 Irbid
 2 Mafraq
 3 Zarqa

1.2 Municipality [add drop down menu] – list of 16 municipalities

1.3 Location type:

- 1 Urban 2 Peri-urban 3 Rural

1.4 What is your nationality?

- 1 Jordanian
 2 Syrian
 98 Other, please specify: _____

1.5 Please provide phone number (optional) _____

Household Profile:

1.6 How many families share this accommodation?

- 1 One family only
 2 Two
 3 Three
 4 More than three
 98 Other, please specify: _____

1.7 Please list the number of males and female family members according to age

- 1 Male: ___ 0-3y ___ 4-11y ___ 12-17y ___ 18-30y ___ 31-59y ___ 60y and over
 2 Female: ___ 0-3y ___ 4-11y ___ 12-17y ___ 18-30y ___ 31-59y ___ 60y and over

1.8 What is the sex of the head of household (HH)? 1 Male 2 Female

1.9 What is the marital status of the head of the HH? 1 Single 2 Married 3 Divorced 4 Widowed

1.10 Does anyone in your HH have a permanent physical disability? 1 Yes 2 No

Specify disability for males: 1 Physical 2 Mental 3 Visual 4 Auditory 5 Speech 6 None

Specify disability for females: 1 Physical 2 Mental 3 Visual 4 Auditory 5 Speech 6 None

1.11 What is the highest education level of your head of HH? Choose only one.

- 1 No formal education
 2 Primary
 3 Secondary
 4 Vocational training

- 5 University degree
- 6 Post graduate
- 98 Other, please specify: _____

1.12 Please state the length of time you have lived in this community. Choose one.

- 1 Less than three months
- 2 Three to six months
- 3 Six months to one year
- 4 One to two years
- 5 More than two years

1.13 Since you arrived / have lived in this community what are the three most prominent changes that you have witnessed due to population increase? Rank first three most important (1=most important).

- 1 Overcrowding in schools/deterioration in the quality of education
- 2 Overcrowding in medical centers/deterioration in the quality of medical service
- 3 Increased competition for job opportunities
- 4 Rising cost of living (food prices/cost of rent)
- 5 Traffic congestion/road accidents
- 6 Increase in the rate of crime/emergence of new crimes
- 7 The spread of disease/emergence of new diseases
- 8 Waste accumulation in public spaces/spread of pests
- 10 Cultural/moral deterioration
- 11 Water shortage
- 12 Have not witnessed any changes
- 98 Other, please specify: _____

1.14 If 1.13 answered 1 ask the questions in the table below.

In the last six months what copings strategies did your HH employ to cope with the deterioration in the quality of educational services in your community? (Check box)

- 1 Home school children/adolescents
- 2 Attend a split school day
- 3 Attend a private school
- 4 Keep children at home without educational instruction
- 5 Send children to work instead of school
- 6 Have children/adolescents travel to other areas to attend school
- 7 Apply for grants/bursaries
- 98 Other, please specify:

1.14 If 1.13 answered 2 ask the following questions in the table below.

Coping Mechanisms: During the last 6 months, how many times did your household have to employ one of the following strategies to cope with the deterioration in the quality of health services/inability to finance health expenditures?	Frequency: Number of times out of the last six months : (use numbers 0-30 to answer number of times)
<input type="checkbox"/> 1 Rely on high-cost private clinics	
<input type="checkbox"/> 2 Use the health facilities of NGOs/charitable organizations/seek financial support from private donors/organizations	
<input type="checkbox"/> 3 Borrow money from family/friends/ neighbours	
<input type="checkbox"/> 4 Sell food vouchers or NFIs received from humanitarian organizations	
<input type="checkbox"/> 5 Self-medicate	
<input type="checkbox"/> 6 Travel to other communities	
<input type="checkbox"/> 7 Take a out loan	
<input type="checkbox"/> 8 Sell assets	
<input type="checkbox"/> 9 Avoid seeking medical attention	

<input type="checkbox"/> 10 Seek medical attention without insurance or sufficient finances	
<input type="checkbox"/> 98 Other, please specify: _____	

Housing/Accommodation:

2.1 What type of accommodation is your HH currently living in?

- 1 Rented house/apartment
- 2 Owned house/apartment
- 3 Informal shelter
- 98 Other, please specify: _____

2.2 How does your HH cover the cost of housing? [Check box] Rank three

- 1 Pay out of income
- 2 Borrow money from family
- 3 Take out a loan
- 4 Sell vouchers
- 5 Share housing and costs with other families
- 6 Sell valuables/possessions
- 7 Pay from pension
- 8 No housing costs/provided free by family/host family
- 98 Other, please specify: _____

2.3 In the last six months what percent of the HH income was spent on housing expenses (rent)?

- 1 0%
- 2 1-15%
- 3 16-30%
- 4 31-45%
- 5 46-60%
- 6 61-75%
- 7 76-90%
- 8 91-100%
- 97 Not applicable/own my accommodation
- 99 Don't know

2.4 Increased shelter prices have led to discontent within your community.

- 1 Strongly agree
- 2 Agree
- 3 Neutral
- 4 Disagree
- 5 Strongly disagree
- 99 don't know

2.5 What challenges is the HH facing in relation to your current housing? [Check box] Rank three

- 1 No challenge
- 2 Overcrowding/Lack of space
- 3 Unclean/Unhealthy environment (eg. Damp, dirty, lack of ventilation)
- 4 Partially constructed /unsafe building
- 5 Cannot afford the rent
- 98 Other, please specify: _____

2.6 Who do you share the HH with? [Check box] Choose all that apply.

- 1 Live alone
- 2 Immediate family
- 3 Extended family
- 4 Jordanian non-relatives
- 5 Syrian non-relatives
- 98 Other, please specify: _____

2.7 (Skip logic) If 2.6 you live with Jordanian/Syrian non-relatives or other , please rate the level of personal safety in the HH.

- 5 Very safe
- 4 Safe

- 3 Moderately safe
- 2 Unsafe
- 1 Very unsafe
- 99 Don't know / Prefer not to answer

2.8 What safety concern/s have you experienced in the HH, if any? [Check box] Rank three

- 1 Confrontation with neighbours/ Bad relationships with neighbours
- 2 Break-ins/robberies
- 3 Inadequate wash facilities for females
- 4 Domestic violence
- 5 Ill fit for children
- 6 Overcrowding/lack of privacy
- 7 Unhygienic living conditions (ex: presence of rodents, pests, damp)
- 8 No safety issues
- 98 Other, please specify: _____
- 99 Don't know / Prefer not to answer

2.9 Coping mechanisms:

During the last 6 months, how many times did your HH have to employ one of the following strategies to cope with housing-related issues?	Frequency: Number of times in the past 6 months: (use numbers 0-30 to answer number of times)
<input type="checkbox"/> 1 Take out loans/incurring debt to cover rental expenditure	
<input type="checkbox"/> 2 Borrow from landlord and/or delay payment of rent	
<input type="checkbox"/> 3 Borrow money from family/friends/neighbours to cover rental expenditure	
<input type="checkbox"/> 4 Sell personal belongings/valuables to cover rental expenditure	
<input type="checkbox"/> 5 Postpone marriage to put off buying/renting property	
<input type="checkbox"/> 98 Other, please specify:	

3. Water:

3.1 Are you connected to the public water network?

- 1 = Yes 2 = No 99 = Don't know

3.2 If 3.1 yes, over the past month how often did you receive water from the public network (hot season)?

- 1=Never 2 = Every day 3 = Three times a week 4 = Twice a week 5=Once a week 6 = Once every two weeks; 7 = Once a month 99 = Don't know

3.3 If 3.1 yes, last winter how often did you receive water from the public network over a one month period?

- 1=Never 2 = Every day 3 = Three times a week 4 = Twice a week 5=Once a week 6 = Once every two weeks; 7 = Once a month 99 = Don't know

3.4 Have you ever received public water delivered by the municipal public water trucks?

- 1 = Yes 2 = No 99 = Don't know

3.5 If yes, over the past month how often did you receive water from the public water trucks (hot season)?

- 1=Never 2 = Every day 3 = Three times a week 4 = Twice a week 5=Once a week 6 = Once every two weeks; 7 = Once a month 99 = Don't know

3.6 If yes, last winter over a one month period how often did you receive water from the public water trucks?

- 1=Never 2 = Every day 3 = Three times a week 4 = Twice a week 5=Once a week 6 = Once every two weeks; 7 = Once a month 99 = Don't know

3.7 Have you ever faced a water shortage over the past one month (hot season)?

- 1 = Yes 2 = No 99 = Don't know

3.8 If yes, how many times?
 _____ # of times (restrict number to 30)

3.9 Last winter (cold season) over the period of one month did you face water shortage?
1 = Yes 2 = No 99 = Don't know

3.10 If yes, how many times?
 _____ # of times (restrict number to 30)

3.11 If 3.7 yes OR 3.9 yes, In case you faced a shortage/s, rank the three most important causes:
 (1= most important)

- 1 Public water supply is not frequent enough
- 2 Not enough storage capacity
- 3 More people joined the household and the water was not enough for everyone
- 4 Cannot afford to buy water from water shops and water trucks
- 5 Private water vendors cannot be trusted
- 6 The private well dried up
- 7 The water flow/pressure (pumped through pipes) is weak
- 8 None of the above
- 98 other: _____
- 99 Don't know

3.12 Coping mechanisms:

During the last one month, how many times did your household have to employ one of the following strategies to cope with a lack of and/or poor quality of water?	Frequency: Number of times during the last 30 days: (use numbers 0-30 to answer number of times)
<input type="checkbox"/> 1 Buy bottled water from shops	
<input type="checkbox"/> 2 Buy water from private trucks	
<input type="checkbox"/> 3 Share water tanks with neighbours / Borrow water from neighbors	
<input type="checkbox"/> 4 Rely on well water	
<input type="checkbox"/> 5 Use water purifying tablets/chemicals, boil water, use water filter	
<input type="checkbox"/> 6 Collect rainwater	
<input type="checkbox"/> 7 Collected water from unsafe water sources (rivers, open wells, etc.)	
<input type="checkbox"/> 8 Tap into the public water network	
<input type="checkbox"/> 9 Reduce water consumption	
<input type="checkbox"/> 10 Travel to another community to receive water	
<input type="checkbox"/> 98 Other, please specify:	

3.13 If 3.12 buy bottled water OR buy water from private trucks <>0, then ask How much have you spent on buying private water over the past 30 days?

_____ JODs

3.14 Are you satisfied with the services provided by the water public authority/municipality in your community?

- 5 Very Satisfied
- 4 Satisfied
- 3 Moderately Satisfied
- 2 Unsatisfied
- 1 Very Unsatisfied
- 99 Don't know

3.15 If unsatisfied OR very unsatisfied, why?

- 1 Water services are poorly managed
- 2 Water distribution / delivery is dependent upon personal relationships
- 3 Not connected to the public water network

- 4 Water pipes are old and poorly maintained
- 5 Water shortages
- 6 Water is not clean
- 7 High cost of water
- 8 The water flow / pressure (pumped through pipes) is weak
- 98 Other, please specify:

3.16 Are you aware of where to make a complaint in regards to your water supply?

- 1 Yes 2 No

3.17 (Skip logic) If 3.16 yes, have you ever made a complaint to the water authorities?

- 1 Yes 2 No

3.18 (Skip logic) If 3.17 yes, how satisfied were you with the outcome of the complaint?

- 5 Very Satisfied
- 4 Satisfied
- 3 Moderately Satisfied
- 2 Unsatisfied
- 1 Very Unsatisfied

3.19 If 3.18 unsatisfied OR very unsatisfied, why?

- 1 There is no response from the authorities
- 2 The authorities took a long time to respond
- 3 Did not receive a trustworthy response
- 4 The response was not helpful
- 98 Other, please specify:

3.20 Water shortages have led to discontent within your community.

- 1 Strongly agree
- 2 Agree
- 3 Neutral
- 4 Disagree
- 5 Strongly disagree
- 99 Don't know / Prefer not to answer

4. Livelihoods / Employment:

4.1 How many members of the HH are employed? _____

4.2 Are there members of the HH currently looking for employment?

- 1 Yes 2 No

4.3 If yes, how many members?

_____ females _____ males

4.4 Has the main breadwinner of the HH struggled to find adequate employment over the past year?

- 1 Yes
- 2 No
- 99 Don't know / Prefer not to answer

4.5 What were the primary (1), secondary (2), and tertiary (3) sources of income to cover HH expenditures in the last 30 days?

- 1 Formal wage labour
- 2 Informal wage labour
- 3 Military personnel
- 4 Pension
- 5 Agricultural labour
- 6 Business owner
- 7 Formal Loans/informal loans
- 8 Cash from humanitarian orgs.

- 9 Sale of food /non-food assistance
- 10 Self-employed/freelance worker
- 11 Begging
- 12 Illegal activity
- 13 Selling personal items/valuables
- 14 Savings
- 15 Remittances
- 98 Other (please specify) _____
- 99 Don't know
- 97 Not Applicable (N/A)

4.6. Rate the breadwinner's level of job security.

- 5 Very secure
- 4 Secure
- 3 Moderately secure
- 2 Insecure
- 1 Very insecure
- 99 Don't know

4.7. The current employment situation has led to discontent within your community.

- 1 Strongly Agree
- 2 Agree
- 3 Neutral
- 4 Disagree
- 5 Strongly Disagree
- 99 Don't know

4.8 Coping mechanisms:

During the last 1 month, how many times did your household have to employ one of the following strategies to cope with a lack of employment?	Frequency: Number of times during the past 6 months : (use numbers 0-30 to answer number of times)
<input type="checkbox"/> 1 Borrow money from family / friends / neighbours	
<input type="checkbox"/> 2 Take out loans / incur debt	
<input type="checkbox"/> 3 Rely on savings or remittances	
<input type="checkbox"/> 4 Endure poor working conditions (safety/health concerns, long hours, low wages)	
<input type="checkbox"/> 5 Work illegally	
<input type="checkbox"/> 6 Work multiple jobs	
<input type="checkbox"/> 7 Sell personal belongings / valuables	
<input type="checkbox"/> 8 Sell food vouchers or NFIs received from humanitarian organizations	
<input type="checkbox"/> 9 Send children to work	
<input type="checkbox"/> 10 Accept marriage proposals for financial compensation	
<input type="checkbox"/> 98 Other, please specify:	

5. Waste disposal / Environmental hazards:

5.1 What is the main way that your household disposes of garbage from your HH? (CHECK ONE)

- 1 Drop it in public bins
- 2 Drop it anywhere outside
- 3 Drop in informal dumping areas where many people drop their garbage
- 4 Pay someone to collect it
- 5 Burn it
- 98 Other, please specify: _____

5.2 How far is the nearest garbage bin from your house? _____ minutes

5.3 In your opinion, how often is the municipality collecting the garbage in your community?(CHECK ONE)

- 1 Every day
- 2 Once every two days
- 3 Once a week
- 4 Once every two weeks
- 5 Once a month
- 6 Less than once a month
- 7 Never
- 99 Don't know

5.4 In your opinion, is the garbage collection frequent enough?

- 1 Yes
- 2 No
- 99 Don't know

5.5 In your opinion, the cleanliness (e.g. lack of garbage) of the area/street around your accommodation is, using the following scale: (CHECK ONE)

- 5 Excellent
- 4 Good
- 3 Fair
- 2 Poor
- 1 Very poor
- 99 Don't know

5.6 There has been an increase in pests (insects, rodents, stray dogs) within the community.

- 1 Strongly Agree
- 2 Agree
- 3 Neutral
- 4 Disagree
- 5 Strongly Disagree
- 99 Don't know

5.7 In your opinion, the way the municipality is dealing with pest control around your accommodation is, using the following scale: (CHECK ONE)

- 5 = Excellent
- 4 = Good
- 3 = Fair
- 2 = Poor
- 1 Very poor
- 99 = Don't know

5.8 Waste accumulation and pests have led to discontent within your community.

- 1 Strongly agree
- 2 Agree
- 3 Neutral
- 4 Disagree
- 5 Strongly disagree
- 99 Don't know

5.9 Coping mechanisms:

During the last 7 days, how many times did your household have to employ one of the following strategies to cope with a lack of waste disposal in the community?	Frequency: Number of times out of the last seven days: (use numbers 0-7 to answer number of times)
<input type="checkbox"/> 1 Burn trash	
<input type="checkbox"/> 2 Bury it	
<input type="checkbox"/> 3 Dump waste by roadside /landfill	
<input type="checkbox"/> 4 Dump waste in river/nearby water	

<input type="checkbox"/> 5 Retain garbage indoors for longer period of time than usual	
<input type="checkbox"/> 6 Recycle waste/compost	
<input type="checkbox"/> 98 Other, please specify:	

5.10 Are you satisfied with the waste management services provided by the municipality in your community?

- 5 Very Satisfied
- 4 Satisfied
- 3 Moderately Satisfied
- 2 Unsatisfied
- 1 Very Unsatisfied
- 99 Don't know

5.11 If unsatisfied OR very unsatisfied, why?

- 1 Garbage collection frequent not enough
- 2 Not a priority service for the municipality
- 3 No waste management services provided
- 4 There are no public waste bins
- 5 The distance to public bins is far
- 6 Increase in pests (insects, rodents, stray dogs) due to the accumulation of waste
- 7 Not enough waste management workers
- 8 Waste management services is poorly run
- 98 Other, please specify:

6. Sanitation

6.1 Do you have access to the sewer system?

(if yes, skip sanitation questions)

- 1 = yes
- 2 = no
- 99 = don't know

6.2 IF your toilet discharges into a pit in the ground, how do you empty it?

- 1 = Public desludging trucks
- 2 = Private desludging trucks
- 3 = Don't empty it, just dig another pit
- 99 = Don't know

6.3 How many times did your pit latrine overflow in the past six months?

- _____ # of times
- 99 = Don't know

6.4 How many times did you desludge your pit latrine in the past six months?

- _____ # times
- 99 = Don't know

6.5 How much did you spend in the past six months to empty it?

- _____ JOD
- = 99 Did not pay anything

6.6 Coping strategies:

During the last 6 months, how many times did your household have to employ one of the following strategies to cope with a lack of desludging ?	Frequency: Number of times over the past 6 months: (use numbers 0-30 to answer number of times)
<input type="checkbox"/> 1 Dig another pit	
<input type="checkbox"/> 2 Rely on private desludging trucks	
<input type="checkbox"/> 3 Rely on public desludging trucks	

<input type="checkbox"/> 4 Dispose of solid waste into a river/valley	
<input type="checkbox"/> 5 Connect to the sewer system	
Other, please specify:	

6.7 Sanitation issues have led to discontent within your community.

- 1 Strongly agree
- 2 Agree
- 3 Neutral
- 4 Disagree
- 5 Strongly disagree
- 99 Don't know / Prefer not to answer

6.8 Are you satisfied with the desludging services provided by the municipality in your community?

- 5 Very Satisfied
- 4 Satisfied
- 3 Moderately Satisfied
- 2 Unsatisfied
- 1 Very Unsatisfied
- 99 Don't know

6.9 If unsatisfied OR very unsatisfied, why?

- 1 No desludging services provide by the municipality
- 2 No sewer system
- 3 High cost of desludging
- 98, Other please specify:

7. Community centers/libraries/parks

7.1 How often do you go to the community center?

- 1 Daily
- 2 Twice a week
- 3 Once a week
- 4 Every two weeks
- 5 Once a month
- 6 Once every two months
- 7 Never
- 8 No community center

7.2 How far is the nearest community center in minutes?

_____minutes

- Don't know

7.3 How often do you go to the sports center?

- 1 Daily
- 2 Twice a week
- 3 Once a week
- 4 Every two weeks
- 5 Once a month
- 6 Once every two months
- 7 Never
- 8 No sport center

7.4 How far is the nearest sports center in minutes?

_____minutes

- Don't know

7.5 How often do you go to the library in your community?

- 1 Daily
- 2 Twice a week
- 3 Once a week
- 4 Every two weeks
- 5 Once a month
- 6 Once every two months
- 7 Never
- 8 No library

7.6 How far is the nearest library in minutes?
_____minutes

- Don't know

7.7 How often do you go to the park in your community?

- 1 Daily
- 2 Twice a week
- 3 Once a week
- 4 Every two weeks
- 5 Once a month
- 6 Once every two months
- 7 Never
- 8 No park

7.8 How far is the nearest park from you in minutes?
_____minutes

7.9 Lack of public leisure centers have led to discontent within your community.

- 1 Strongly agree
- 2 Agree
- 3 Neutral
- 4 Disagree
- 5 Strongly disagree
- 99 Don't know

7.10 Coping strategies:

During the last one month, how many times did your household have to employ one of the following strategies to cope with a lack of public leisure spaces ?	Frequency: Number of times during the past one month: (use numbers 0-30 to answer number of times)
<input type="checkbox"/> 1 The family socialises at home	
<input type="checkbox"/> 2 Women socialise inside of the home	
<input type="checkbox"/> 3 Youth roam around the streets	
<input type="checkbox"/> 4 Youth/children use inappropriate/unsafe public spaces as playgrounds	
<input type="checkbox"/> 5 Travel to other areas to visit leisure spaces	
<input type="checkbox"/> 98 Other, please specify:	

7.11 Are you satisfied with the availability and quality of public leisure spaces provided by the municipality in your community?

- 5 Very Satisfied
- 4 Satisfied
- 3 Moderately Satisfied
- 2 Unsatisfied

- 1 Very Unsatisfied
- 99 Don't know

7.12 If unsatisfied OR very unsatisfied, why?

- 1 There are no public leisure spaces
- 2 This is not a priority for the municipality
- 3 Overcrowded leisure spaces
- 4 Not enough leisure equipped spaces
- 5 Public leisure spaces are far
- 6 Poor maintained / leisure space facilities
- 98 Other, please specify:

7.13 How far is the nearest graveyard from your household in minutes?

_____ minutes

7.14 This graveyard has adequate capacity for the local community?

- 5 Strongly Agree
- 4 Agree
- 3 Neutral
- 2 Disagree
- 1 Strongly Disagree

7.15 How far is the nearest market from your household in minutes?

_____ minutes

- 99 Don't know

7.16 This market caters to your household needs

- 5 Strongly Agree
- 4 Agree
- 3 Neutral
- 2 Disagree
- 1 Strongly Disagree
- 99 Don't know

7.17 How far is the nearest slaughterhouse from your household in minutes?

_____ minutes

- 99 Don't know

7.18 How satisfied are you with the state of your local slaughterhouse?

- 5 Very satisfied
- 4 Satisfied
- 3 Neutral
- 2 Unsatisfied
- 1 Very unsatisfied
- 99 Don't know

8. Roads/sidewalks and public illumination

8.1 Are you satisfied with the quality of roads and sidewalks in your community?

- 5 Very Satisfied
- 4 Satisfied
- 3 Moderately Satisfied
- 2 Unsatisfied
- 1 Very Unsatisfied
- 99 Don't know

8.2 If unsatisfied OR very unsatisfied, why?

- 1 No sidewalks

- 2 Poor maintained roads
- 3 incurred additional costs to fix the car
- 4 Narrow roads
- 5 Dangerous roads
- 98 Other, please specify

8.3 Are you satisfied with the way the municipality is maintaining the roads and sidewalks in your community?

- 5 Very Satisfied
- 4 Satisfied
- 3 Moderately Satisfied
- 2 Unsatisfied
- 1 Very Unsatisfied
- 99 Don't know

8.4 If unsatisfied OR very unsatisfied, why?

- 1 No maintenance
- 2 Irregular maintenance
- 3 Poorly maintained
- 98 Other, please specify:

8.5 Are you satisfied with the availability of public lighting in your community?

- 5 Very Satisfied
- 4 Satisfied
- 3 Moderately Satisfied
- 2 Unsatisfied
- 1 Very Unsatisfied
- 99 Don't know

8.6 If unsatisfied OR very unsatisfied, why?

- 1 No public lighting available near roadside
- 2 Poor public lighting
- 3 All public lighting needs maintenance
- 4 Irregular maintenance
- 98 Other, please specify

8.7 Do you feel unsafe in your community at night?

- 1 Always
- 2 Most of the time
- 3 Sometimes
- 4 Rarely
- 5 Never

8.8 If always/most of the time/sometimes, why? Rank first three most important.

- 1 Poor street lighting
- 2 Fear of criminal activity
- 3 Gang presence
- 4 Fear of harassment
- 5 Substance abuse in the streets
- 6 Culturally inappropriate to be in the streets after dark
- 98 Other, please specify _____
- 99 Don't know

8.9 The quality of roads/public illumination have led to discontent within your community.

- 1 Strongly agree
- 2 Agree
- 3 Neutral
- 4 Disagree
- 5 Strongly disagree
- 99 Don't know

8.10 Coping strategies: During the last one month, how many times did your household have to employ one of the following strategies to cope with a lack of public illumination and/poor quality of roads?	Frequency: Number of times during the past one month: (use numbers 0-30 to answer number of times)
<input type="checkbox"/> 1 Did not go out at night due to poor lighting	
<input type="checkbox"/> 2 Did not go out at night / drive at night because of road safety issues (examples: hidden corner, non-functioning traffic lights/signs, narrow two-way streets, no sidewalks)	
<input type="checkbox"/> 3 Used alternative transportation (walking, animals, etc) due to poor quality of roads	
<input type="checkbox"/> 4 Incurred additional costs to fix my car	
<input type="checkbox"/> 5 Avoided public areas	
<input type="checkbox"/> 6 installed additional lighting around your accommodation	
<input type="checkbox"/> 98 Other, please specify:	

9. Community outreach

9.1 How satisfied are you with the way the municipality is dealing with the main issues in your community?

- 5 Very Satisfied
- 4 Satisfied
- 3 Moderately Satisfied
- 2 Unsatisfied
- 1 Very Unsatisfied
- 99 Don't know

9.2 Are you aware of where/how to make a complaint about municipal services?

- 1 Yes 2 No

9.3 Have you ever made a complaint to the municipality?

- 1 Yes 2 No

9.4 If yes, what was it about? (multiple choice)

- 1 waste accumulation / no public waste collection
- 2 presence of pests and wild dogs
- 3 lack of public illumination at night/feeling unsafe at night
- 4 lack of public leisure spaces
- 5 poor quality of roads and sidewalks
- 6 water-related issues
- 98 other, please specify: _____

9.5 (Skip logic) If 9.3 yes, how satisfied were you with the outcome of the complaint?

- 5 Very Satisfied
- 4 Satisfied
- 3 Moderately Satisfied
- 2 Unsatisfied
- 1 Very Unsatisfied

9.6 If unsatisfied OR very unsatisfied, why?

- 1 There is no response from the authorities
- 2 The authorities took a long time to respond
- 3 Did not receive a trustworthy response
- 4 The response was not helpful

98 Other, please specify

9.7 Have you ever participated in a community consultation?

1 Yes 2 No

9.8 (Skip logic) If 9.7 yes, how satisfied were you with the outcome of the consultation?

- 5 Very Satisfied
- 4 Satisfied
- 3 Moderately Satisfied
- 2 Unsatisfied
- 1 Very Unsatisfied

9.9 If unsatisfied OR very unsatisfied, why?

- 1 There is no response from the authorities
- 2 The authorities took a long time to respond
- 3 Did not receive a trustworthy response
- 4 The response was not helpful
- 98 Other, please specify:

9.10 Coping mechanisms:

During the last six months, how many times did your household have to employ one of the following strategies to cope with community- related issues?	Frequency: Number of times during the past six months: (use numbers 0-30 to answer number of times)
<input type="checkbox"/> 1 Complained to the community leader	
<input type="checkbox"/> 2 Complained to the religious leader	
<input type="checkbox"/> 3 Complained to local organizations/NGOs	
<input type="checkbox"/> 4 Complained to the media	
<input type="checkbox"/> 98 Other, please specify:	

9.11 What are the most prioritized sectors for you to have in your community? Rank the most important three priorities (1 most important)

- 1 Housing/Accommodation
- 2 Water
- 3 Livelihoods / Employment
- 4 Waste disposal / Environmental hazards
- 5 Sanitation
- 6 Community centres / libraries / parks
- 7 Roads/sidewalks and public illumination
- 8 Community outreach
- 98 Other (please specify)