TELAFAR AREA-BASED ASSESSMENT

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CRC
Community Resource Centre
مراكز الموارد المجتمعية

REACH
Informing more effective humanitarian action

Telafar Area-Based Assessment

Produced by REACH Initiative with the support of the Community Resource Centre (CRC) initiative, in partnership with the Government of Iraq's Joint Coordination and Monitoring Centre (JCMC) and the international community.

REACH would like to thank INTERSOS and Terre des Hommes for their participation in household-level data collection for the Telafar Area-Based Assessment.

REACH facilitates the development of information tools and products that enhance the capacity of aid actors to make evidence-based decisions in emergency, recovery and development contexts. All REACH activities are conducted through inter-agency aid coordination mechanisms.

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INTRODUCTION

The return and reintegration of displaced populations to their areas of origin (AoO) presents a complex challenge for humanitarian and development actors, particularly in urban settings that encompass multiple affected population groups and have varying degrees of damage, needs, and service provision. Telafar, the second largest city in Ninewa governorate after Mosul, was one of the last remaining territories under control of the so-called Islamic State of Iraq and the Levant (ISIL) and sustained significant damage during military operations by the Government of Iraq (GoI) to retake the city. Nearly all inhabitants had fled from Telafar by the time these operations had commenced in August 2017;[1] as of October 2018, approximately 320,000 returns to Telafar have been recorded by the International Organization for Migration (IOM).[2]

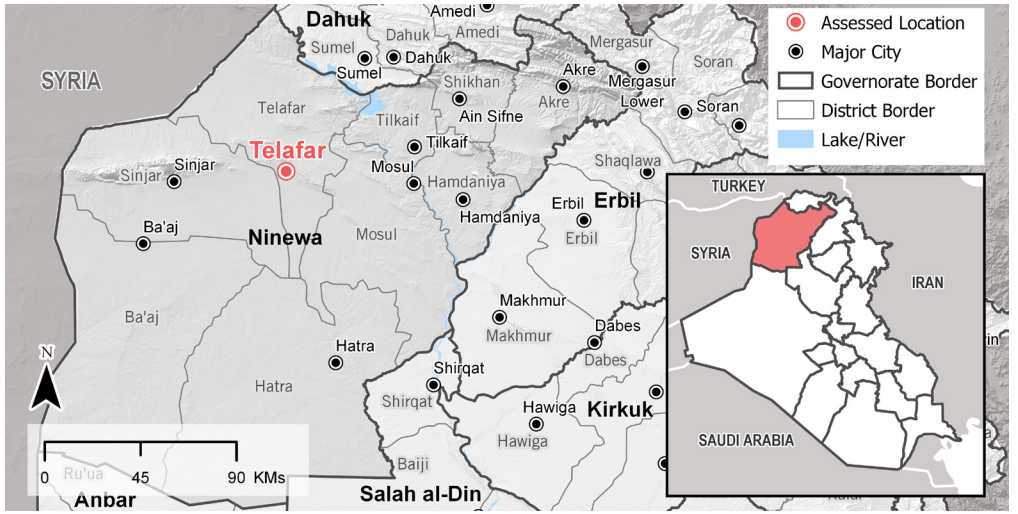
As the context in Telafar transitions from an emergency to one of recovery and stabilization, the priority for the government and the humanitarian community has shifted to facilitating the safe and dignified return of internally displaced persons (IDPs) and the resumption of key public services.

Based on available sources, REACH Initiative (REACH) found that, while macro-level data regarding population flows and levels of damage within Telafar is widely available, there has been a lack of location-specific information outlining the availability of services and specific needs at a more granular level. To address these gaps, REACH and partners launched an area-based assessment (ABA) in Telafar city in August 2018.

This assessment sought to provide a tailored and actionable profile of the city, with a focus on household-level needs and access to public services. It was implemented under the framework of the Community Resource Centre (CRC) initiative, which supports the GoI to facilitate safe, voluntary, non-discriminatory, and sustainable returns and socio-economic reintegration in conflict-affected communities through establishing and reinforcing coordination and service delivery mechanisms. In line with this objective, the Telafar city ABA informs the CRC established by Terre des Hommes (TdH) in al-Muthana neighbourhood, in particular localised response planning and prioritisation activities. Data collection was conducted jointly by INTERSOS, TdH, and REACH. REACH presented preliminary findings during the opening of the TdH CRC on 16 October 2018 in Telafar, highlighting key findings and presenting the information to relevant coordination bodies, the JCMC, the Office of the Mayor, and other actors working in the city such as the United Iraqi Medical Society (UIMS), the International Medical Corps (IMC), the International Organization for Migration (IOM), and INTERSOS. Following the initial presentation, REACH, IOM and TdH conducted a workshop on 7 November 2018, aiming to present and facilitate a more granular understanding of service gaps and needs, and how these vary within a dense urban area, gathering both coordination bodies and actors implementing humanitarian programming in the same space.

These meetings aimed to facilitate evidence-based planning and coordination amongst actors operating at the city level. Moving forward, the complete ABA findings presented in this profile will inform recovery efforts underway in Telafar, with the aim of guiding an inter-sectoral response plan and prioritisation process.

Figure 1. Ninewa Governorate map



Telafar city

METHODOLOGY

The ABA employs a mixed methods approach, composed of qualitative and quantitative components. The qualitative component included: secondary data review (SDR), semi-structured key informant interviews (KIIs) with community leaders, semi-structured KIIs with individuals with specialized knowledge of service provision in the area, community group discussions (CGDs), and participatory mapping sessions in the 24 neighbourhoods that make up the urban area. The quantitative component included a household-level needs assessment in all neighbourhoods of Telafar city. All data was collected between 1 June and 2 September 2018.

Table 1. Number of KIIs conducted, sessions held, or households interviewed, per assessment component

Interviewees	Number Surveyed / sessions
Community Leader KIs:	**19 KIIs**
Specialised Service Provision KIs	**25 KIIs**
Participatory Mapping	**24 sessions**
Community Group Discussions	**10 sessions**
Household Survey	**400 households**

Scoping and SDR: Before the start of primary data collection, REACH gathered and reviewed existing data and literature sources about the situation in Telafar, which was used to build contextual knowledge to inform the data collection plan and identify information gaps, and was later used to triangulate findings from the ABA primary data. In addition, REACH conducted several scoping missions to the area in order to meet with community leaders, conduct enumerator training, and pilot assessment tools.

Community Leader KIIs: REACH conducted a total of 19 community leader KIIs. In the governance structure of Iraq, individuals known as mukhtars represent the most local level of government representation. These individuals are appointed by local councils and serve as a primary intermediary between residents and government service providers within their area of responsibility. In their position as community representatives, mukhtars are well placed to provide general information on the demographics, needs and access to services within their areas of responsibility. All interviews were conducted between 3-11 July 2018.

Specialised Service Provision KIIs: REACH conducted a total of 25 KIIs with individuals with specialised knowledge of service provision – education, healthcare, water, electricity and solid waste removal – within Telafar city. These individuals were identified through community leaders, and other INGOs and UN agencies active in the area. All interviews were conducted between 12 July and 16 August 2018.

CGDs and Participatory Mapping: REACH conducted ten CGDs to triangulate the information obtained from community leaders, aiming to get additional inputs to get a more comprehensive picture from the community perspective. In addition, REACH conducted participatory mapping exercises in each of the 24 neighborhoods to develop a general infrastructure map of Telafar city. Relevant sections of satellite imagery were presented to the participants with a list of infrastructure to facilitate discussion regarding the location, condition, and the overall functionality of key infrastructure.

Household (HH) level Needs Assessment Survey: REACH conducted a household survey in all 24 neighbourhoods of Telafar city together with INTERSOS and TdH. GPS points were distributed throughout the residential sections of the area of assessment, being drawn proportionate to population density figures collected, with the chosen sample yielding a 95% confidence level with a 5% margin of error, collecting information

from 400 households, composed of 2,463 individuals. Findings based on the responses of a subset of the sample population may have a lower confidence level and wider margin of error. For example, questions asked only to households with school-aged children, or only to households who reported needing access to healthcare services, may yield results with a lower precision. REACH and partners recorded interview responses digitally using KoBoToolbox.[3] REACH conducted a one-day training on the data collection tool and methodology, followed by a one-day pilot session, to ensure the collection of high quality data uniformly across the enumerator team. Overall coordination of joint data collection and data cleaning was led by REACH. All data was collected between 14 August and 2 September 2018. The dataset for this assessment is available on the REACH Resource Centre.

Table 2. Number of KIIs conducted, per service

Specialised Service Provision KIs	Number of KIIs conducted
Education	4
Healthcare	8
Basic services: water	4
Basic services: electricity	3
Basic services: solid waste and wastewater	6

Challenges and limitations

- Accurate population data for most areas of Iraq is limited in terms of overall population and more granular figures such as by population group (e.g. IDP, non-displaced, returnee) or at neighbourhood level. Therefore, to facilitate the development of a sampling framework, REACH used information regarding population numbers, population groups present, and distribution of population groups provided by KIIs conducted in the qualitative portion of the assessment to fill information gaps.
- In order to conduct the participatory mapping sessions, and due to the limited contact network in Telafar city, REACH contacted the community leader of each neighbourhood and asked them to gather between 4 to 6 residents. Sessions were held in the community leader's office or house due to limited options for a functional and accessible space in the city.
- Given the limitations of qualitative data collection, the information collected through KIIs and CGDs is indicative only and is not generalisable to the entire population.
- The household-level survey was administered to a single respondent per household answering on behalf of the household. Therefore, questions regarding sub-groups of the household or regarding individual members were all answered by the head of household or an adult household representative. The series of questions regarding individual family members included immediate family members as well as any dependents that the family was responsible for, including elderly or disabled individuals and unaccompanied or separated children.

BACKGROUND AND CONTEXT

Recent conflict and geopolitical history

Located in Ninewa governorate 63 kilometres west of Mosul, Telafar has repeatedly experienced conflict since the US-led invasion of Iraq in 2003.[4] The city retained strategic importance as the so-called Islamic State of Iraq and the Levant (ISIL) gained prominence in 2014.[5] Its location near a highway connecting Mosul to the city of Raqqa, Syria facilitated mobility through the ISIL-held territories[6] and constituted an evacuation route out of Mosul into Syria.[7] ISIL gained control of Telafar city in June 2014, using it as a strategic base until the GoI retook control in August 2017. One of the last ISIL controlled areas in Iraq, Telafar was declared retaken by Iraqi Prime Minister Haider al-Abadi on 31 August 2017 following a 12-day offensive.[8]

The security situation in Telafar city in the aftermath of ISIL occupation has stabilised, with large areas destroyed but internal roads cleared from debris. There is a large presence of Iraqi Security Forces (ISF), Popular Mobilization Units (PMU), and federal police that have checkpoints on the outskirts and centrally in the city. Explosive hazards such as improvised explosive devices (IEDs) and unexploded ordinances (UXOs) remain a pressing security threat in areas that have not been fully cleared.

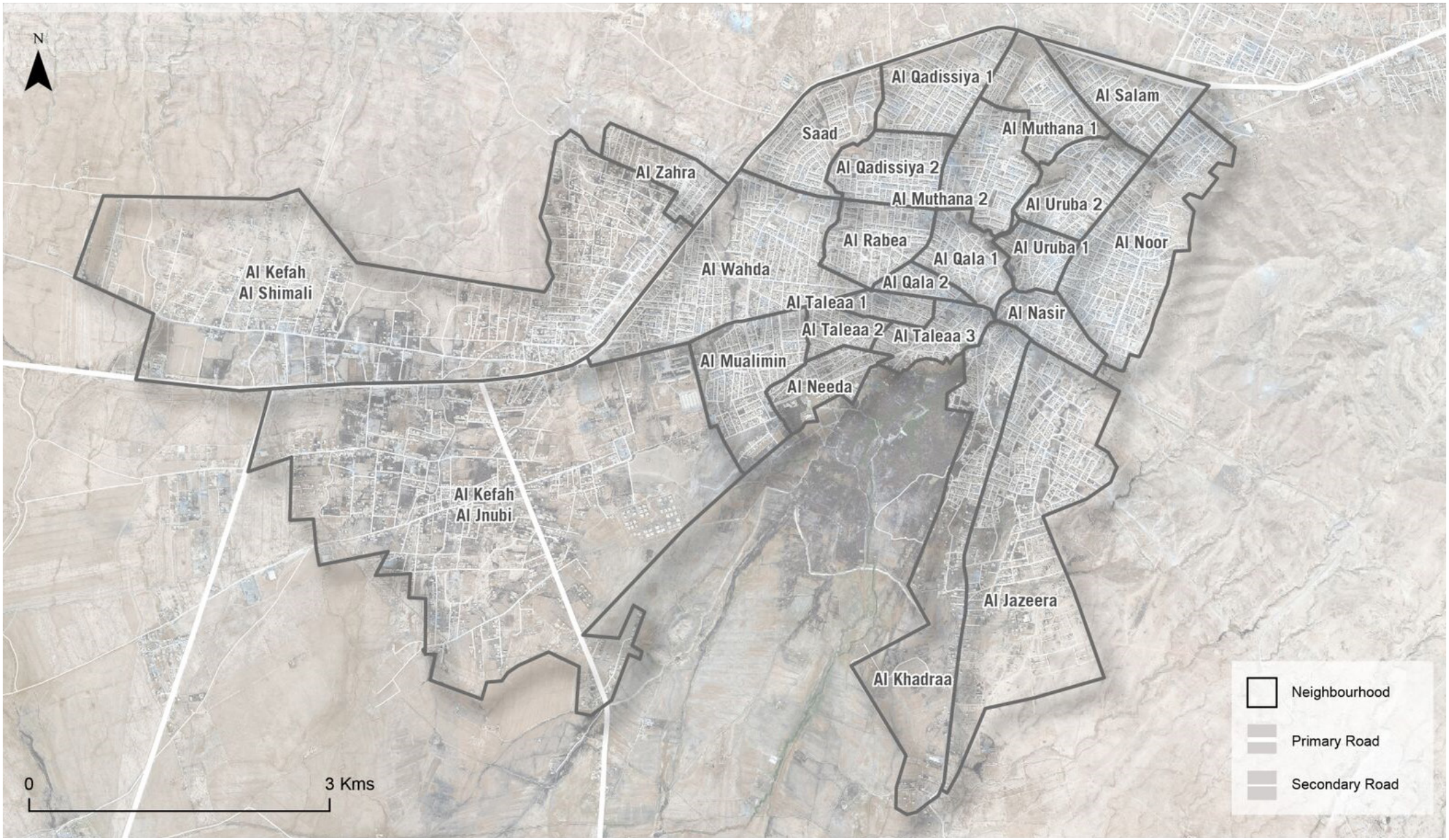
Before the ISIL occupation period, the two primary sources of employment for Telafar residents were the government and agricultural sectors. In January 2018, the World Bank estimated US$ 655 million worth of damages to the agricultural sector in Ninewa governorate, impeding residents from cultivating land. Moreover, an estimated US$ 39.7 million in damages to municipal assets, with over 70% of basic infrastructure in cities like Mosul and Telafar being destroyed.[9]

Population profile

Telafar has a highly diverse ethno-religious composition. The town is home to (Sunni and Shia) Arabs, Kurds, and Turkmen. Policies implemented since the 1970s opened the door for sectarian differences between Sunni and Shia Turkmen in Telafar, with the town becoming polarized and used as an important hub for al-Qaeda by 2005.[10]

Before the ISIL occupation period, Telafar was mainly populated by Sunni Turkmen, and its population was estimated to be between 200,000 and 220,000 inhabitants.[11,12] However, little information is available regarding current population figure estimates, demographics, or density of residents across inhabited areas of the city, especially for those who have returned.[13]

Figure 2. Telafar city map of neighbourhoods



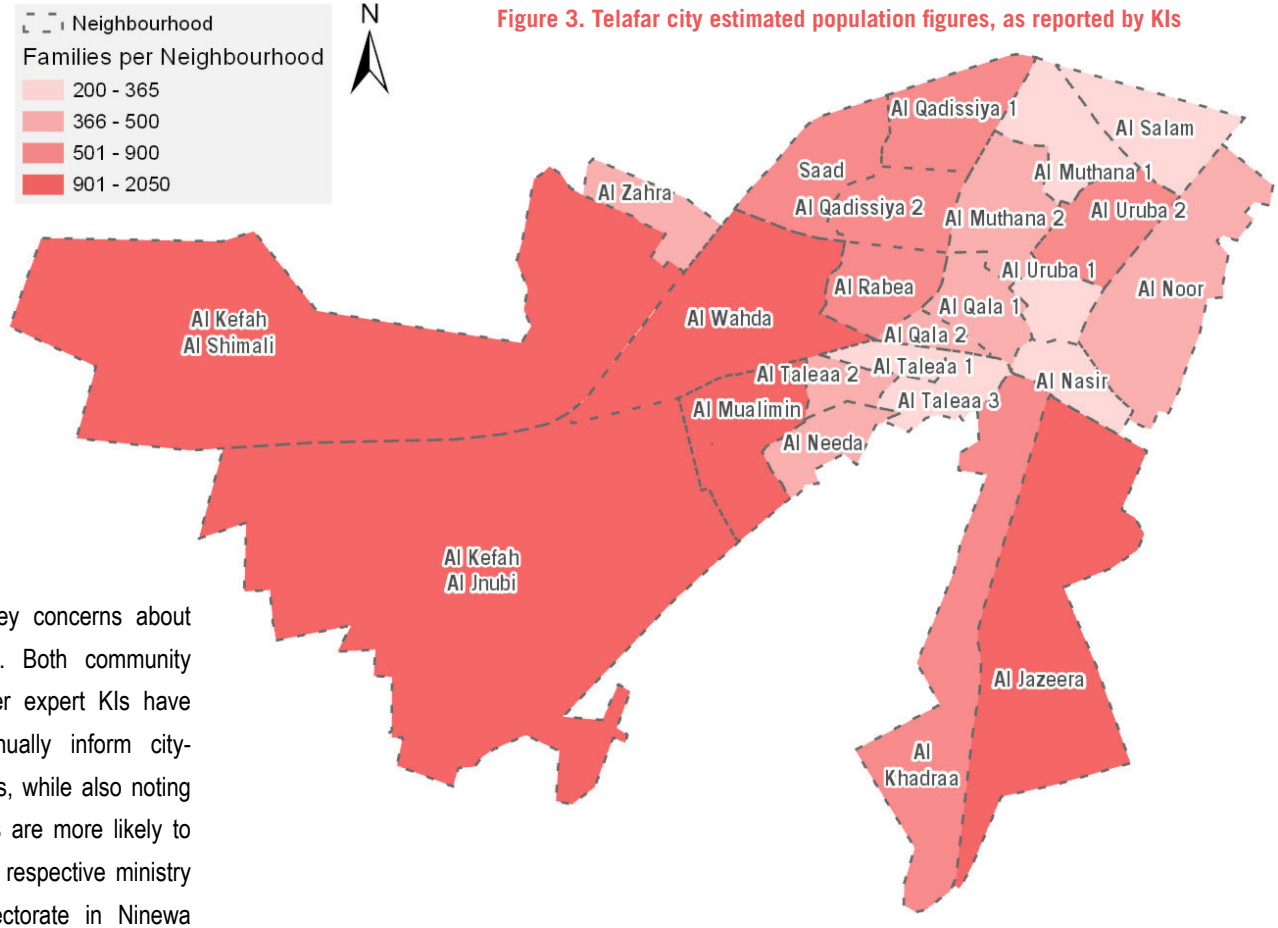
Governance structure and geographic composition of Telafar

Iraq's post-2003 governance structure is broken down by governorate, district, and sub-district. Telafar is a city and a district within northern Ninewa governorate, bordering Syria to the west, and Turkey to the north. Telafar city is located 63 kilometres west of Mosul, 52 kilometres east of Sinjar, and 400 kilometres northeast of Baghdad. Its urban area is comprised of approximately 27 square kilometres.

Telafar city is divided into 24 neighbourhoods, as defined by participants during the ABA mapping exercises and by community leaders. At the most local level of governance, each neighbourhood has one mukhtar – community leader – who is responsible for keeping and maintaining records of the households living within their neighbourhood, assigning households to Public Distribution System (PDS)[14] agents and addressing community concerns to the relevant authorities.

While mukhtars more often raise basic concerns related to access to services (i.e. electricity, water and solid waste collection), they can also liaise with service providers to convey concerns about healthcare and education. Both community leaders and subject matter expert KIs have reported that they continually inform city-level officials of their needs, while also noting that subject matter experts are more likely to raise the concerns to their respective ministry or the corresponding directorate in Ninewa Governorate.

Figure 3. Telafar city estimated population figures, as reported by KIs



Telafar city

ASSESSMENT FINDINGS

Demographics

The demographic profile of households in Telafar was established through a statistically representative assessment of the city. An understanding of the human composition of the city, including household structure and demographics, can highlight specific areas of vulnerability within the city.

Sixty-eight per cent (68%) of interviews were conducted with the head of household (HoH), and the remainder of interviews (32%) were with another adult household member (18 years or above). The most common demographic profile of a HoH was a male (88%), married (87%), and between the ages of 30-59 (77%). Female-headed households (12%), however, were mostly widowed, with an age range from 40 to 49 years old (40%), followed by 60 or more years (26%). Out of the assessed individuals, 51% were male and 49% were female. Eleven per cent (11%) of adult females were reportedly pregnant or lactating.

The overall age demographics of Telafar city point to a high dependency ratio, with the proportion of working-age adults (18-59 years) representing less than half of the total population. The largest adult age group was between 18 and 29 years, representing 21% of the total sample. Overall, children (under 18 years) comprised 50% of the sample.

Half of all adult individuals in Telafar were reported to be single, and 46% married. Only 2% were reported to be divorced, and 2% widowed.

Nearly all households (98%) were identified as returnees, having reported previously displacing from Telafar city since 2014. The remaining households were found to be IDPs (1%), or fell into an "other" (1%) category, as they moved to Telafar for a reason other than conflict. The average length of displacement among returnee households was three years and four months. Additionally, 6% of households were hosting other returnees in their home, which, according to the community leader KIIs, was due to the destruction of buildings in Telafar city during the ISIL occupation period. The average duration of return among those returnee households was six months and two weeks.[15]

Twelve per cent (12%) of households reported having at least one member with a disability, either physical or mental, representing 2% of assessed individuals. Among these individuals, 77% had disabilities that were reported to affect their ability to perform daily living activities. Nineteen per cent (19%) had disabilities reportedly related to an explosive hazard such as mines, UXOs, or IEDs.

Figure 4. Demographic pyramid of Telafar city

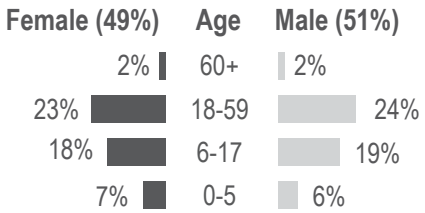


Figure 5. Civil status of adult individuals

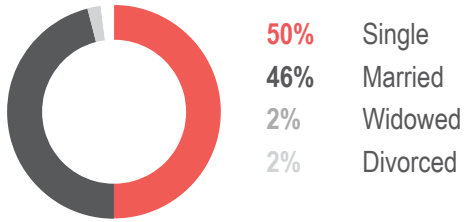
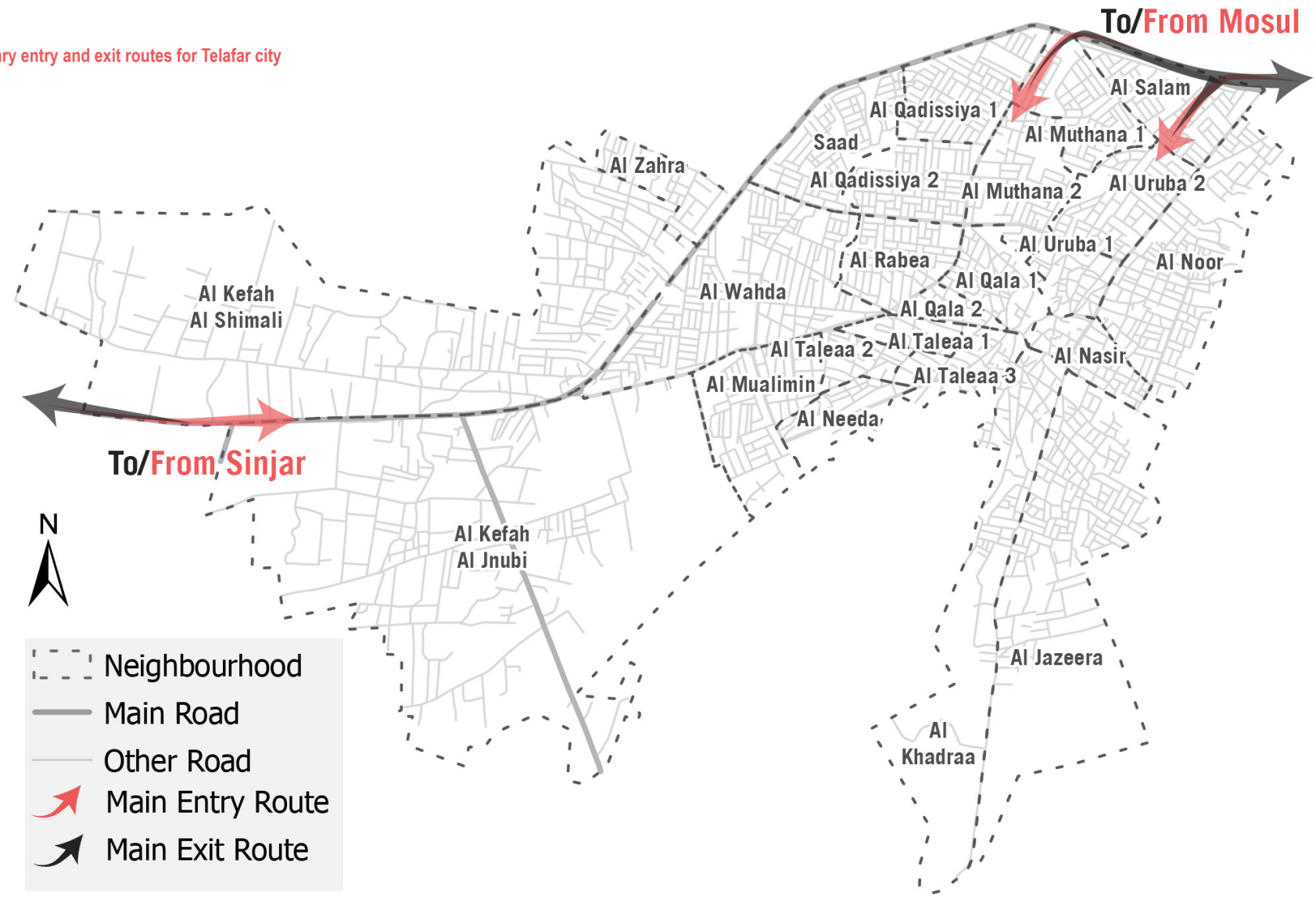


Figure 6. Primary entry and exit routes for Telafar city



Livelihoods, income and expenditure

All components of the assessment revealed a reported lack of livelihood opportunities in Telafar city. Results from the survey found that only one-third of adult household members were reportedly earning an income from employment in the 30 days preceding the assessment, and on average, worked 17 out of the last 30 days. Employment among women was particularly low, with only 8% of women compared to 57% of men reportedly earning an income in the 30 days preceding data collection. Among this 8%, most women were between 18 to 29 years of age (35%) or 30 to 39 years (22%).

These findings indicate that only a limited proportion of the adult population in Telafar city are working, but those who are largely appear to be working close to full time. This is supported by the primary type of employment among working adults: **43% of individuals earning an income were reportedly employed in government jobs.** Community leaders reported increased competition for the jobs available, as many

Table 3. Availability of jobs in Telafar, compared to the pre-ISIL occupation period by sectors*

Sector	Current situation
Public sector	Iraq's economy is dominated by the state-run petroleum sector. KIs reported considerable overstaffing in the public sector. Because government employment guarantees a pension and fixed compensation, competition is high to obtain employment from the state.[16] Countrywide, the Government of Iraq stopped hiring new employees, but KIs reported that governmental employees (e.g. teachers and doctors) are getting paid on time.
Agriculture	Telafar consists of mostly flat, desert-like terrain where, before the ISIL occupation period, farmers used to cultivate wheat, and other crops like potatoes, tomatoes, grapes, and cucumbers. KIs reported damage to agricultural equipment, damage to the water network, and the presence of explosive hazards on farm lands as barriers to resuming work in the agricultural sector.
Industries (cement factory)	There was a functioning cement factory in Sinjar which was reportedly employing around 1,000 residents from Telafar. It was completely destroyed during the ISIL occupation period.
Industries (concrete blocks)	Concrete block factories in Telafar were reportedly employing around 100 residents from the city, but now are operating at a reduced level, employing only around five residents.
Small businesses	KIs reported that Telafar residents used to work in small shops (e.g. food markets). Most of the shops were closed during the ISIL occupation period, but are now beginning to reopen. However, due to limited financial means, residents are not reopening all previous shops, and are reportedly uncertain about the degree of business they will receive from residents as a consequence of unemployment.

** As reported by community leader KIs and CGD participants. Severity level based on a 3-point scale; a score was assigned based on the category into which the majority of information fell.*

- ***High severity:*** *very limited jobs available, and no real livelihood opportunities exist.*
- ***Medium severity:*** *some jobs are available; livelihoods may not bring sufficient income to meets needs, and coping mechanisms are used.*
- ***Low severity:*** *jobs are generally available. Low unemployment.*

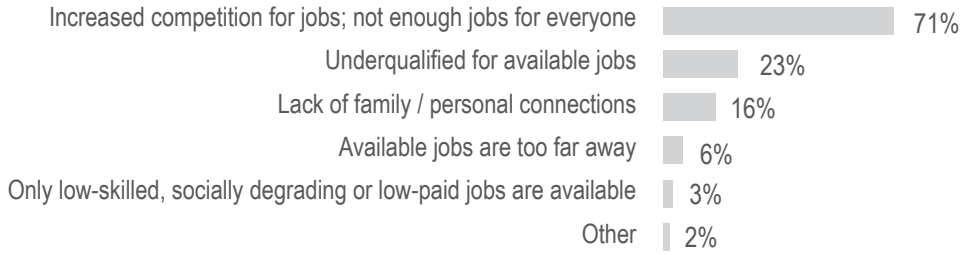
sectors had not resumed following the retaking of Telafar (see Table 3). Although the public sector was reported to be a key source of employment, KIs mentioned that the government stopped hiring new employees during the ISIL occupation period and has not yet resumed new hiring.

Among unemployed adults, 20% were reported to be actively seeking work in Telafar. However, when disaggregated by sex, 50% of men were actively seeking work compared to only 5% of women despite the significantly higher unemployment rate among adult women. The primary obstacle reported by those actively seeking work was that there were not enough jobs for everyone (71%), followed by feeling underqualified for available jobs (23%) and a lack of family or personal connections (16%) – from which arises the concept of *wasta* in Arabic, defined as using one's influence to get hired.

Results from the household survey revealed a median household income of 400,000 IQD (335.5 USD) during the 30 days preceding data collection, for an average household size of 10 members. However, median household expenditure in the 30 days preceding data collection was 563,500 IQD (473 USD), which represents a monthly deficit of 41% – or 153,500 IQD – compared to income. A large share of monthly household expenditure was reportedly for shelter maintenance, with a median figure of 200,000 IQD (168 USD).

Just over two thirds of households reported some level of debt, with only 31% of households in Telafar reporting not having any debt. Households in debt reported spending a median of 200,000 IQD (168 USD) in debt payment in the 30 days preceding data collection, and a total accrued debt of 2,500,000 IQD (2,098 USD). Moreover, the primary reason for taking on debt was for basic household expenditures including repairs and maintenance – 71% of those with debt – followed by food (14%), and healthcare (7%), indicating that current income levels are insufficient to meet the needs of returnee households in Telafar. Given that the city is overwhelmingly comprised of returnee households looking to rebuild their lives after a period of displacement, shelter maintenance was found to constitute a significant share of monthly expenditures and was the top reason for debt.

Figure 7. Reported obstacles faced among those actively seeking work*



** More than one answer could be selected. Therefore, overall percentage exceeds 100%.*

Figure 8. Household-reported level of debt

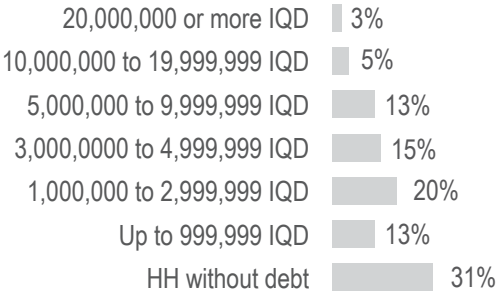


Table 4. Household-reported monthly expenditures in Telafar (median).

Expenditure category	Amount (IQD)	Amount (USD)[17]
Electricity	30,000 IQD	25 USD
Healthcare (includes medicine)	45,000 IQD	38 USD
Education	No expenditures	No expenditures
Food	250,000 IQD	209.5 USD
Water	No expenditures	No expenditures
Transportation	20,000 IQD	17 USD
NFI	25,000 IQD	21 USD
Shelter maintenance*	200,000 IQD	168 USD

**Out of those households who reported expenditures in shelter maintenance.*

All education KIs reported that teachers in Telafar city are being paid on time, with only three out of 20 community leaders reporting delays in the payment of salaries. Community leaders reported that all governmental employees are receiving their salaries on time. In some cases, recent graduates of universities are giving lectures at schools on a voluntary basis to fill staffing gaps, without receiving salaries or being contracted by the Ministry of Education.

During one of the CGDs it was reported that not all teachers have returned to Telafar, and some are travelling from Mosul on a daily basis to teach at the schools. While these teachers are providing an essential temporary service, their ability to consistently access Telafar is sometimes impeded by issues such as budgetary restrictions or lack of governmental security clearance, leading to gaps in teaching staff.

Despite limited livelihood opportunities and high rates of adult unemployment within Telafar city, community leaders reported that residents were not travelling outside the city to seek daily work. While Telafar is situated between Sinjar and Mosul cities, it is unclear whether job seekers traveled between the cities to seek daily employment prior to the conflict, and further research could be conducted to explore the labour market dynamics of the region.

Food security

Results from the qualitative components of the assessment revealed that consumer markets were largely functional in Telafar city, with food items being widely available in most neighbourhoods at the time of data collection. Overall, 96% of assessed households within Telafar had an "acceptable" Food Consumption Score (FCS), and 1% of households scored "poor".[18]

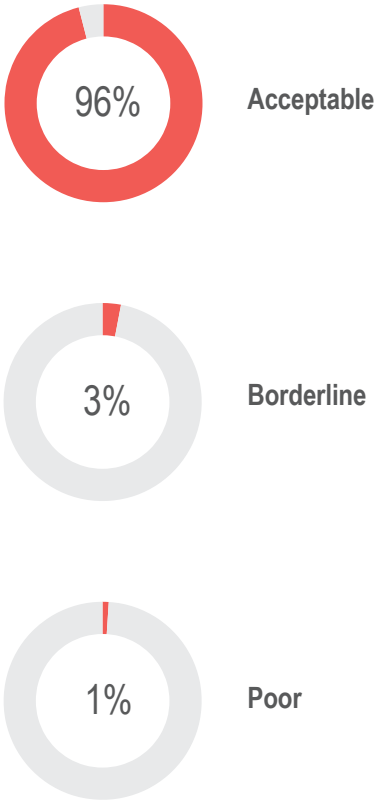
While household food consumption was found to be generally acceptable, food purchases represented an average of 47% of households' monthly expenditures. Three quarters of assessed households reported that their own cash was the main source for accessing food in the past seven days, followed by purchasing food on credit (11%). Notably 10% of households relied on the Public Distribution System (PDS) as primary source for accessing food in the past seven days. Run by the Iraq Ministry of Trade, the PDS is a mechanism by which the government provides subsidised food and fuel to all Iraqi citizens through a ration card system distributed in different cities. Notably, the distribution system has been affected by the country's economic downturn and conflict during the Iraq War[19] as well as the ISIL occupation period. Results from the household survey revealed that 78% of households were able to access the PDS in the three months prior to data collection. Vegetable oil (98%), sugar (96%), wheat flour (94%), and rice (87%) were reportedly the primary items received. Less than 1% of households reported having received fuel, and no households received powdered milk in the most recent PDS distribution.[20]

Figure 9. Food expenditure over total expenditure

Families receive PDS rations through one of the country's local branches tied to the Ministry of Trade distribution warehouses, and they are responsible for applying for a PDS transfer in the event of moving residence. Community leader KIs noted that households who were unable to access the PDS were the ones who only recently returned or moved to Telafar and were therefore not included on the distribution lists for the city.

Households were found to engage in coping strategies to maintain acceptable levels of food consumption. Shifting toward less expensive food items five or more days a week was the main reported coping strategy (29%). Seven per cent (7%) of households reported asking friends or relatives for assistance. Related to food intake, 12% of households reduced the number of daily meals and 11% of households limited portions for adults to prioritise food for children. Finally, 16% of households reported consuming less food during meals.

Figure 10. Food Consumption Score in Telafar city



FUNCTIONALITY AND ACCESS TO SERVICES

Overview

In areas of Iraq formerly under the control of ISIL, the resumption of basic services has been cited as a primary consideration for displaced individuals in determining whether to return to their areas of origin. **Overall, functionality of basic services, in Telafar including municipal services, healthcare, and education, were found to be below the pre-ISIL occupation period.**

In the context of Telafar city, several entities were identified as having operations to improve access to basic services, either by repairing and replacing infrastructure or providing interim provision of services. As outlined by all respondent types, these services included garbage collection at a reduced scale by INGOs and cash-for-work activities, but most opportunities were temporary and inconsistent.

While these steps have helped improved access to services for some residents, there were still a variety of identified barriers to accessing basic services, as outlined in the subsequent sections.

Healthcare

Key Findings

- **Overall, functionality of the healthcare system is below pre-ISIL levels**, and the cost and availability of services and medication were the primary barriers to accessing healthcare in Telafar.
- According to the household survey, 22% of residents needed to access health services or treatment (including medicine) in the three months prior to data collection. Out of those, 17% were not able to access the needed health services or services.

According to KIs with specialist knowledge in health care services (health KIs), the Telafar General Hospital is the primary facility providing medical, health, and therapeutic services to western areas of Ninewa Governorate, in particular the towns of Telafar, Sinjar and Sinuni, receiving 500 to 600 patients every day. Its functionality is needed to reduce the referrals and patients going to the hospital in Mosul city. Running at full capacity the 205-bed General Hospital in Telafar can support an estimated 500,000 patients a year.

Since the retaking of Telafar city, the hospital has gone through waves of maintenance periods and has slowly reopened different units.[21] When the cleaning work started, hospital staff evaluated the equipment lost at about 80%. In particular, the extensive structural damage included hallways, roofs, windows, and doors and serious damage to hospital generators, the central cooling system, and the burning of the hospital storage room and drug storehouses.

Hospital equipment was also greatly affected, as all dialysis machines were looted and other key equipment were damaged. As a result of the lack of equipment and materials, the hospital does not have a functioning operating room. Health KIs reported that some patients need to travel to other cities in search for the right medical equipment to other cities, especially Mosul, Dohuk, Erbil, and Baghdad.

In recent months, the hospital re-opened the emergency care room,[22] followed by the re-opening of the maternity care unit for natural childbirth,[23] and by January 2018, all sections and units of the hospital had been re-opened, including consultations and an emergency room for operations that can accommodate caesarean sections, supporting the maternity care unit in more complicated cases. Nevertheless, as the operating theatre is not functional, health KIs reported residents who require surgery have to travel out of the city, primarily to to Mosul or Dohuk hospitals. The hospital reportedly does not have

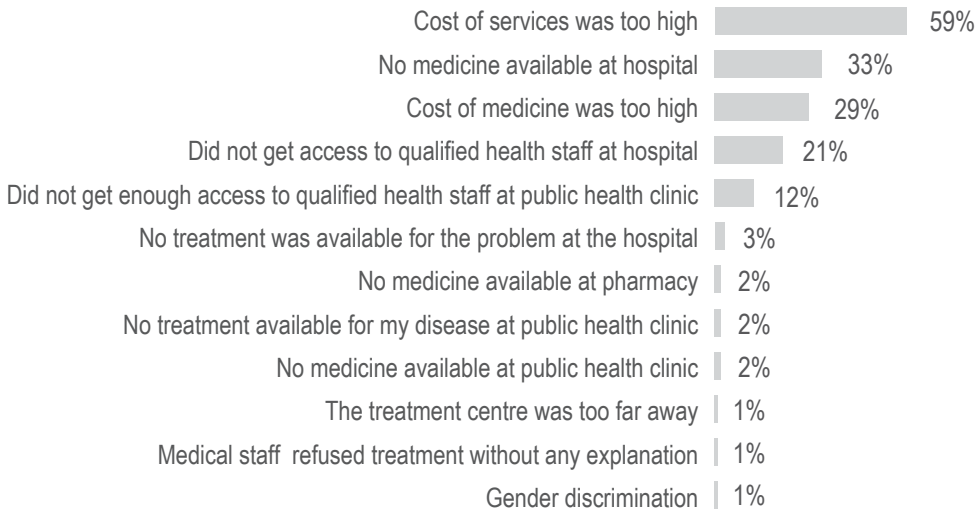
General Hospital in Telafar city

enough staff, particularly specialist doctors, and therefore cannot handle trauma cases. Finally, community leaders reported some smaller healthcare centres have not resumed operations as there are no medical staff or equipment to re-open them.

Nineteen per cent (19%) of residents reported no issues accessing healthcare or treatment in the three months prior to data collection. While costs of health services was the most frequently cited difficulty, the cost and availability of medicines was also a key concern. Before the ISIL occupation period, the hospital was able to give medications for free or reduced prices. However, community leaders reported that only basic medicines were available at the General Hospital, including painkillers, antipyretics, or cough syrup for children. As a result, residents were required to purchase other types of medicines from a private pharmacy. Private pharmacies have most general drugs available, but do not have medicines for specific courses of treatment, such as for cancer or heart disease. To purchase these specialized medicines, most residents travel to Mosul or Baghdad, while some residents from al-Kifah al-Jnubi neighbourhood traveled to private pharmacies located on the highway connecting Sinjar and Mosul. Community leaders also identified informal pharmacies run by doctors or nurses, but operating without a license.

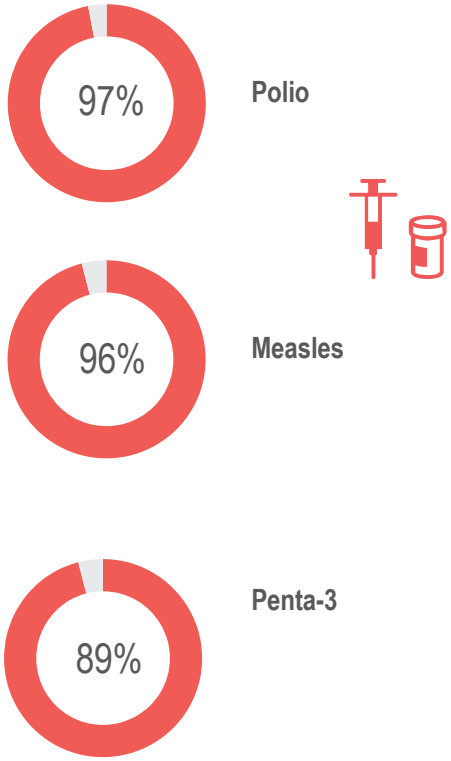
Finally, the vast majority of children had received polio, measles, and Penta 3 vaccinations – 97%, 96%, and 89%, respectively.

Figure 11. Most frequently reported difficulties in accessing healthcare services*

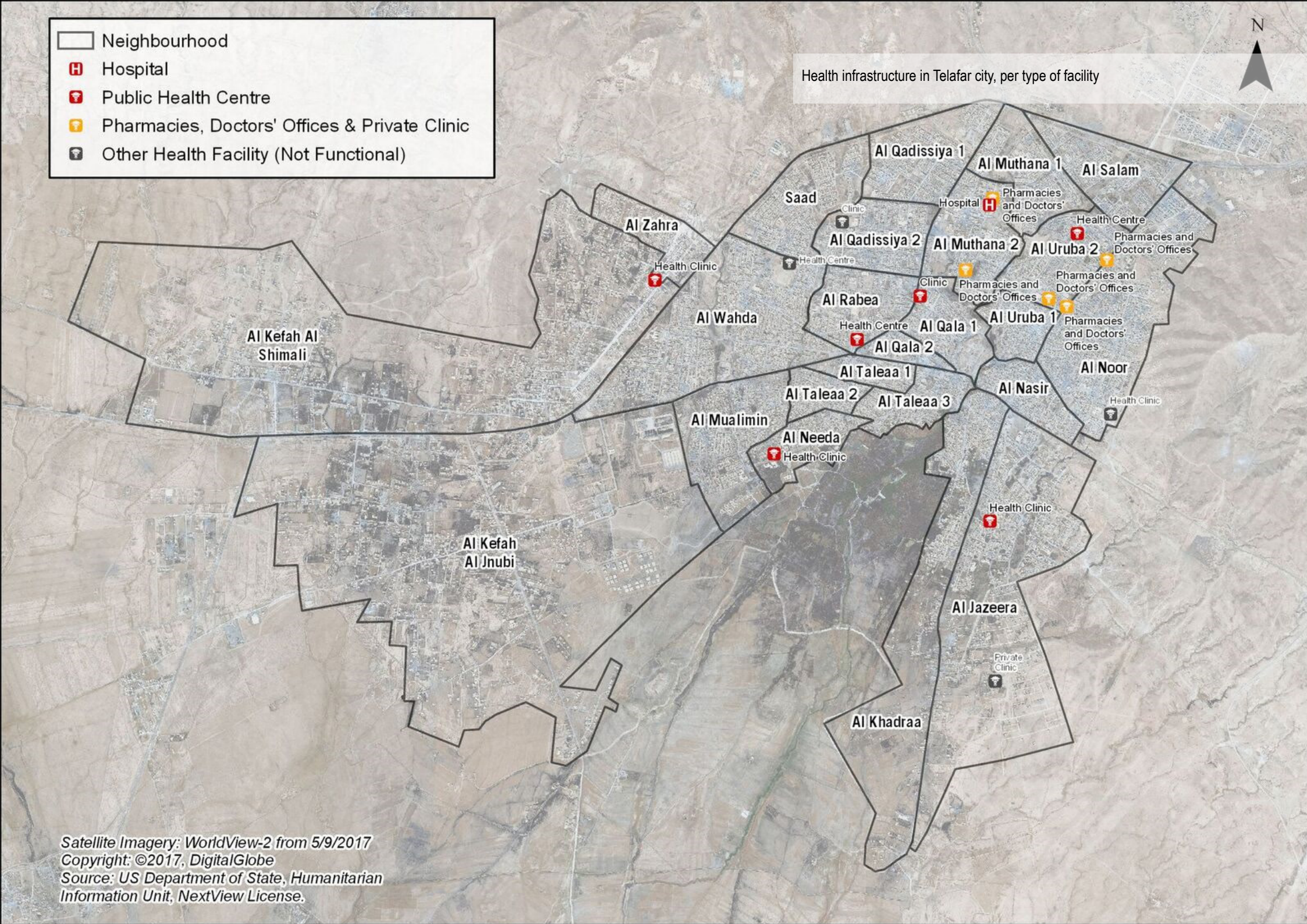


** More than one answer could be selected. Therefore, overall percentage exceeds 100%.*

Figure 12. Proportion of children* vaccinated against polio, measles and penta-3.



** Among children under five years of age for polio and measles; among children under two years of age for penta-3*


Neighbourhood
Hospital
Public Health Centre
Pharmacies, Doctors' Offices & Private Clinic
Other Health Facility (Not Functional)
N
Health infrastructure in Telafar city, per type of facility
Al Qadissiya 1
Al Muthana 1
Al Salam
Saad
Clinic
Hospital
Pharmacies and Doctors' Offices
Health Centre
Al Zahra
Al Qadissiya 2
Al Muthana 2
Al Uruba 2
Pharmacies and Doctors' Offices
Health Clinic
Health Centre
Clinic
Pharmacies and Doctors' Offices
Pharmacies and Doctors' Offices
Al Rabea
Al Wahda
Al Uruba 1
Pharmacies and Doctors' Offices
Health Centre
Al Qala 1
Al Kefah Al Shimali
Al Qala 2
Al Taleaa 1
Al Noor
Al Taleaa 2
Al Taleaa 3
Al Nasir
Health Clinic
Al Mualimin
Al Needa
Health Clinic
Health Clinic
Al Kefah Al Jnubi
Al Jazeera
Private Clinic
Al Khadraa
Satellite Imagery: WorldView-2 from 5/9/2017
Copyright: ©2017, DigitalGlobe
Source: US Department of State, Humanitarian Information Unit, NextView License.

Education

Key Findings

- Results from the HH survey revealed a **significant portion of students have dropped out or missed school due to displacement.**
- The **functionality of the educational system was reported to be below pre-ISIL levels** due to a number of factors: damage to facilities; shortages of teachers, books, furniture, and support materials; overcrowding; and long distances for students to travel to access school facilities.
- Through the community mapping sessions, REACH identified a total of **42 functioning school facilities in Telafar city.**

School functionality and infrastructure

According to four KIs with specialist knowledge of education (education KIs), most schools were functional, but some were partially damaged, including collapsed areas and broken windows, doors, and fences that need to be repaired. Community leaders also reported some fire damage, and that some teachers and families have paid from their own personal funds to repair or replace windows, doors, and desks. Structural damages also impede the provision of services within educational facilities: it was reported that most of the schools do not have water due to broken or blocked pipes.

During one of the CGDs, participants reported that electrical equipment, such as switches and wires, have been stolen but some schools are being repaired by the Directorate of Education through a local contractor, or by NGOs. Students still go to schools, but the lack of basic services – water and electricity – cause further issues during class time. Education KIs reported that children are still attending schools in damaged buildings due to lack of other options. CGD participants reported that the main building of the Directorate of Education was also burned during the ISIL occupation but it has been repaired by the Government.

Education KIs, community leaders, and CGD participants highlighted that shortages in books, blackboards, and furniture are common. In some schools up to four students are reportedly sharing the same desk. In addition, the lack of materials has reportedly led to teachers providing lessions without any support materials (e.g. maps for geography courses). However, the problem with books was also present before; education KIs reported that only half of the students had books before the ISIL occupation.

All education KIs reported that teachers are being paid on time, with only three out of 20 community leaders reporting delays in the payment of salaries.

In order to avoid the closing of more educational facilities, some residents – usually recent graduates of universities – are giving lectures at the schools on a voluntary basis to fill staffing gaps, without receiving salaries or being contracted by the Ministry of Education. During one of the CGDs it was reported that not all teachers have returned to Telafar, and some are traveling from Mosul to teach. However, eight of 20 community leaders reported that there are enough teachers in their neighbourhoods (al-Sada, al-Rabea, al-Qadissiya 1, al-Mualiameen, al-Wahda 1, al-Taleaa 3, al-Khadraa and al-Nidaa).

Classroom overcrowding

At the time of data collection the problem of overcrowded classrooms was one of the most reported issues in Telafar by education KIs, which was worsened by the fact that most schools do not have enough teachers to meet the demand of students. Overcrowding was a particular concern for mixed-sex schools. On average, schools

operating in shifts register about 600 students per shift, and about 50 to 60 students per classroom, as reported by CGD participants. Community leader KIs reported up to 70 students in one classroom for schools receiving school-aged children from adjacent neighbourhoods. This overcrowding is largely a result of damages sustained to a number of school buildings, resulting in fewer schools operating. Notably, it was reported that before ISIL occupation, half of the primary school-aged children in Telafar attended Al-Raya school in al-Jazeera neighbourhood, which had capacity for about 1,600 students. CGD participants reported that prior to the ISIL occupation, Al-Raya was well-staffed and did not face overcrowding, with 30 students per classroom. However, Al-Raya school was damaged during the occupation, and can no longer support the high caseload of children, requiring families to seek out schools in nearby neighborhoods.

Particularly in areas where schools are completely damaged, students must travel to other neighbourhoods to access functional facilities and in some cases, students have to walk fairly long distances. The longest distance was reported in al-Jazeera, with some students travelling to school in an area called Kuder Ilias about 5 kilometres away. CGD participants reported this situation to be common for accessing middle and high schools in some neighbourhoods with students travelling 3 to 4 kilometres. Only a few neighbourhoods (e.g. al-Qala 1) have primary, middle, and high school facilities within the neighbourhood boundaries. In addition to safety-related concerns for the children, the long distances to school have led to an economic burden; it was reported that families who need to send their children to schools outside the neighbourhood of residence will face a cost of 30,000 to 100,000 IQD (25 to 84 USD) per month for transportation, which is a barrier to educational access for many households.

Enrollment figures

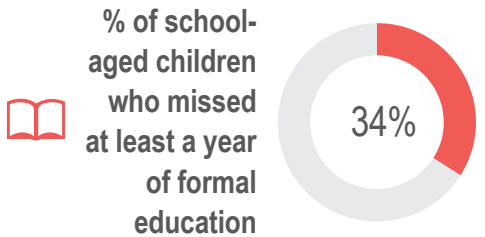
According to the household survey, 19% of school-aged children (6-17 years old) in Telafar were not attending formal education during the school year.[24] Thirty-four per cent (34%) of children in Telafar missed at least one year of formal education since the ISIL occupation, with a mean of almost two years and a maximum of four.

One of the community leader KIs reported that school-aged children are being put in classes based on their age for administrative convenience, even if they have not studied to that point. As a result, children who have not missed any schooling and children who have missed up to four years during the ISIL occupation could be placed in the same classrooms.

Thirty-six per cent (36%) of the school-aged children who are currently not attending formal education have also previously never attended school.[25] Most frequently reported reasons by for never attending formal education were recent or continuous displacement (36%), because the child is disabled, unhealthy, or traumatized (30%), and because the household could not afford to pay for tuition and costs (15%).[26]

Of those age-school children who are currently not attending school, but previously did attend school, 79% were reported to have dropped out for good, while re-enrollment in formal education was a possibility for 21%.[27] Only 6% of non-enrolled students were reported to have earned an income in the past 30 days.[25]

Figure 13. Children who missed formal education



[24] Although findings are based on a subset of the sample population, findings are still representative to a 95% confidence level and 5% margin of error.
[25] Findings are based on a subset of the sample population and representative to a 95% confidence level and 8% margin of error.
[26] Findings for 'school-aged children who never attended formal education' are based on a small subset of the sample population (62 school-aged children) and are therefore indicative only.
[27] Findings are based on a subset of the sample popoulation and are representative to a 95% confidence level and 10% margin of error.

Regarding students who missed years of school since January 2014, the highest percentage dropped out in June 2014 (50%), followed by May 2014 (14%) and July 2014 (9%).[27] In total, these three months represent 73% of school dropouts in Telafar since January 2014 onwards (see figure below), while 2015, 2016, and 2017 represent 3%, 8%, and 5%, respectively, of dropouts from school.

Community leader KIs reported that children are not going to kindergarten facilities, and during one CGD it was reported that there is only a private kindergarten located in al-Taleaa, which costs 15,000 IQD (13 USD) per month and another kindergarten in al-Wahda that is being repaired and expected to open next year.

Figure 14. Timing of school dropouts for school-aged children in Telafar city

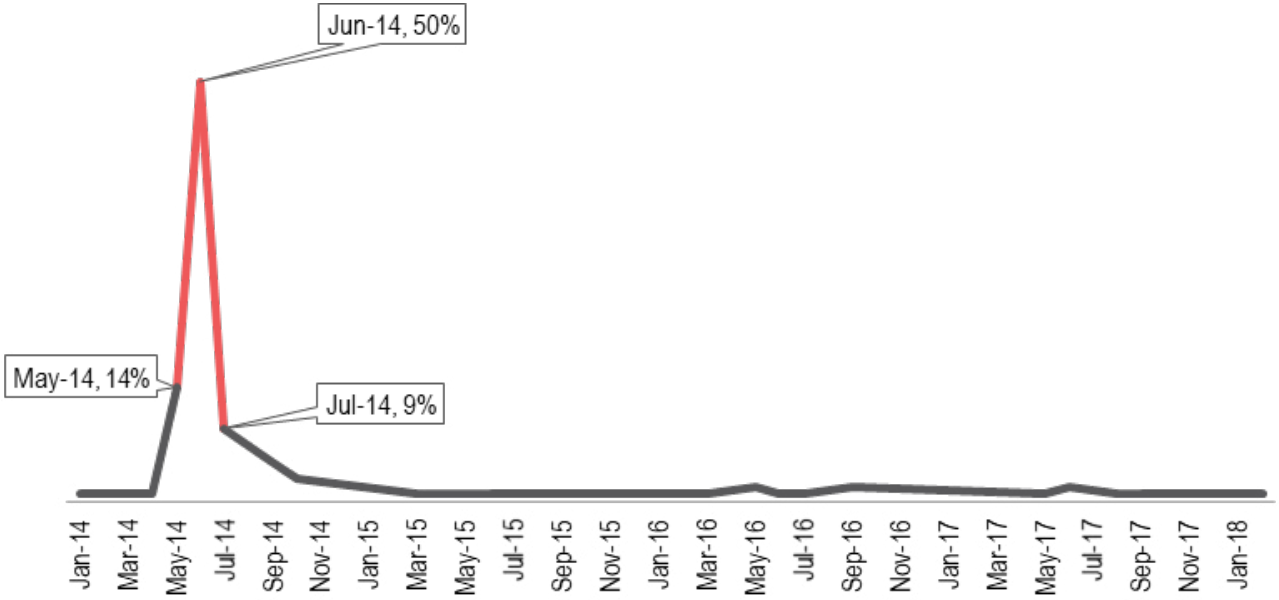
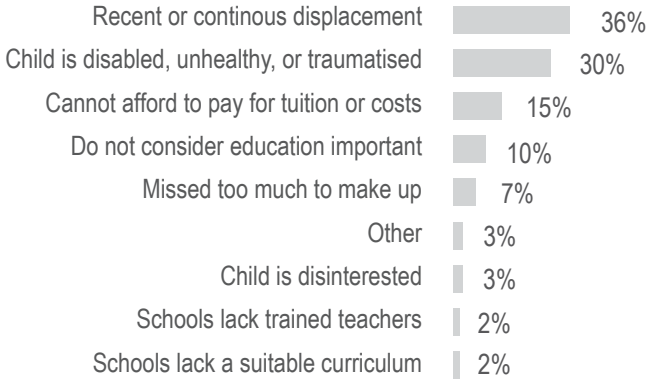
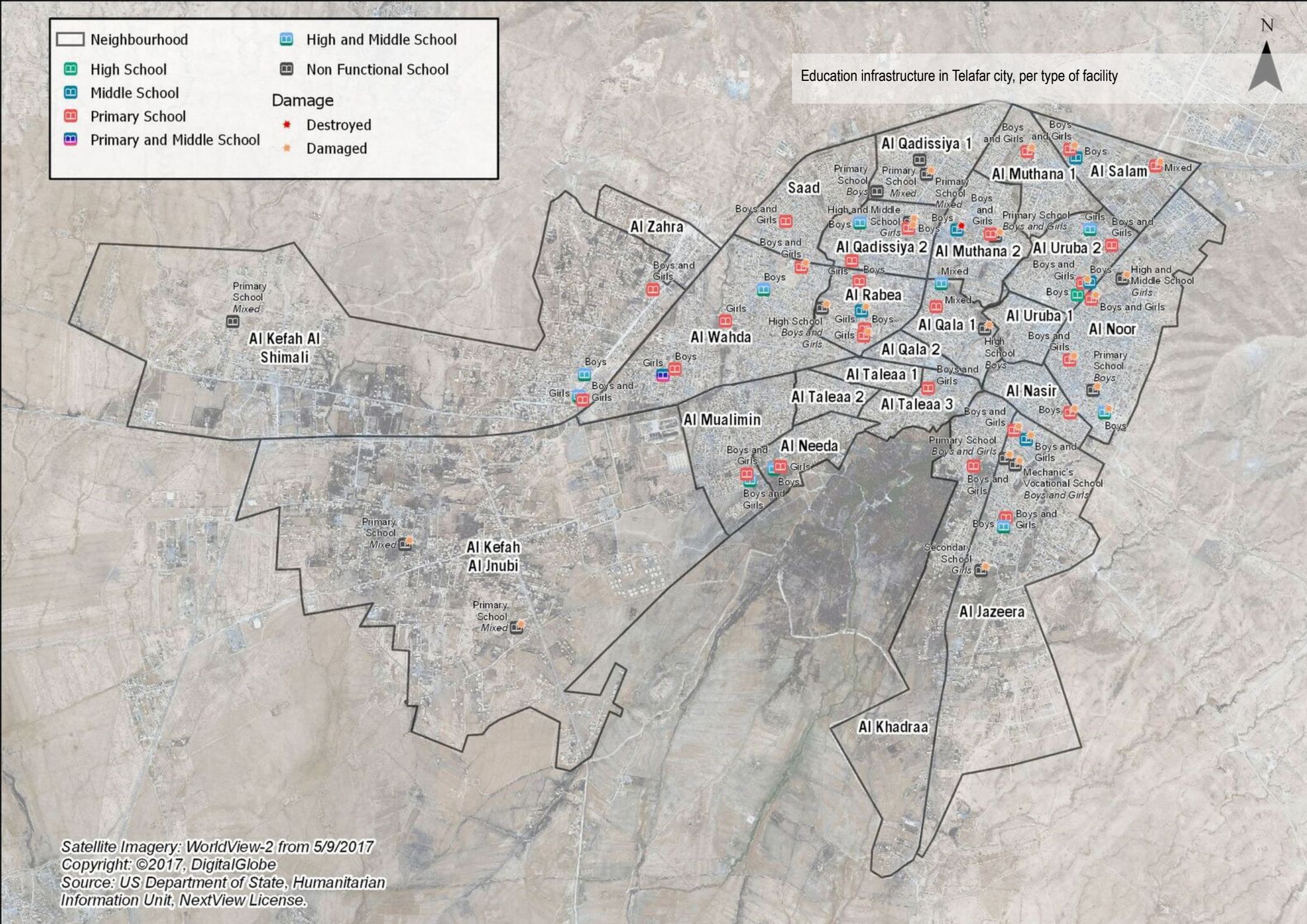


Figure 15. Reported reasons for not attending school [29]



[28] Findings are based on a subset of the sample population and are representative to a 95% confidence level and 7% margin or error.

[29] Findings for 'school-aged children who never attended formal education' are based on a small subset of the sample population (62 school-aged children) and are therefore indicative only.


Neighbourhood
High School
Middle School
Primary School
Primary and Middle School
High and Middle School
Non Functional School
Damage
Destroyed
Damaged
N
Education infrastructure in Telafar city, per type of facility
Al Qadissiya 1
Al Muthana 1
Al Salam
Saad
Al Zahra
Al Qadissiya 2
Al Muthana 2
Al Uruba 2
Al Rabea
Al Qala 1
Al Uruba 1
Al Noor
Al Wahda
Al Qala 2
Al Taleaa 1
Al Taleaa 2
Al Taleaa 3
Al Nasir
Al Mualimin
Al Needa
Al Kefah Al Shimali
Al Kefah Al Jnubi
Al Jazeera
Al Khadraa
Primary School Mixed
Boys and Girls
Boys
Girls
High and Middle School Girls
High School Boys and Girls
Primary School Boys and Girls
Primary School Boys
Mechanic's Vocational School Boys and Girls
Secondary School Girls
Satellite Imagery: WorldView-2 from 5/9/2017
Copyright: ©2017, DigitalGlobe
Source: US Department of State, Humanitarian Information Unit, NextView License.

ACCESS TO MUNICIPAL SERVICES

Water

Key Findings

- The majority of Telafar residents rely on **the pipe network as their primary source of water.** According to the four KIs with specialist knowledge of water (water KIs), Telafar receives around 7-8 hours of water every day from al-Aski Mosul, but water is then directed to different neighbourhoods, with each receiving water roughly once every 7 to 10 days.
- **Neither the water network supply nor water pressure are adequate, and supply issues are exacerbated during summer months.**
- Additional sources of water in Telafar city include trucking services and wells, especially for households living in old houses, .

Piped water is reportedly being brought to the city from the Tigris river through al-Aski Mosul Water Treatment Plant (WTP) and then to a pumping station located in Abu Mariya before it reaches the city. Water KIs reported that **Telafar receives around 7-8 hours of water every day** from al-Aski Mosul WTP. However, the water is directed to different neighbourhoods, with each receiving water roughly once every 7-10 days, to be stored in water tanks.

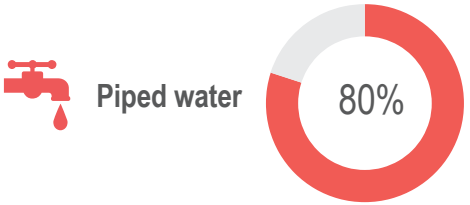
Al-Aski, located close to Mosul dam, began operating in the early 1980s and has a total capacity of 66,000 m^3/day. Even prior to the ISIL occupation period, studies indicated that al-Aski Mosul WTP units were not effective in removing impurities and are merely acting as pass-through units.[30] This has worsened in recent years by conflict and poor maintenance.[31]

Despite the interventions of the government, the United Nations (UN), and different NGOs to maintain the water network,[32] water KIs reported that **much of the regional water infrastructure was damaged during operations to retake the city of Mosul, including pumping stations, thus compromising the ability of the network to deliver water efficiently to both Telafar and Mosul cities.**

As a result, community leaders reported that some neighbourhoods (e.g. al-Nasir and al-Rabea) were receiving water with an inconsistent frequency, while others (e.g. al-Kefah al-Shimali and al-Taleaa 2) are receiving water only in areas of the neighbourhood within municipality limits. Severe damage to the water network impedes access to water through the municipal network in al-Kefah al-Jnubi. These gaps in water service persist despite community leader and water KIs reporting partial repair efforts by the government, focused on the rehabilitation of pipes.

According to the household-level needs assessment, piped water was the primary source of drinking water during the last 7 days (80%), followed by water trucking (10%), and purchased from shop (8%). Only 1% reported using a dug well as the primary source of drinking water. Household survey findings corroborate that the water network has been repaired, as piped water was by far the main source for accessing water in Telafar, though concerns persist about households' reliance on a reportedly inconsistent water source. Water KIs identified as main barriers to repair the water infrastructure to be the lack of specialized machines and the lack of employees hired by the municipality, although they acknowledged that this was due to budgetary constraints.

Figure 16. Primary source of drinking water

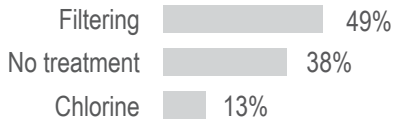


Forty-one per cent (41%) of households reported that the water from their main source is not clean enough for drinking. Among those households, 49% cited filtering as a water treatment method, followed by 13% who added chlorine before drinking the water. Notably, 38% of households who reported unclean drinking water did not treat the water before consumption, which potentionally points to a lack of resources or ability to treat water at the household level. As a comparison, among households who reported a clean drinking source, 84% did not treat the water before consumption. Water KIs corroborated households' concerns with water quality, citing the insufficient treatment capacity and lack of maintenance at al-Aski Mosul WTP.

During community group discussions, residents discussed addressing their concerns about the water quality by purchasing water filtration systems for approximately 110,000 IQD (92.5 USD) and pay an additional 2,000 to 5,000 IQD every two weeks to change the filter. Other residents are buying chlorine tablets on a regular basis for 250 to 1,500 IQD (0.21 to 1 USD). Also, some residents are purchasing bottled drinking water directly – 20 litres for 500 IQD (0.5 USD) – or from trucks –1,300 litres for 5,000 IQD (4 USD). However, families who cannot manage these costs are directly drinking water from the network, which was, reportedly, cleaner before the ISIL occupation period. As a result, three of the four water KIs reported that residents who drink water without filtering are getting sick, including diarrhoea and kidney infections, among other conditions. The most vulnerable are children and people with existing medical conditions.

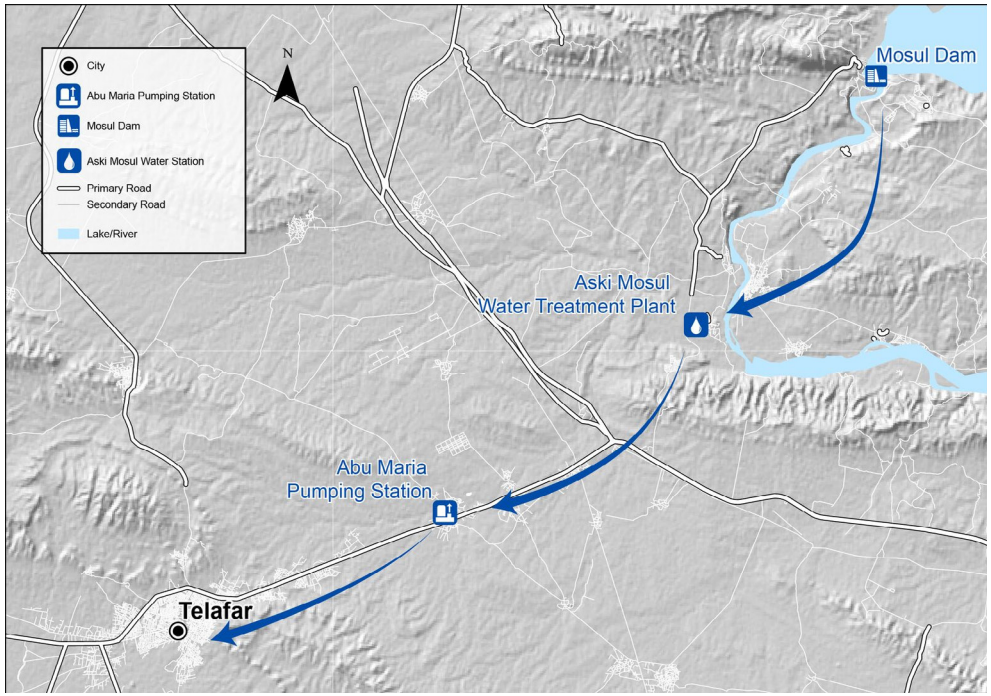
Furthermore, there are no sewage networks, pumping stations, or wastewater treatment plants in Telafar city. The only existing system consists of a few lines of stormwater networks and stormwater pumping stations.[33]

Figure 17. Primary household-level water treatment method



** Among 41% of households who reported water is not clean*

Figure 18. Water route (municipal network), from Mosul Dam to Telafar city



Electricity

Key Findings

- **Power from the public network is supplied for an average of 7-8 hours per day** in most neighbourhoods, with no set schedule during the day. Only informal houses built in areas outside the limits of the municipality do not have access to the public power grid.
- Community generator power complements the electricity supplied by the public grid. While most residents pay to access community generators, poorer families without financial means were being provided electricity for free.
- **According to community leader KIs, there are no remaining issues from the offensive in relation to damage to the wires, transformers and poles in 12 out of 19 neighbourhoods.**

Community leaders and KIs with specialist knowledge of electricity (electricity KIs) reported most neighbourhoods have access to both the public grid and community generators. **Power from the public grid is supplied for an average of 7 to 8 hours per day in most neighbourhoods, with no set schedule during the day.** Generator power complements the electricity supplied by the public grid: when the government power is off, the generators turn on.

Community leader KIs reported only informal houses built in areas outside the limits of the municipality do not have access to the public grid. According to the household survey, including both the public grid and generators, only one household had no access to electricity.

A key concern raised during community group discussions was regarding the instability of the supply of electricity, due to damages and only partial repairs. According to community leader KIs, there are no remaining issues from the offensive in relation to damage to the wires, transformers and poles in 12 out of 19 neighbourhoods. However, CGD participants reported that gaps in access to either the public grid or community generators were especially pronounced in areas where the wires or transformers have been damaged during the ISIL occupation period. Notably, residents flagged that in some areas, up to 200 houses were connected to the same transformer.

To address the frequent but irregular power outages from the public grid, residents are relying are communal and/or private generators. Community generators are widely available in most neighbourhoods and most families can cover the cost of 10,000 IQD (8.5 USD) per ampere. Poor families were reportedly provided with electricity from the generator for free, from the operator. Private generators are much less common, due to the high costs to purchase, run, and maintain.

According to the three electricity KIs, **electricity supply fluctuates depending on the season. It is available for fewer hours during summer and winter, due to a higher consumption and demand, as more households require air conditioning or electric heating.**

Solid waste

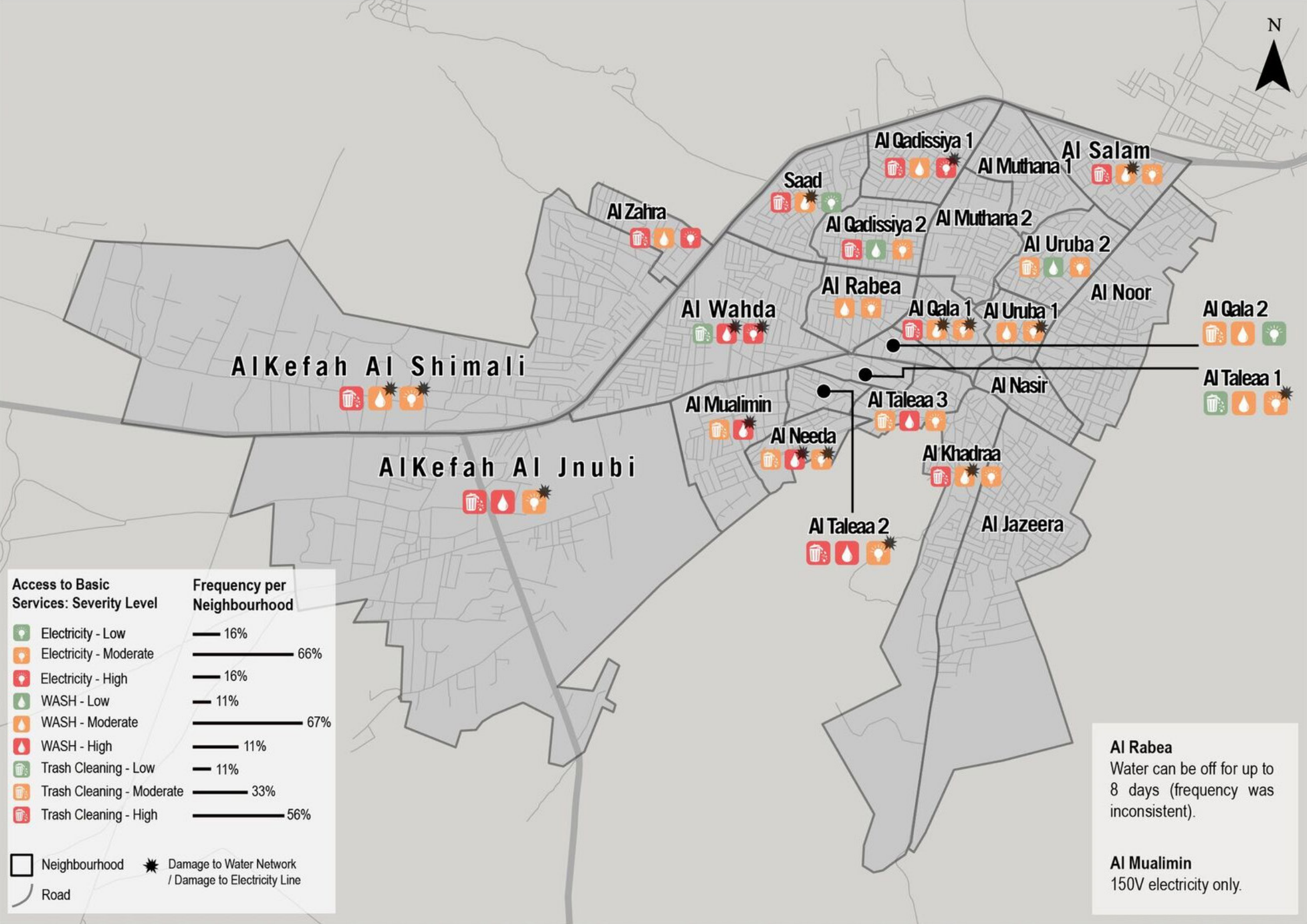
Key Findings

- **Solid waste was identified by all components of the assessment to be below the pre-ISIL occupation period,** particularly with regards to the frequency of waste collection.
- In the pre-ISIL period, collection occurred daily in most neighbourhoods; currently the only taily waste collection occurs along the main street of the city.
- **Neighbourhoods located beyond the municipality do not have access to waste collection services.**

Overall, the municipal solid waste collection functionality was identified by all components of the assessment to be below the pre-ISIL occupation period. Although solid waste collection is provided by the municipality in most neighbourhoods, the frequency of collection is insufficient. **While solid waste removal occurred daily during the pre-ISIL period, this service is currently provided daily along the main street only, and weekly in most residential neighbourhoods.** Furthermore, neighbourhoods located beyond the municipality do not have access to any waste collection services, which is reportedly due to a lack of financial resources. Community leader KIs reported that waste trucks were among the machinery and equipment that were either taken or destroyed during ISIL occupation. This lack of waste collection capacity was also reported to have affected livelihood opportunities in the city, as individuals previously employed in waste collection are unable to resume their previous jobs.

To avoid the accumulation of garbage in smaller streets and neighbourhoods outside municipal limits, residents have taken an active role in disposing of waste. In many neighbourhoods, residents are collectively bringing waste to the main road or to open areas outside of the city. However, residents in some neighbourhoods are reportedly disposing of waste in the streets and in nearby destroyed or abandoned houses.

Community leader KIs reported that the accumulation of waste in some areas within the city attracts flies and other insects. 'Habat Baghdad' (sand flies) is a common disease-carrying parasite often found in areas with poor sanitation conditions. The bite of a sand fly starts with a slow-growing wart, leaving a very evident scar, which community leader KIs reported as a growing problem.[34]


N
Al Qadissiya 1
Al Muthana 1
Al Salam
Saad
Al Zahra
Al Qadissiya 2
Al Muthana 2
Al Uruba 2
Al Rabea
Al Noor
Al Wahda
Al Qala 1
Al Uruba 1
Al Qala 2
AlKefah Al Shimali
Al Nasir
Al Taleaa 1
Al Mualimin
Al Taleaa 3
Al Needa
Al Khadraa
AlKefah Al Jnubi
Al Taleaa 2
Al Jazeera
Access to Basic Services: Severity Level
Frequency per Neighbourhood
Electricity - Low 16%
Electricity - Moderate 66%
Electricity - High 16%
WASH - Low 11%
WASH - Moderate 67%
WASH - High 11%
Trash Cleaning - Low 11%
Trash Cleaning - Moderate 33%
Trash Cleaning - High 56%
Neighbourhood
Damage to Water Network / Damage to Electricity Line
Road
Al Rabea
Water can be off for up to 8 days (frequency was inconsistent).
Al Mualimin
150V electricity only.

PROTECTION

Civil documentation

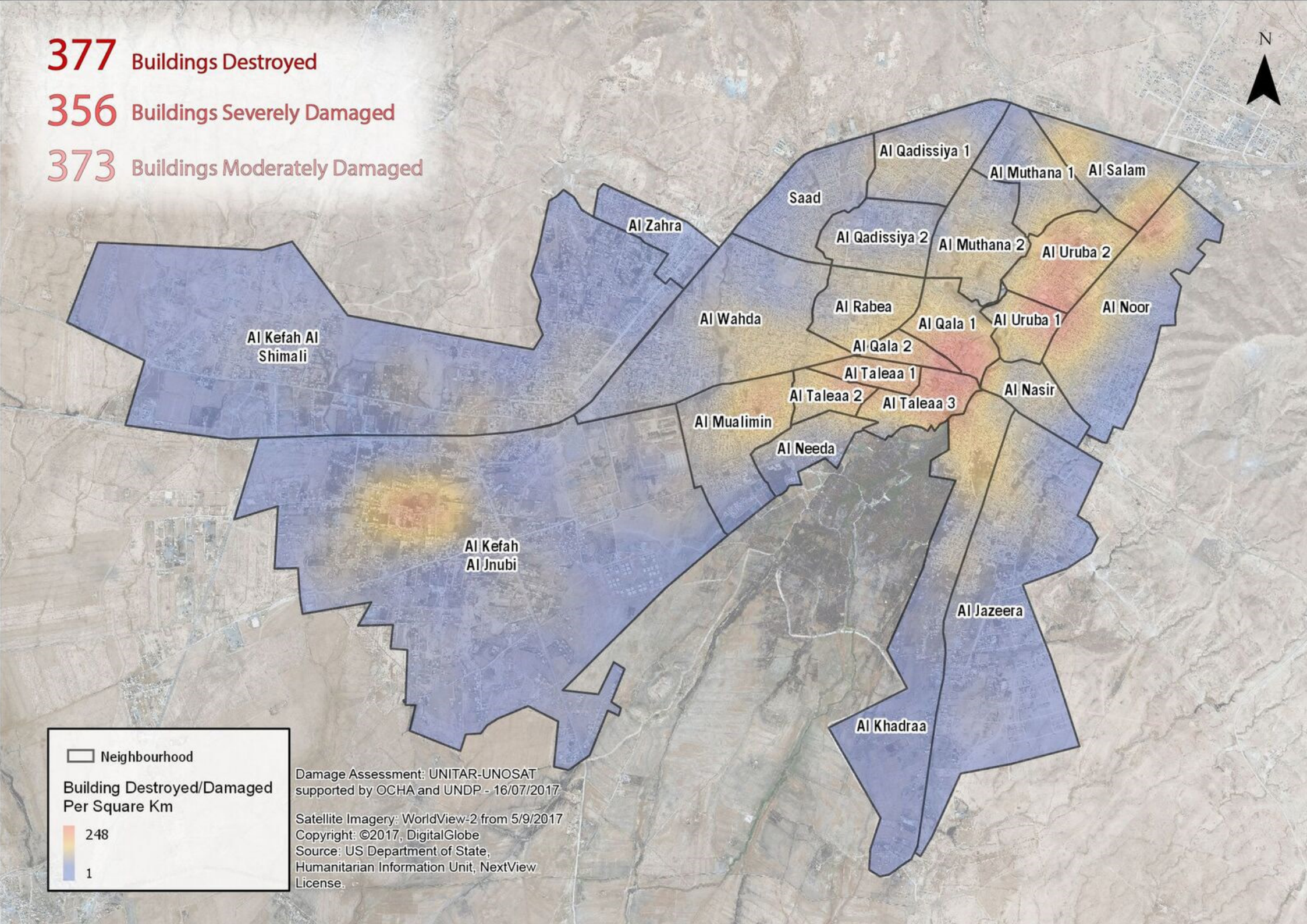
With regards to civil documentation, **9% of households reported having at least one member with any civil document lost, damaged, or expired.** The three most commonly reported missing documents were citizenship certificates, national ID cards, and PDS ration cards. Civil documentation registered during the period of ISIL occupation are generally not accepted by Iraqi authorities, leading to barriers to access to a variety of services. For individual and families missing documentation, this registration provides legal evidence of the birth which is necessary for proof of age, school enrollment, and access to an identity card among other things, which highlights the importance of this process. **Displacement was cited as the reason for lost, damaged or expired documents for the vast majority of individuals who were missing documentation (98%)**.

The household survey also found that 5% of children under five years of age had not had their birth registered with the authorities. Although birth registration figures have considerably improved in recent decades despite multiple waves of conflict, the level of registration is low compared to other countries.[35]

Housing, land, and property

Sixteen per cent (16%) of households reported having lost or stolen land or property since Telafar was retaken. Of those, 52% had filed a compensation or restitution claim for damages to the land but the vast majority reported that their request was still unresolved. Nearly half were still waiting for news and an additional roughly 40% reported that their request was currently under consideration at the courts. The remaining roughly 10% of requests were denied.

According to the damage assessment conducted by UNITAR's Operational Satellite Applications Programme (UNOSAT) in late 2017, there were a total of 1,106 buildings damaged in Telafar. Most of the damage was located in al-Uruba 1, al-Uruba 2, al-Qala 1, al-Qala 2, al Taleaa 1, al-Taleaa 3 and al-Noor, with up to 248 buildings destroyed or damaged per square kilometre. The household-level survey found that **all households in Telafar were living in houses, and 44% reported some level of damage to their home.** The median shelter size was reported to be 250 square metres. With regards to the legal status of their residency, 51% of households reported they owned the house with documentation, and a 22% of households reported they are occupying a house with permission, but do not rent or own the house they live in. **Whilst only 8% of households (32) are renting, notably only one household had a written rental contract.**[36]


377 Buildings Destroyed
356 Buildings Severely Damaged
373 Buildings Moderately Damaged
N
Al Qadissiya 1
Al Muthana 1
Al Salam
Saad
Al Zahra
Al Qadissiya 2
Al Muthana 2
Al Uruba 2
Al Rabea
Al Noor
Al Wahda
Al Qala 1
Al Uruba 1
Al Kefah Al Shimali
Al Qala 2
Al Taleaa 1
Al Nasir
Al Taleaa 2
Al Taleaa 3
Al Mualimin
Al Needa
Al Kefah Al Jnubi
Al Jazeera
Al Khadraa
Neighbourhood
Building Destroyed/Damaged Per Square Km
248
1
Damage Assessment: UNITAR-UNOSAT supported by OCHA and UNDP - 16/07/2017
Satellite Imagery: WorldView-2 from 5/9/2017
Copyright: ©2017, DigitalGlobe
Source: US Department of State, Humanitarian Information Unit, NextView License.

CONCLUSION

As the context in Telafar transitions from an emergency to one of recovery and stabilization, the priority for the government and the humanitarian community has shifted to the resumption of key public services to address the needs of a diverse population. The recovery process that has started with the Government of Iraq, the UN, and different humanitarian organizations will require close coordination with multiple stakeholders, centred on the needs of the community.

This report has synthesised multiple layers of data from community leaders, individuals with specialised knowledge in service provision, and resident households with the aim of informing evidence-based planning and prioritisation of needs. The findings aim to support actors implementing humanitarian and recovery interventions at the urban level in Telafar city, providing granular, location-specific information, while informing planning and programming of the TdH-led CRC in Telafar city.

With most of its population composed of recently returned households, Telafar is in its early stages of recovery. Damage and destruction of buildings during the ISIL-occupation period remain a significant problem for returning households, many of whom were found to be hosted. The responsibility of repairing homes was a primary driver for households to take on unsustainable levels of debt, exacerbated by limited livelihood opportunities in the city. Households previously relying on agriculture or daily work face barriers in resuming their livelihoods, partially due to a damaged water network, stolen equipment and inputs, and fear of land contaminated by explosive hazards. This, together with a lack of new opportunities within the public sector, has created an unsustainable environment for households looking to rebuild their livelihoods.

Despite recent improvements to the general hospital, the healthcare system overall was functioning below pre-ISIL levels. Residents reported needing to travel outside the city to access health services and buy medicines. Individuals without financial means remained untreated due to increased prices at private pharmacies and a lack of medicines at public facilities.

With a significant portion of students having dropped out or missed years of school due to displacement, the damage to educational facilities and shortages of teachers and equipment further compounds the functionality of the system. Despite the efforts of the humanitarian communtity to repair some schools, children were reported to travel long distances to access formal education, highlighting both cost and protection-related issues.

REACH is currently supporting an area-based response which will present multi-sectoral response priorities in the different neighbourhoods within Telafar city. This exercise will be based on the ABA results and the service mapping conducted by the TdH CRC.

Endnotes

1. REACH, Telafar and Surrounding Areas - Rapid Overview of Areas of Return (ROAR), April 2018.

2. IOM DTM, Returns Overview, dashboard, 15 October 2018.

3. For more information, on KoBoToolbox, visit https://www.humanitarianresponse.info/en/applications/kobotoolbox

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10. Stansfield, G. (2016). The Looming Problem of Tal Afar. Retrieved October 22, 2018, from: https://www.wilsoncenter.org/sites/default/files/the_looming_problem_of_tal_afar.pdf

11. Global Public Policy Institute (2017). Tal Afar City. Retrieved September 10, 2018, from: http://www.gppi.net/publications/iraq-after-isil-tal-afar-city/

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13. The country's last official census was in 1987. Although another census was held in 1997, it was in 15 of Iraq's 18 governorates and was not conducted by the central Government. See: Habib, M. (2013). Counting Iraqis. Why there may never be a census again. Retrieved September 10, 2018, from: http://www.niqash.org/en/articles/politics/3238/

14. The Iraqi Public Distribution System (PDS) is run by the Ministry of Trade and provides government-subsidised food and fuel rations to all Iraqi citizens.

15. Calculated based on the reported date of returning to Telafar and the date of assessment for that household.

16. The World Bank Group (2014). Republic of Iraq Public Expenditure Review. Toward More Efficient Spending for Better Service Delivery. Retrieved October 30, 2018,

from: http://documents.worldbank.org/curated/en/611781468253505876/

17. Conversion from https://www.xe.com on November 5, 2018. Value was rounded to the nearest .5.

18. In the Iraqi context the thresholds for Food Consumption Score classifications is: >42 acceptable; 28-42 borderline; <28 poor.

19. The Iraq War began in 2003 with the US-led invasion of Iraq.

20. From 2008 the number of items received from the PDS was reduced. Powdered milk for children was part of the PDS in Iraq. https://reliefweb.int/report/iraq/iraq-government-cut-items-its-free-food-handouts

21. Starting on 5 September 2017.

22. On 5 October 2017.

23. On 6 November 2017.

24. Although findings are based on a subset of the sample population, findings are still representative to a 95% confidence level and 5% margin of error.

25. Findings are based on a subset of the sample population and representative to a 95% confidence level and 8% margin of error.

26. Findings for 'school-aged children who never attended formal education' are based on a small subset of the sample population (62 school-aged children) and are therefore indicative only.

27. Findings are based on a subset of the sample popoulation and are representative to a 95% confidence level and 10% margin of error.

28. Findings are based on a subset of the sample population and are representative to a 95% confidence level and 7% margin or error.

29. Findings for 'school-aged children who never attended formal education' are based on a small subset of the sample population (62 school-aged children) and are therefore indicative only.

30. Al-Rawi, S. M. & Bilal, A. A. (2013). Impact of Raw Water Characteristics on Aski – Mosul Water Treatment Plant. Iraqi National Journal of Earth Sciences, 13, 1-12.

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33. World Bank Group (2018). Iraq Reconstruction & Investment. Part 2. Damage and Needs Assessment of Affected Governorates. Retrieved October 23, 2018, from: http://documents.worldbank.org/curated/en/600181520000498420/pdf/123631-REVISED-Iraq-Reconstruction-and-Investment-Part-2-Damage-and-Needs-Assessment-of-Affected-Governorates.pdf

34. Dewachi, O. (2017). Ungovernable Life: Mandatory Medicine and Statecraft in Iraq. California: Stanford University Press.

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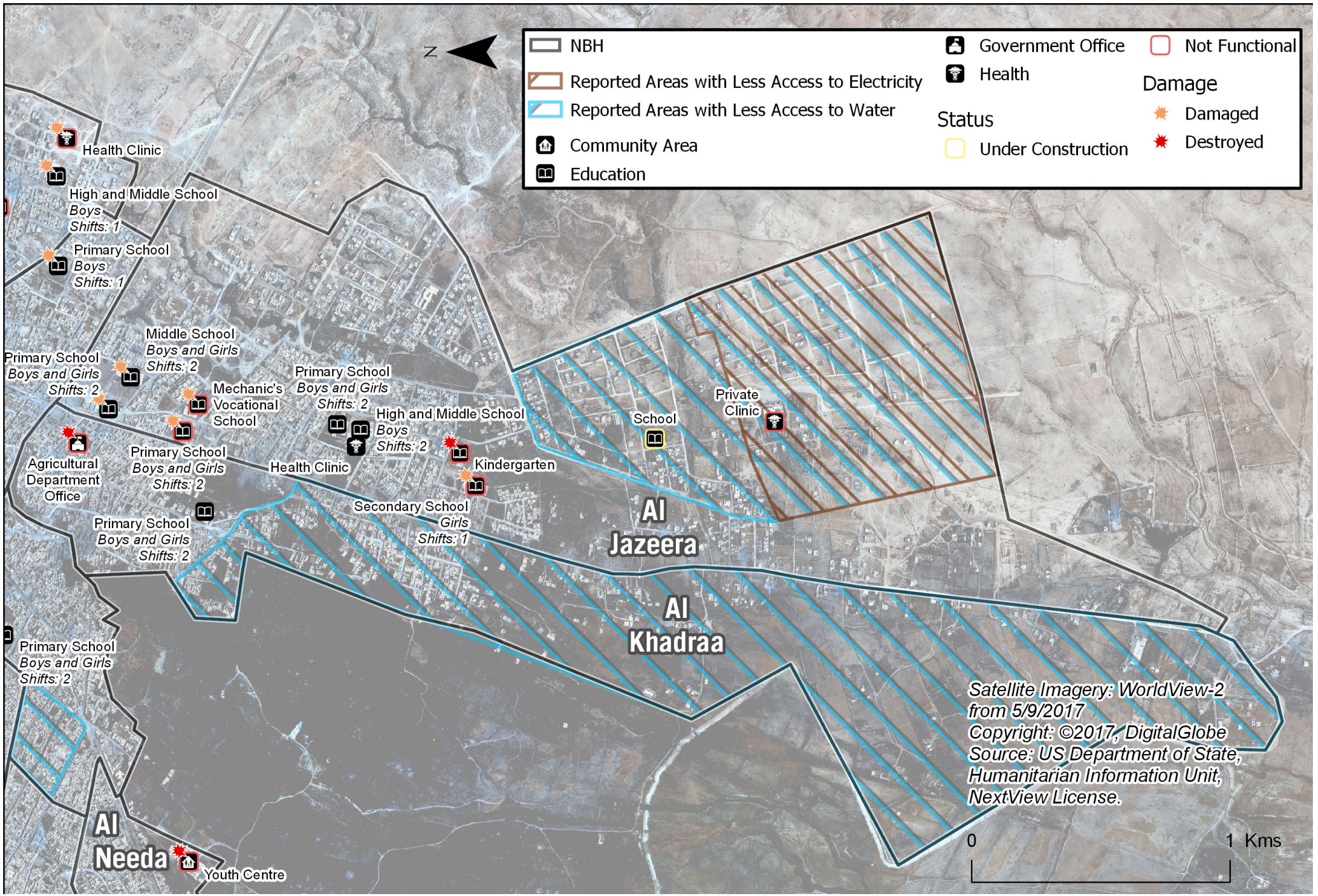
Events in Iraq. Retrieved November 4, 2018, from: https://www.cdc.gov/nchs/data/isp/010_registration_of_-vital_events_in_iraq.pdf

36. The proportion of renting households with a written agreement is based on a small subset of the sample population (32 households), and therefore should be considered indicative rather than statistically representative.Events in Iraq. Retrieved November 4, 2018, from: https://www.cdc.gov/nchs/data/isp/010_registration_of_-vital_events_in_iraq.pdf

APPENDIX ONE:

Telafar city neighbourhood maps

SOUTH EAST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NBH
Reported Areas with Less Access to Electricity
Reported Areas with Less Access to Water
Community Area
Education
Government Office
Health
Status
Under Construction
Not Functional
Damage
Damaged
Destroyed
Health Clinic
High and Middle School
Boys
Shifts: 1
Primary School
Boys
Shifts: 1
Middle School
Boys and Girls
Shifts: 2
Primary School
Boys and Girls
Shifts: 2
Primary School
Boys and Girls
Shifts: 2
Mechanic's
Vocational
School
Agricultural
Department
Office
Primary School
Boys and Girls
Shifts: 2
Primary School
Boys and Girls
Shifts: 2
Health Clinic
Primary School
Boys and Girls
Shifts: 2
High and Middle School
Boys
Shifts: 2
Kindergarten
Secondary School
Girls
Shifts: 1
School
Private
Clinic
Al
Jazeera
Al
Khadraa
Primary School
Boys and Girls
Shifts: 2
Al
Needa
Youth Centre
Satellite Imagery: WorldView-2
from 5/9/2017
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Humanitarian Information Unit,
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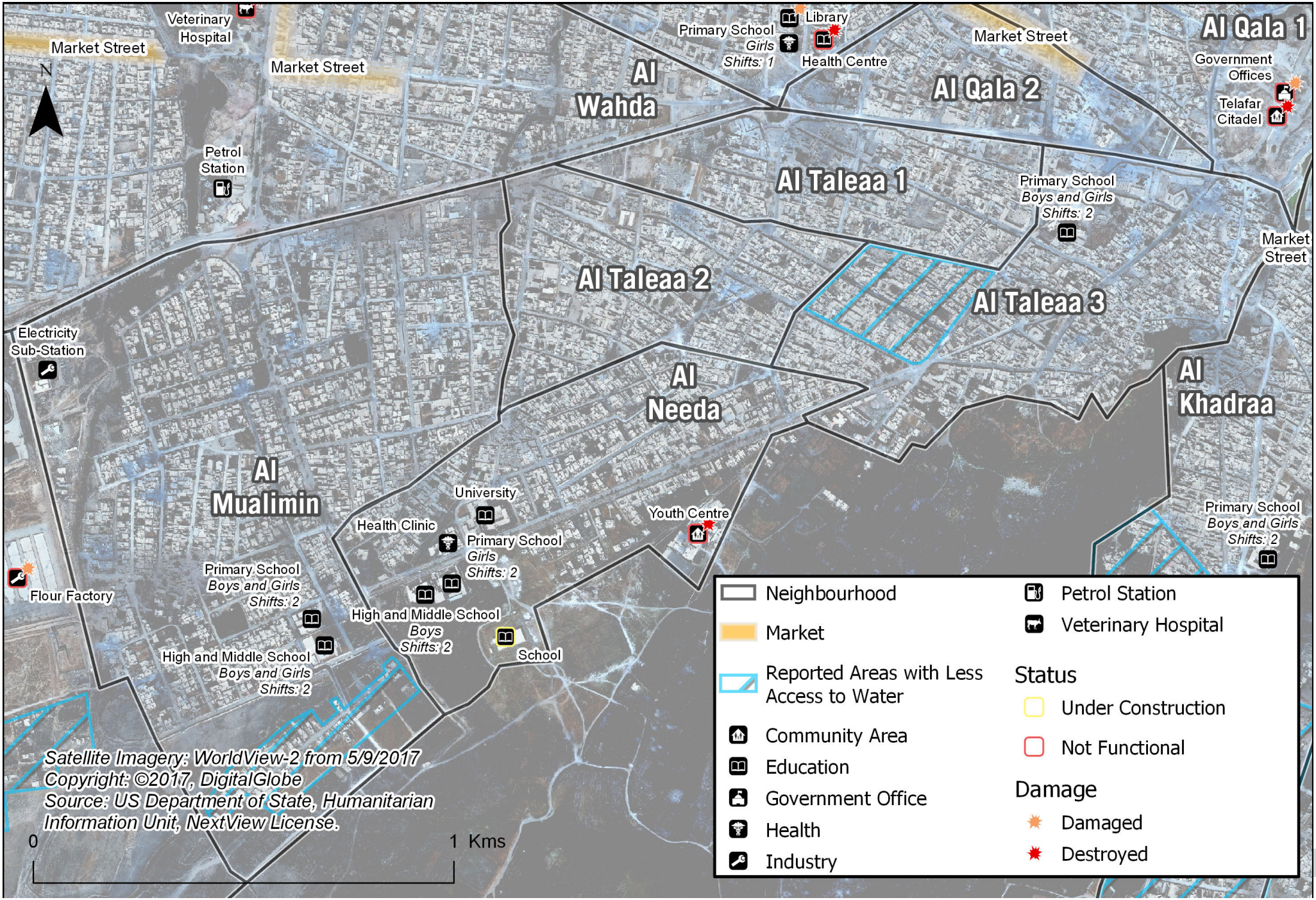
SOUTH CENTRE



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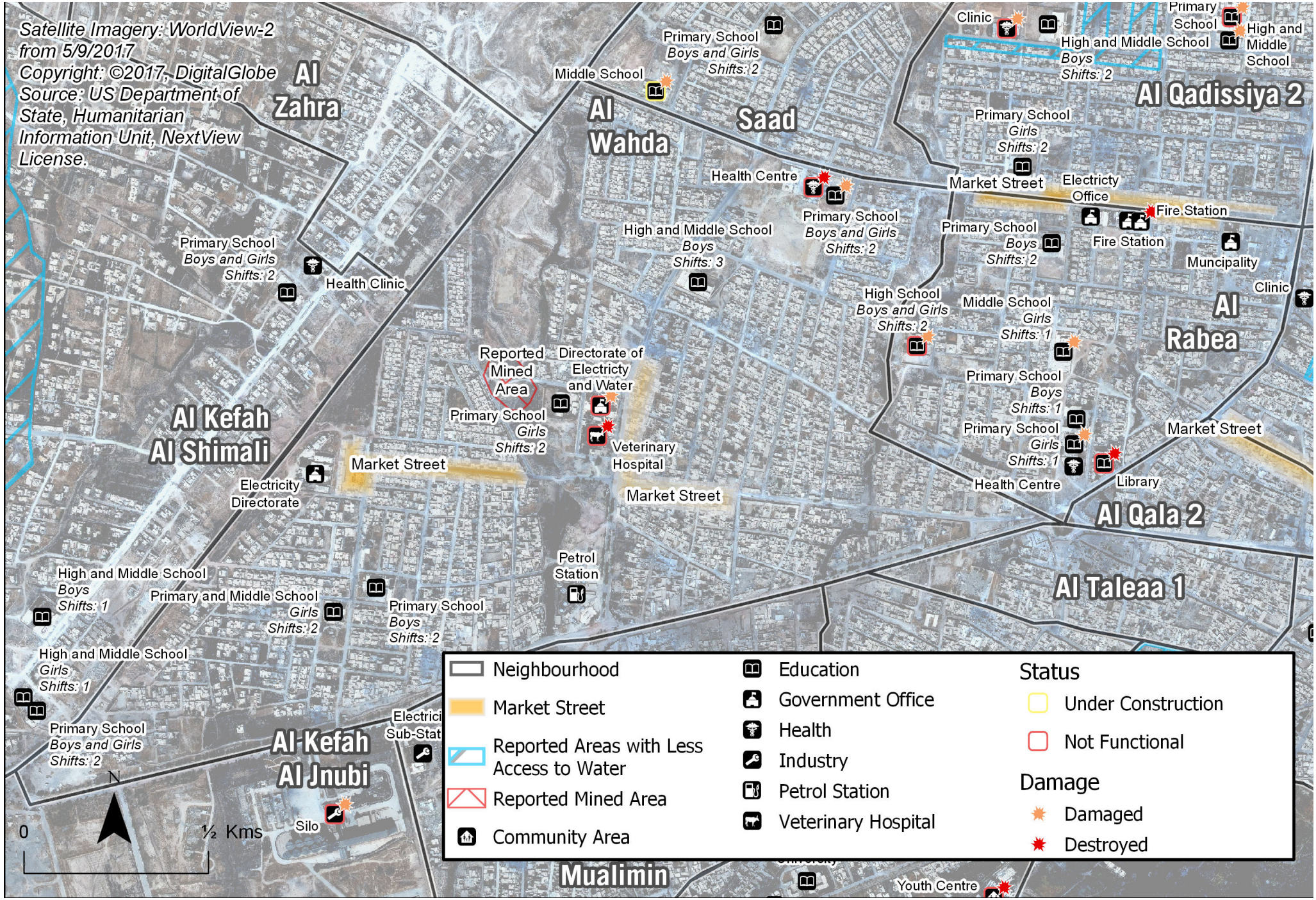
Satellite Imagery: WorldView-2 from 5/9/2017
Copyright: ©2017, DigitalGlobe
Source: US Department of State, Humanitarian Information Unit, NextView License.
Al Zahra
Al Wahda
Saad
Al Qadissiya 2
Al Rabea
Al Kefah Al Shimali
Al Kefah Al Jnubi
Al Qala 2
Al Taleaa 1
Mualimin
Primary School Boys and Girls Shifts: 2
Middle School
Clinic
High and Middle School Boys Shifts: 2
Primary School Girls Shifts: 2
Market Street
Health Centre
Electricty Office
Fire Station
Primary School Boys and Girls Shifts: 2
High and Middle School Boys Shifts: 3
Primary School Boys Shifts: 2
Muncipality
Health Clinic
High School Boys and Girls Shifts: 2
Middle School Girls Shifts: 1
Reported Mined Area
Directorate of Electricty and Water
Primary School Girls Shifts: 2
Primary School Boys Shifts: 1
Veterinary Hospital
Electricity Directorate
Library
Petrol Station
High and Middle School Boys Shifts: 1
Primary and Middle School Girls Shifts: 2
Primary School Boys Shifts: 2
High and Middle School Girls Shifts: 1
Silo
Youth Centre
Neighbourhood
Market Street
Reported Areas with Less Access to Water
Reported Mined Area
Community Area
Education
Government Office
Health
Industry
Petrol Station
Veterinary Hospital
Status
Under Construction
Not Functional
Damage
Damaged
Destroyed
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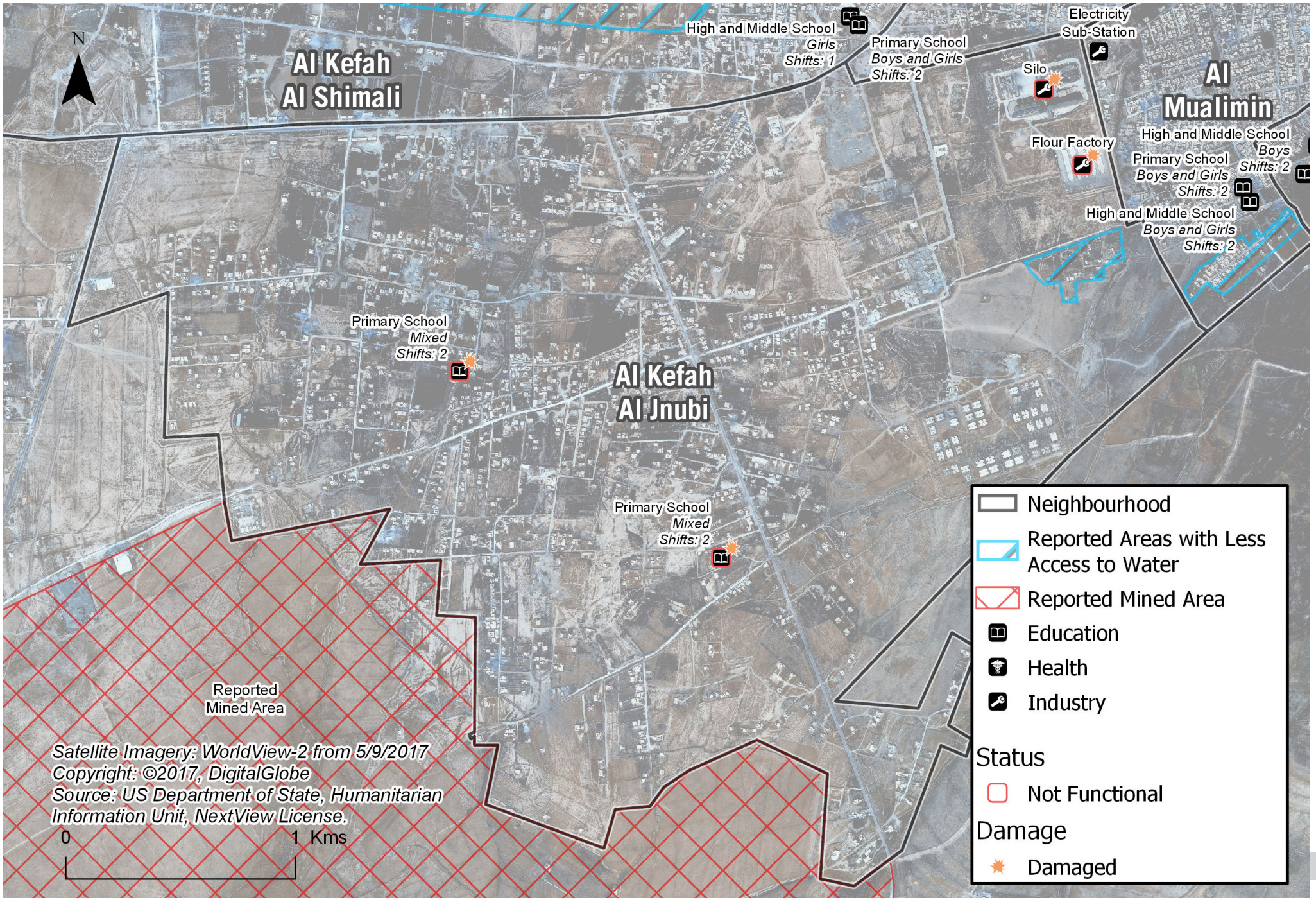
½ Kms

SOUTH WEST


N
Al Kefah
Al Shimali
High and Middle School
Girls
Shifts: 1
Primary School
Boys and Girls
Shifts: 2
Electricity
Sub-Station
Silo
Al
Mualimin
Flour Factory
High and Middle School
Boys
Shifts: 2
Primary School
Boys and Girls
Shifts: 2
High and Middle School
Boys and Girls
Shifts: 2
Primary School
Mixed
Shifts: 2
Al Kefah
Al Jnubi
Primary School
Mixed
Shifts: 2
Reported
Mined Area
Satellite Imagery: WorldView-2 from 5/9/2017
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Information Unit, NextView License.
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Neighbourhood
Reported Areas with Less Access to Water
Reported Mined Area
Education
Health
Industry
Status
Not Functional
Damage
Damaged

NORTH EAST

N
Neighbourhood
Areas with Less Access to Water
Reported Unregistered Houses
Community Area
Education
Government Office
Health
Industry
Status
Not Functional
Damage
Damaged
Destroyed
Al Qadissiya 1
Electricity Station
Park
Primary School Boys and Girls Shifts: 2
Kindergarten Boys and Girls Shifts: 1
Primary School Boys and Girls Shifts: 1
Middle School Boys Shifts: 1
Al Muthana 1
Al Salam
Primary School Mixed Shifts: 1
Football Pitch
Al Muthana 2
Pharmacies and Doctors' Offices
Registration Office
Hospital
Statistics Office
Primary School Boys and Girls Shifts: 2
Primary School Boys and Girls Shifts: 2
High and Middle School Girls Shifts: 1
Al Uruba 2
Sewage Directorate
Health Centre
Primary School Boys and Girls Shifts: 2
Al Noor
Satellite Imagery: WorldView-2 from 5/9/2017
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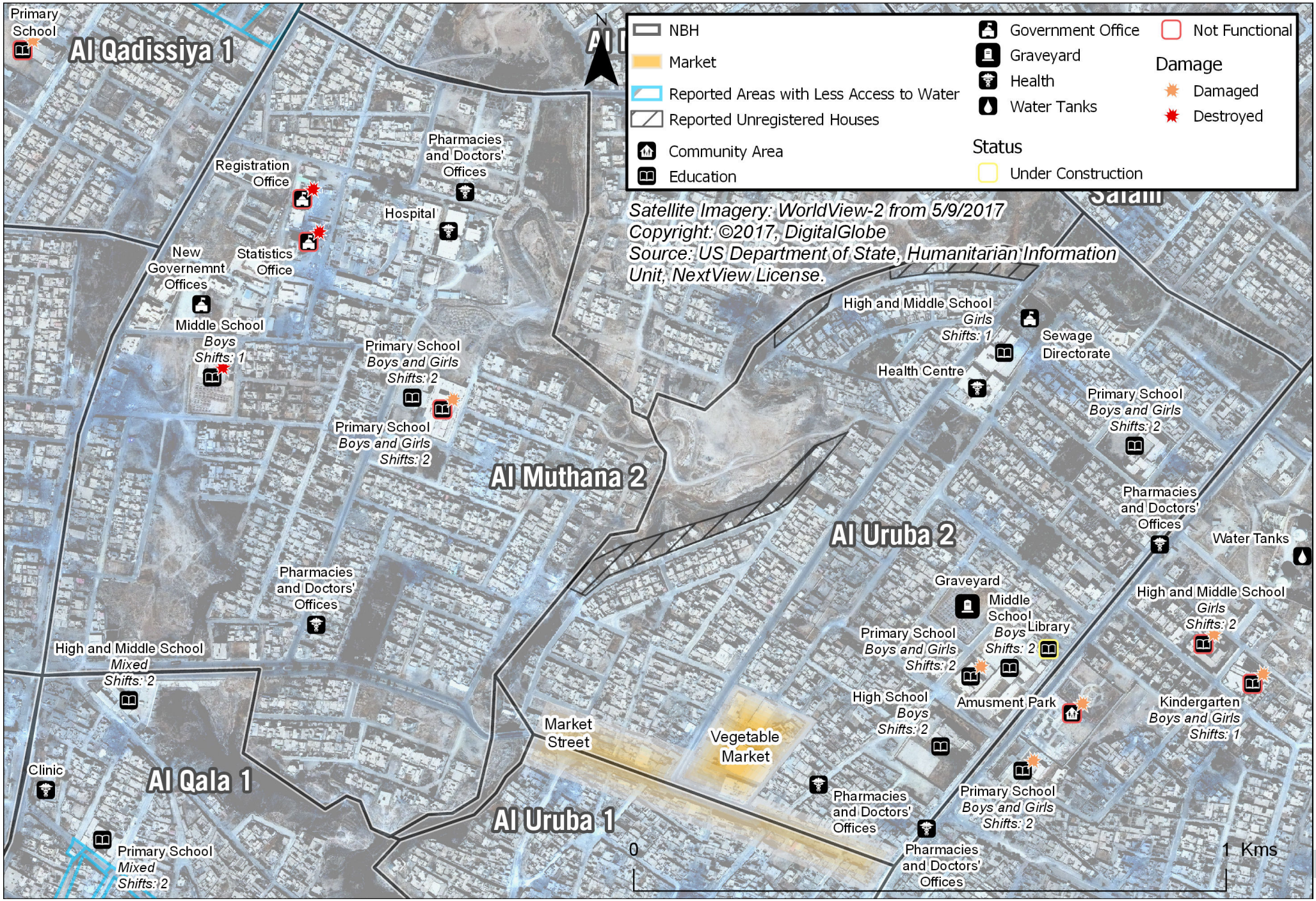
CENTRE WEST


NBH
Market
Reported Areas with Less Access to Water
Reported Unregistered Houses
Community Area
Education
Government Office
Graveyard
Health
Water Tanks
Not Functional
Damage
Damaged
Destroyed
Status
Under Construction
N
Satellite Imagery: WorldView-2 from 5/9/2017
Copyright: ©2017, DigitalGlobe
Source: US Department of State, Humanitarian Information Unit, NextView License.
Al Qadissiya 1
Al Muthana 2
Al Uruba 2
Al Qala 1
Al Uruba 1
Primary School
Registration Office
Pharmacies and Doctors' Offices
Hospital
New Governemnt Offices
Statistics Office
Middle School Boys Shifts: 1
Primary School Boys and Girls Shifts: 2
Primary School Boys and Girls Shifts: 2
High and Middle School Girls Shifts: 1
Sewage Directorate
Health Centre
Primary School Boys and Girls Shifts: 2
Pharmacies and Doctors' Offices
Water Tanks
Pharmacies and Doctors' Offices
Graveyard
Middle School Boys Shifts: 2
Library
Primary School Boys and Girls Shifts: 2
High and Middle School Girls Shifts: 2
High and Middle School Mixed Shifts: 2
Amusment Park
Kindergarten Boys and Girls Shifts: 1
High School Boys Shifts: 2
Market Street
Vegetable Market
Clinic
Primary School Boys and Girls Shifts: 2
Pharmacies and Doctors' Offices
Primary School Mixed Shifts: 2
Pharmacies and Doctors' Offices
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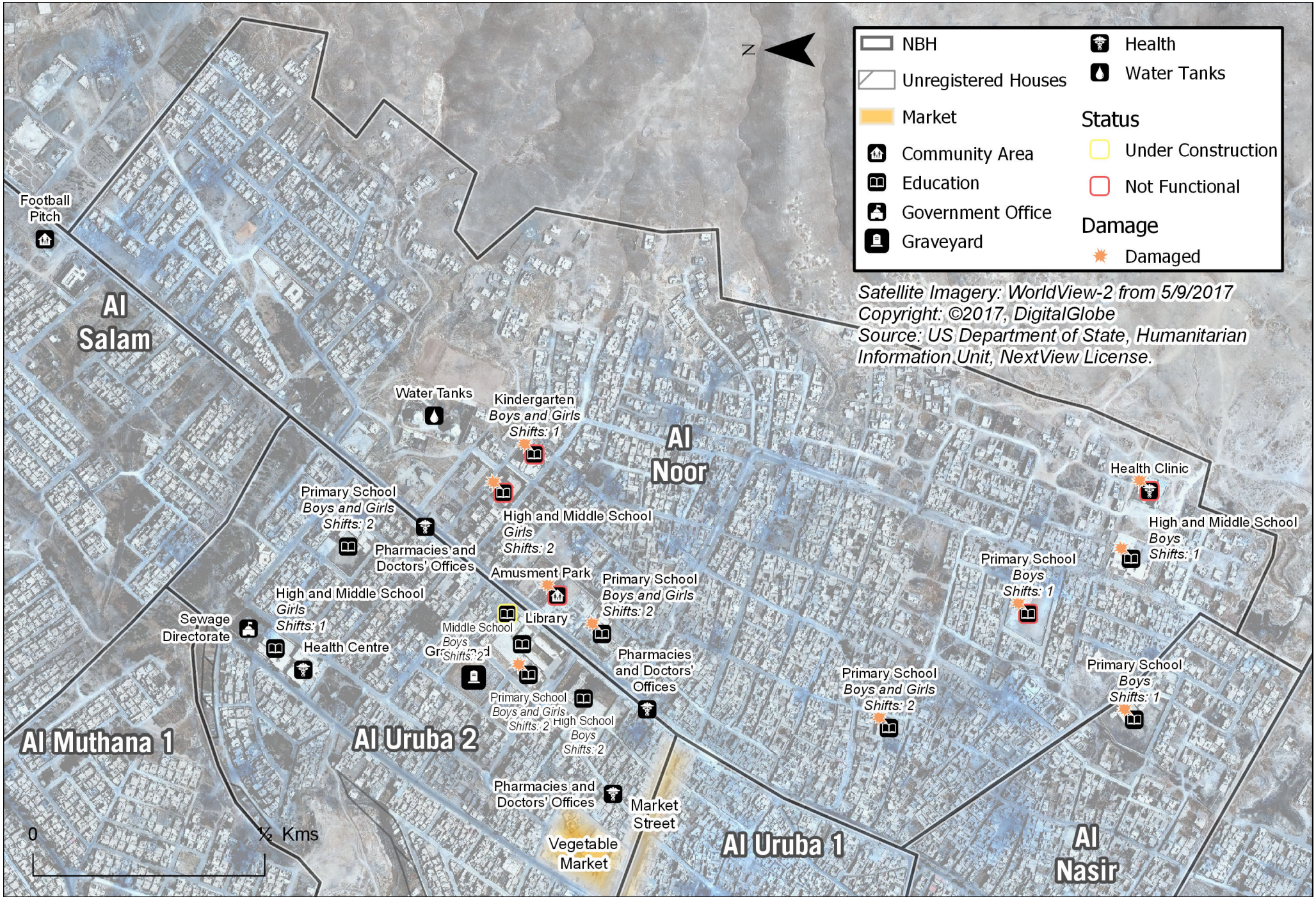
CENTRE EAST


N
NBH
Unregistered Houses
Market
Community Area
Education
Government Office
Graveyard
Health
Water Tanks
Status
Under Construction
Not Functional
Damage
Damaged
Satellite Imagery: WorldView-2 from 5/9/2017
Copyright: ©2017, DigitalGlobe
Source: US Department of State, Humanitarian Information Unit, NextView License.
Football Pitch
Al Salam
Water Tanks
Kindergarten Boys and Girls Shifts: 1
Al Noor
Primary School Boys and Girls Shifts: 2
High and Middle School Girls Shifts: 2
Pharmacies and Doctors' Offices
Amusment Park
Primary School Boys and Girls Shifts: 2
High and Middle School Girls Shifts: 1
Sewage Directorate
Health Centre
Middle School Boys Shifts: 2
Library
Primary School Boys and Girls Shifts: 2
High School Boys Shifts: 2
Pharmacies and Doctors' Offices
Health Clinic
High and Middle School Boys Shifts: 1
Primary School Boys Shifts: 1
Primary School Boys and Girls Shifts: 2
Primary School Boys Shifts: 1
Al Muthana 1
Al Uruba 2
Pharmacies and Doctors' Offices
Market Street
Vegetable Market
Al Uruba 1
Al Nasir
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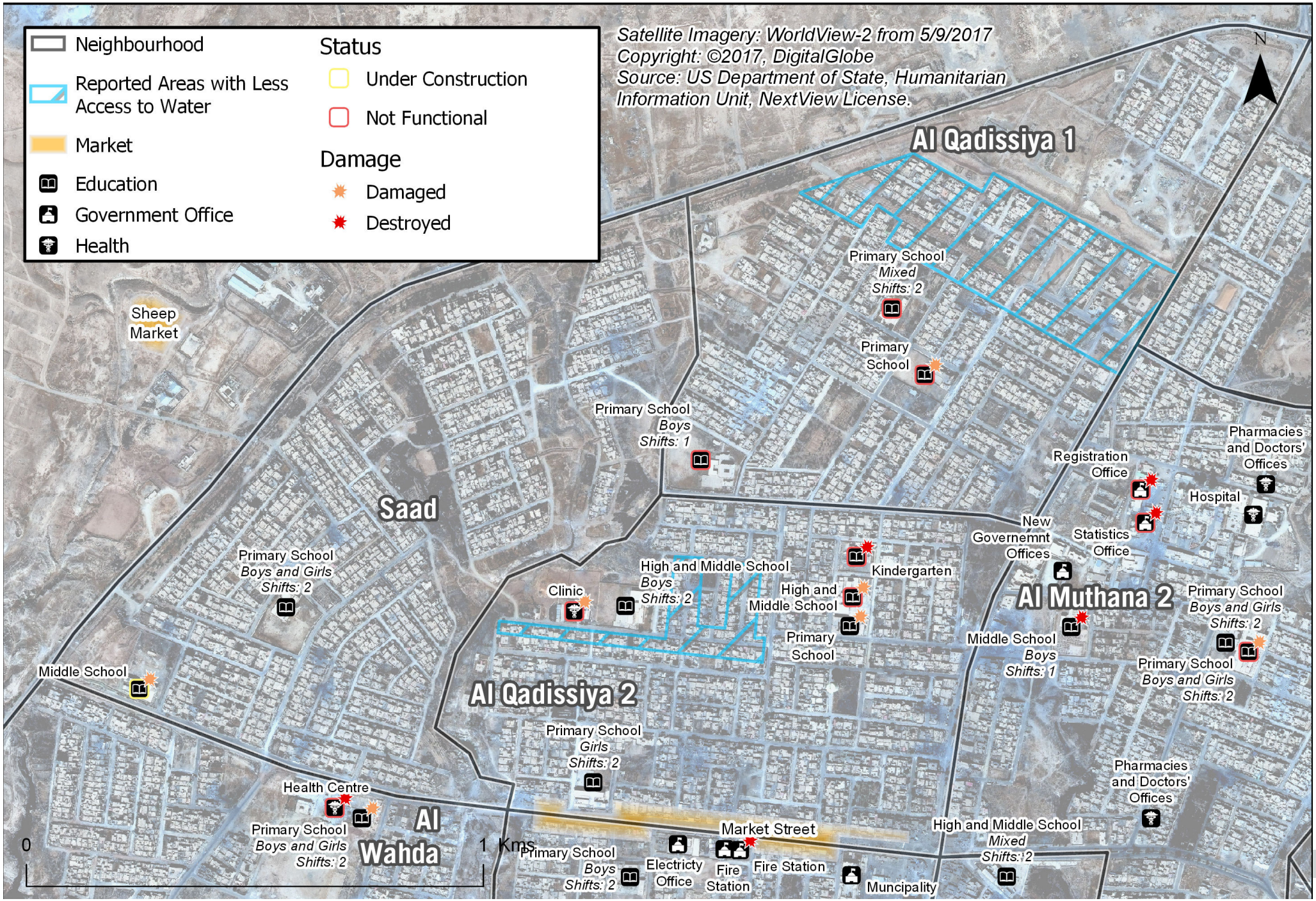
NORTH CENTRE



CENTRE

Fire Station
Market Street
Muncipality
High and Middle School
Mixed
Shifts: 2
Primary School
Boys
Shifts: 2
Clinic
Al Muthana 2
Market
Street
Vegetable
Market
Primary School
Boys and Girls
Shifts: 2
High School
Boys
Shifts: 2
Amusment
Park
Pharmacies and
Doctors' Offices
Primary School
Boys and Girls
Shifts: 2
Pharmacies
and Doctors'
Offices
Al
Rabea
Primary School
Mixed
Shifts: 2
Middle School
Girls
Shifts: 1
High School
Boys
Shifts: 2
Al Qala 1
Al Uruba 1
Primary School
Boys
Shifts: 1
Primary School
Girls
Shifts: 1
Market Street
Health Centre
Library
Government
Offices
Primary School
Boys and Girls
Shifts: 2
Telafar
Citadel
Al Qala 2
Al Taleaa 1
Primary School
Boys
Shifts: 1
Market Street
Al
Nasir
Al
Khadraa
Agricultural
Department
Office
Primary School
Boys
Shifts: 1
Middle School
Boys and Girls
Shifts: 2
Primary School
Boys and Girls
Shifts: 2
Neighbourhood
Reported Areas with Less
Access to Water
Market
Community Area
Education
Government Office
Health
Status
Not Functional
Damage
Damaged
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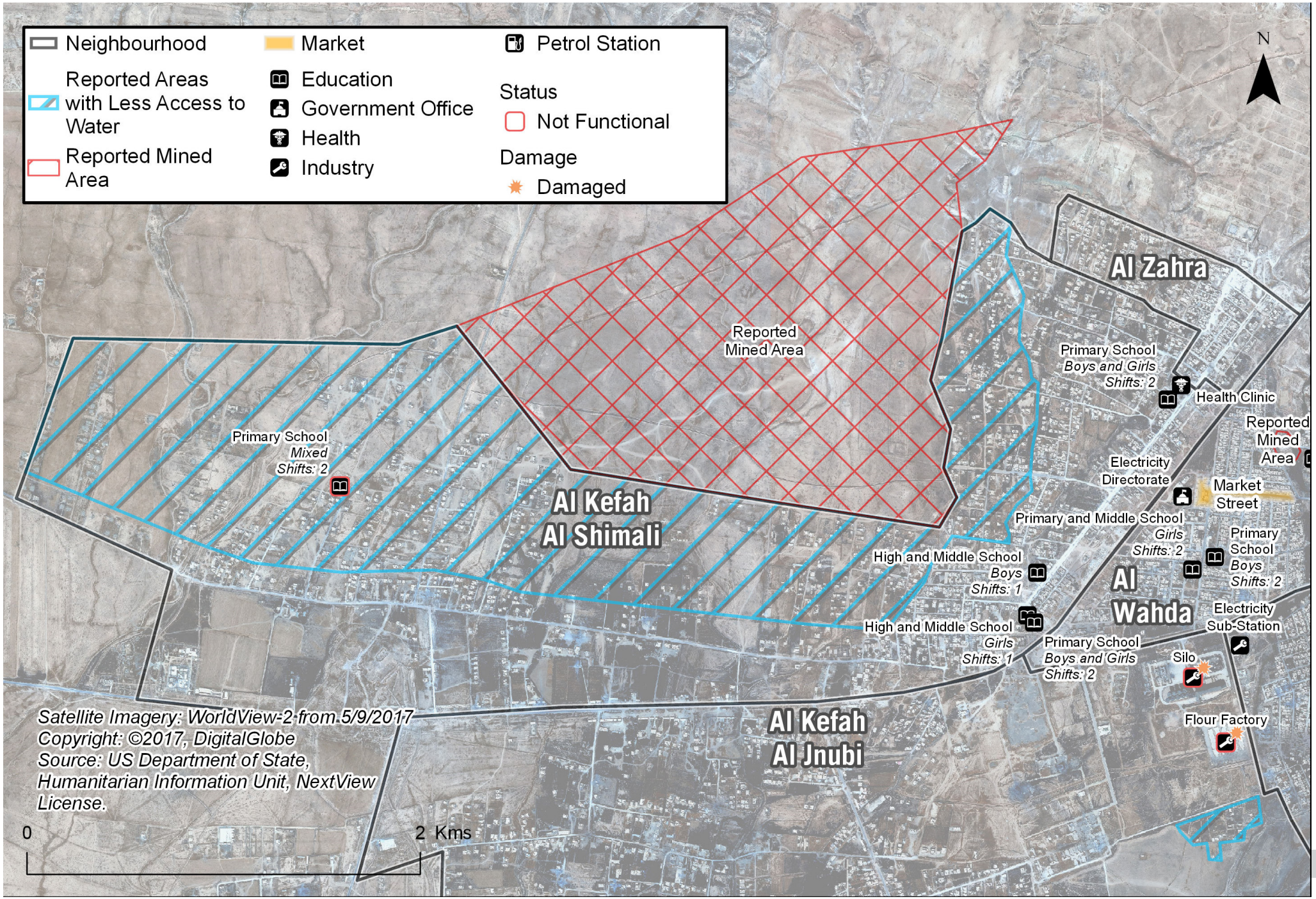
NORTH WEST


Neighbourhood
Reported Areas with Less Access to Water
Reported Mined Area
Market
Education
Government Office
Health
Industry
Petrol Station
Status
Not Functional
Damage
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Al Zahra
Reported Mined Area
Primary School Boys and Girls Shifts: 2
Health Clinic
Reported Mined Area
Primary School Mixed Shifts: 2
Electricity Directorate
Market Street
Al Kefah Al Shimali
Primary and Middle School Girls Shifts: 2
Primary School Boys Shifts: 2
High and Middle School Boys Shifts: 1
Al Wahda
Electricity Sub-Station
High and Middle School Girls Shifts: 1
Primary School Boys and Girls Shifts: 2
Silo
Flour Factory
Al Kefah Al Jnubi
Satellite Imagery: WorldView-2 from 5/9/2017
Copyright: ©2017, DigitalGlobe
Source: US Department of State, Humanitarian Information Unit, NextView License.
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2 Kms

Telafar city