Skin Diseases Situation Overview: Idleb and Surrounding Areas

Northwest Syria, February 2019

REACH Informing more effective humanitarian action

CONTEXT

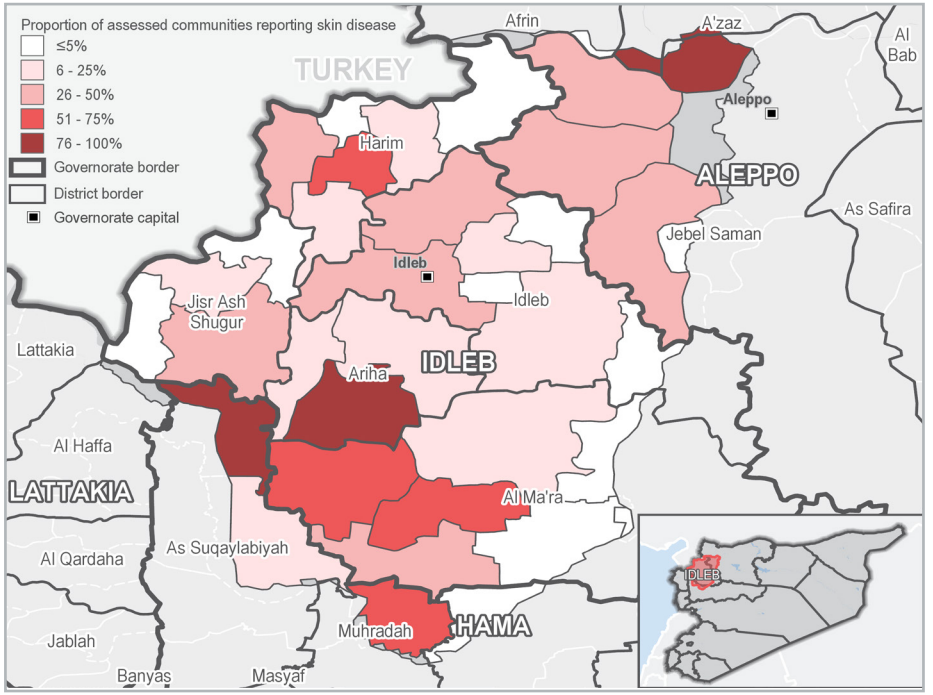
Over eight years of conflict in Syria have taken their toll on the living conditions of the civilian population. Over the course of 2018, the predominantly rural region of Idleb governorate and its surrounding areas of western Aleppo and northern Hama in northwest Syria witnessed mass movements of internally displaced people (IDPs) within and into the area due to escalating violence across the country.[1] The hostilities, protracted displacement, and destruction of infrastructure have taken their toll on basic services in the area, particularly on health care services. According to REACH data collected in March 2019 for the Humanitarian Situation Overview in Syria (HSOS) on the situation in February, which served as the main source of data for this Situation Overview, Key Informants (KIs) in 77% of assessed communities reported difficulties to access health care services, creating a particularly dire health situation for the population in Idleb and its surrounding areas - approximately a third of which are estimated to be IDPs.[2] This combined with limited access to water, sanitation and hygiene (WASH) facilities, inadequate shelter, and a lack of livelihoods opportunities, has created adverse living conditions and an environment prone to communicable diseases. One such disease is leishmaniasis, a vector-borne skin disease caused by the protozoan leishmania parasites, which are transmitted by the bite of infected female phlebotomine sandflies.[3] Cutaneous leishmaniasis typically causes painless lesions which often develop into ulcers, leaving life-long scars, and serious disability, whereas visceral leishmaniasis can be fatal.[3] In February, KIs in 171 (31%) of 546 assessed communities in Idleb governorate and surrounding areas reported skin diseases, namely leishmaniasis, being a common health problem in their community.* In the two months after data collection, Idleb governorate and surrounding areas have experienced large-scale shelling and displacement, (see the REACH Southern Idleb and Northern Hama Rapid Needs Assessment May 2019) which is likely to have increased existing drivers of leishmaniasis.

To provide a multi-sectoral analysis of the trends in skin disease, in particular leishmaniasis, this situation overview considers also compounding factors contributing to the incidence of skin diseases including a lack of access to health care, to adequate shelter, to WASH facilities, and to food security and livelihood opportunities.

MAIN FINDINGS

- The Syrian conflict has created conditions conducive to an outbreak of skin diseases, leishmaniasis in particular, in Idleb governorate and surrounding areas.
- The lack of adequate health care and insufficient presence of trained personnel has led to late diagnoses and treatments of communicable diseases.
- A large number of people reportedly sleep in the ruins of their homes and in close proximity to vector breeding sites.
- The inadequate management of garbage dumping places and dysfunctionality of sewerage systems could contribute to increased vector breeding.

Map 1. KIs reporting skin diseases as a common health problem in their community



Methodology

HSOS data collection is conducted through an enumerator network in accessible locations throughout Idleb, Aleppo, Hama, Deir-ez-Zor, Ar-Raqqa, and Al-Hasakeh governorates. For this assessment, data was extracted from the larger February HSOS dataset in 546 accessible communities in Idleb and surrounding areas of western Aleppo and northern Hama in northwest Syria. Data was collected between 2 and 20 March 2019, and KIs were asked to report on the situation in February 2019. REACH enumerators are based inside Syria and interview Key Informants (KIs) directly in the community about which they are reporting. KIs were selected based on their knowledge of the population and general expertise about the assessed locations. The confidence levels associated with each question are presented in the final dataset. The HSOS data collection tool asks KIs to report on most common health problems, of which 'skin diseases' is an option. Enumerators have confirmed that whenever respondents reported 'skin diseases', the majority of the cases were related to leishmaniasis. HSOS data has been triangulated with secondary sources to provide an overview of the prevalence of leishmaniasis in northwest Syria. However, this is not based on recorded cases and therefore findings must be considered indicative at the time of data collection.

*The question asked was "What were the most common health problems reported by all people in your community during the previous month?". Please see the Methodology section for the limitations of this question.

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LEISHMANIASIS

There are three main types of leishmaniasis - visceral, mucocutaneous, and the most common type, cutaneous leishmaniasis.[3] Infection and consequent disease can only be acquired through the bite of female sandflies infected with this parasite. Depending on the type of leishmaniasis, symptoms can range from disfiguring (painless) lesions (cutaneous leishmaniasis) to parasitic invasion of organs, such as the liver and spleen (visceral leishmaniasis).[5] The most common form found in Syria is cutaneous leishmaniasis, and until 1960, its prevalence was restricted to two areas (Aleppo and Damascus and surroundings) where it was endemic.[6] The disease, which has locally been referred to as the 'Aleppo Boil', has maintained a high incidence in Syria with an annual average of 23,000 cases recorded in the years leading up to 2008.[5] However, the conflict created conditions conducive to an increased prevalence of the disease. In 2018, nearly 80,000 cases were reported across northern Syria in the first nine months of the year.[4] In Idleb governorate alone, there was a 100 percent increase in the number of cases reported in 2018 in comparison with those reported in 2017.[4] In areas where the sandfly was historically endemic, incidence of leishmaniasis is likely higher.

The mass movement of people is considered to be closely linked to the rising incidence and spread of cutaneous leishmaniasis. Human displacement may cause the ecological disruption of sandfly habitats, causing the infection to manifest in places that are not historical hotspots of cutaneous leishmaniasis.[7] Moreover, the living conditions associated with displacement, such as poor housing, increased population density, the absence of adequate WASH facilities, and presence of rubble and waste may increase sandfly breeding and resting sites around human settlements. The HNO 2019 reported that almost half of all IDPs in Syria (428,138) are located in northwest Syria, the majority located in Idleb governorate. Vulnerable groups, such as IDPs, children, people with disabilities, elderly and others with diminished coping abilities are particularly at risk of communicable diseases.

How does leishmaniasis spread?

- Poor housing, damaged infrastructure, rubble[8]
- Human displacement[7]
- Sand-flies thrive in rubble and debris[8]
- Lack of waste management[4]
- Poor sanitary conditions such as an open sewerage[4]
- Lack of preventive measures, such as indoor residual spraying (IRS) and small-mesh mosquito nets[8]

COMPOUNDING FACTORS

HEALTH CARE

The lack of adequate health care and absence of trained personnel has led to late diagnoses and treatments of communicable diseases. A lack of available drugs (difficult to import) is an additional impediment to treating leishmaniasis.

SHELTER

Sand-flies lives in rubble, debris, and cracks in walls.[8] Therefore, ruined infrastructure and shelter can exacerbate the presence of sandflies and the spread of leishmaniasis.

Several compounding factors increase the incidence of leishmaniasis. If skin diseases are left untreated, due to inability to access or afford treatment, symptoms can be exacerbated, leaving life-long scars and serious disability.

WASH

Breakdown of sanitation systems, limited waste management, and open sewers create a favourable environment for sandflies to live and breed.

FOOD SECURITY & LIVELIHOODS

Low socio-economic and nutritional status impact the susceptibility to leishmaniasis.[14]

COMPOUNDING FACTORS

HEALTH CARE

The conflict in Syria has significantly eroded the health system. More than half of the country's public hospitals and health care centers have been destroyed, closed down, or are only partially functioning, limiting civilians' access to medical assistance and overwhelming the few available facilities.[9] In Idleb governorate and its surrounding areas, KIs in 46% of assessed communities reported that there were no health care facilities functioning in the community. Moreover, the quality of health care has been affected by consistent shortages of drugs and medical supplies and the limited presence of health care workers (HCWs) trained in all aspects of leishmaniasis diagnosis and treatment, despite the efforts of humanitarian partners.[9] The treatment of CL lesions requires multiple intradermal injections. HCWs need specialized training in order to perform these injections which are relatively complex. For this reason, a lack of trained staff is a barrier to treatment.

KIs reporting type of medical care facilities perceived to be available in assessed communities:

No health care facilities functioning in the community	46%
Public health care facilities	27%
Informal emergency care points	18%
Mobile clinics/field hospitals	16%
Pre-conflict hospitals	8%

Control programs and general treatment of leishmaniasis have primarily been the responsibility of health care centers and other health services. Critical factories supplying the first-line drug treatment for cutaneous leishmaniasis, glucantime, were destroyed, halting the supply of 90% of the country's medication needed.[10] The partial collapse of the health care system coupled with overcrowding of available facilities has shifted priorities and resources to focus on more emergent health concerns.[5] Additionally, interventions focused on control and treatment programs of leishmaniasis continue to remain scarce in hard to reach areas, despite needs being high. With only one Health Cluster partner known to be active in the treatment/control of leishmaniasis in Idleb governorate and surrounding areas, and knowing that the scale of the problem is significant, there are likely to be major gaps in the response. Following large-scale displacement in Idleb of approximately 300,000 people, there are concerns that the incidence of leishmaniasis will likely increase.

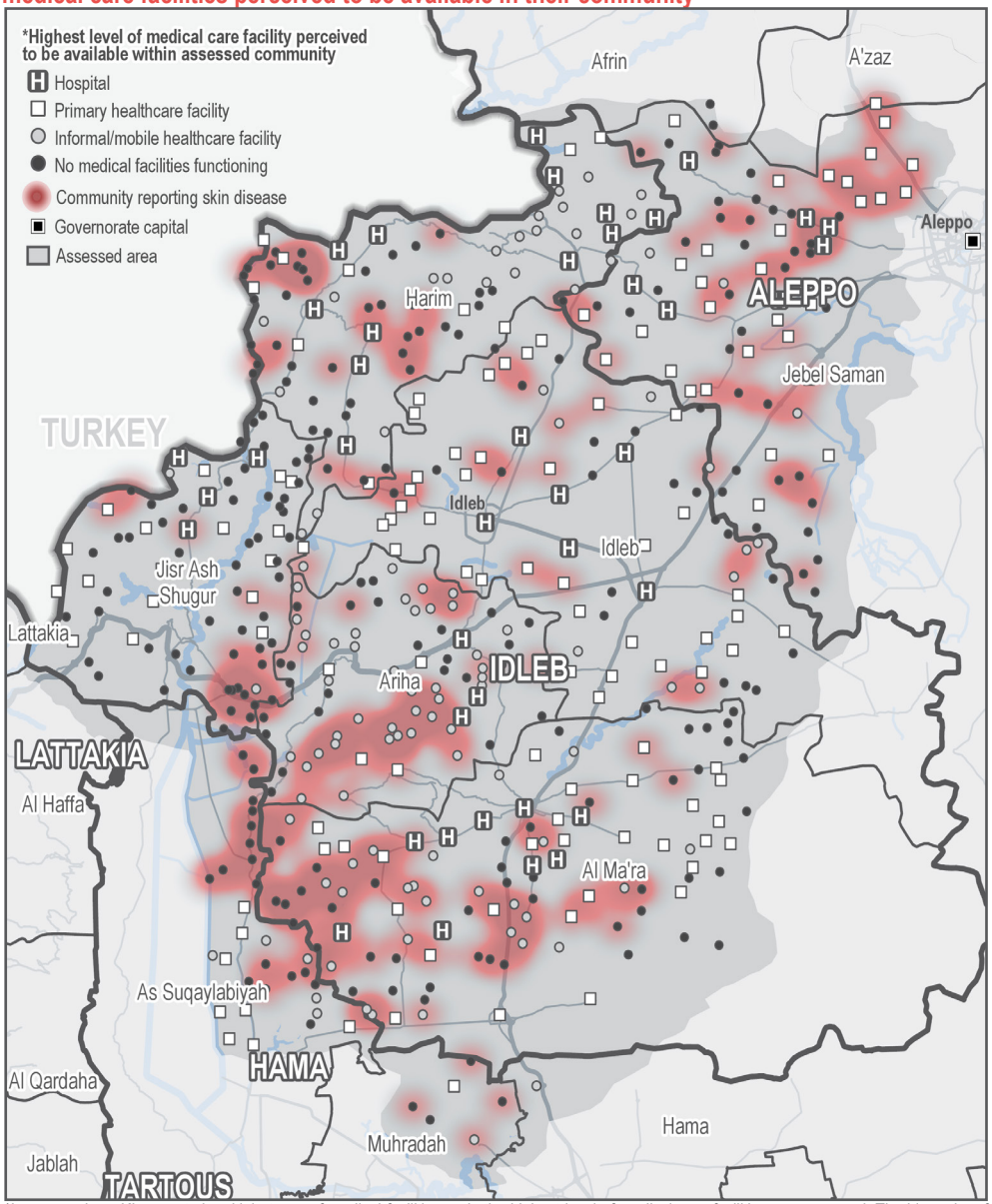
KIs reporting most common barriers to accessing health care in assessed communities:

No health facilities available in the community*	38%
Lack of transportation/distance to facilities	35%
High cost of transportation to facilities	27%
Due to disability, injury, or illness	17%
Security concerns when traveling to facilities	13%

Map 2 shows that there is a higher reported incidence of skin diseases in areas where the perceived available health care facilities are limited to informal mobile health care facilities or where there is a perceived lack of medical facilities, both reported by KIs. This is particularly noticeable in northern Hama and southern Idleb.

* A perceived absence of health care facilities does not necessarily coincide with an actual lack of health care facilities, or with lack of access to health care. While residents may not be able to access health facilities within their own community, they are frequently able to access health care services in a nearby community less than 1 hour away.

Map 2. KIs reporting skin diseases as a common health problem and KIs reporting type of medical care facilities perceived to be available in their community



*In cases where KIs reported multiple types of medical facilities, only the highest level of medical care facilities were mapped. The hierarchy of medical care facilities was defined as follows: hospital, primary health care facility and informal/mobile health care facility.

COMPOUNDING FACTORS

SHELTER

The female sandfly, the vector of leishmaniasis, lays its eggs in ruined building and cracked walls, which provide optimal conditions for the larvae to develop. Years of war have caused large-scale destruction, resulting in a high number of damaged buildings and rubble left in the streets. In Idleb city alone, 1,415 buildings were reportedly damaged, according to REACH Syrian Cities Damage Atlas.[11]

The large-scale destruction has not only facilitated sandfly breeding, but also increased the sandflies' access to humans. Human behaviour, such as sleeping outside or on the ground and therefore in close proximity to vector breeding sites, may increase risk.[5] The poor shelter conditions in overcrowded displacement camps and sites are particularly notorious for exacerbating rates of leishmaniasis. IDPs and refugees are predisposed to increased risk as many are forced to sleep on the ground, putting them in direct contact with the sandfly. The situation in IDP camps in Idleb governorate has been highlighted to be particularly dire due to a lack of adequate shelter and insufficient medical facilities and services.[12]

Most commonly reported shelter type for pre-conflict population households in asssessed communities:

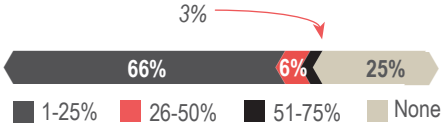
Independent apartment/house	97%
No information	2%
Unfinished apartment/house	1%

Most commonly reported shelter type for IDP households in assessed communities:

Independent apartment/house	68%
Shared apartment/house	12%
Tent	11%

Safe and cost-effective methods used to limit exposure to the vector include indoor residual spraying, the use of insecticide-treated or long-lasting insecticidal nets, and environmental management that includes improved housing. Before the outbreak of the conflict, these vector control measures kept the disease at bay, as they were commonly used across northwest Syria where cutaneous leishmaniasis has been endemic since at least the eighteenth century.[10] Since 2011, the use of prevention measures has decreased sharply, leading to the wider spread of disease.

Proportion of assessed communities reporting percentage uninhabitable buildings due to damage:

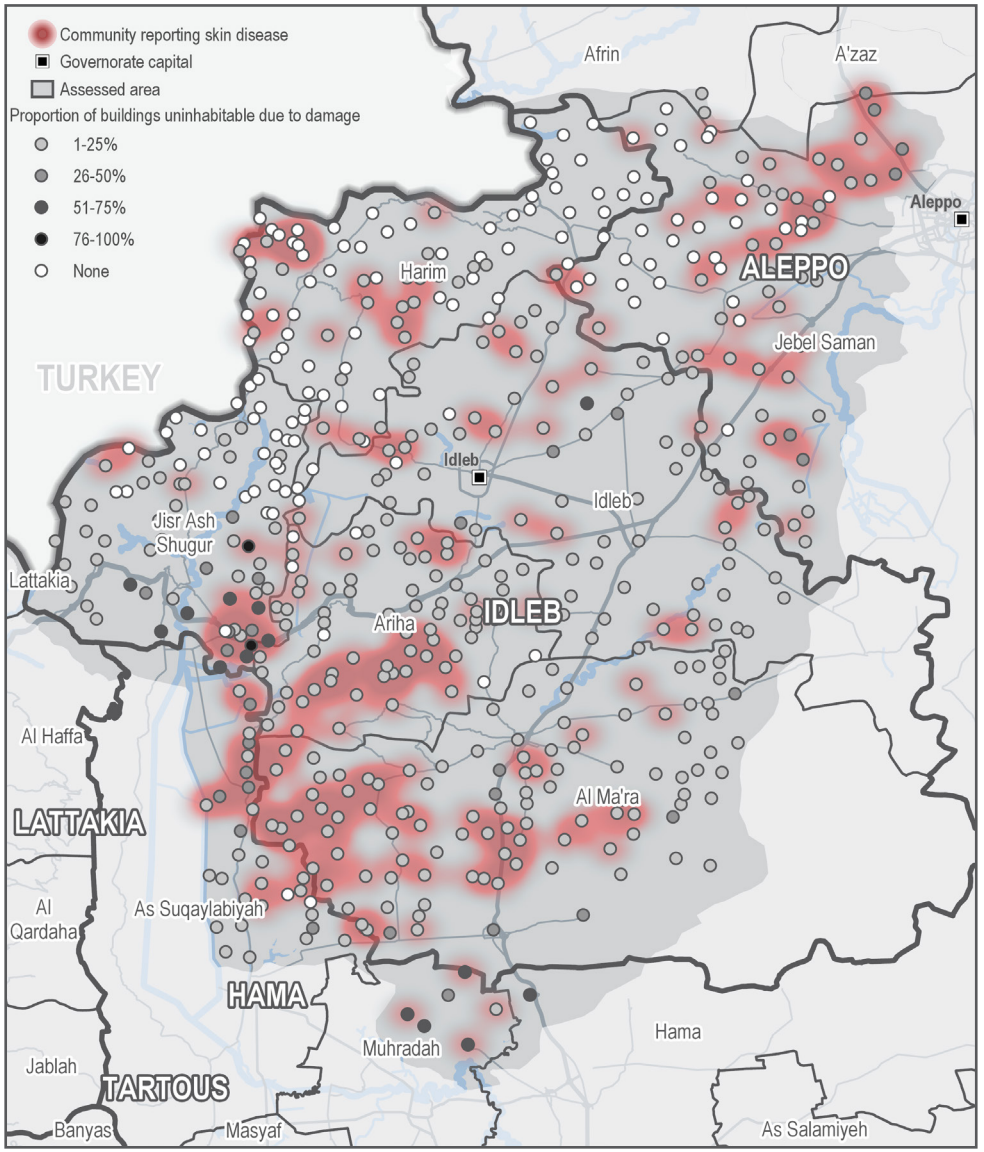


"There's a lot of destruction, a lot of rubble because of the war...There are lots of places for these sandflies to live."

Medical worker of the Mentor Initiative interviewed by WHO, 23 October 2017.[9]

Map 3 shows that in almost all communities in which KIs reported skin diseases, uninhabitable buildings due to damage were also reported. Prevalence of skin diseases around communities with reportedly no uninhabitable buildings was notably lower, highlighting the connection between damaged structures (rubble) and potential sandfly breeding.

Map 3. KIs reporting skin diseases as a common health problem and KIs reporting perceived proportion of damaged uninhabitable buildings in their community

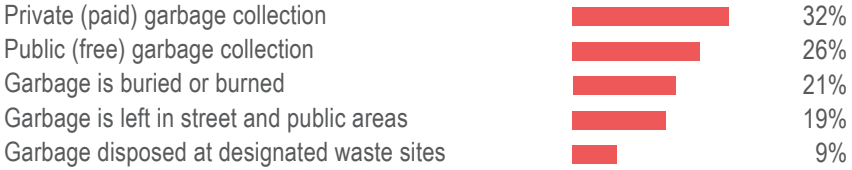


COMPOUNDING FACTORS

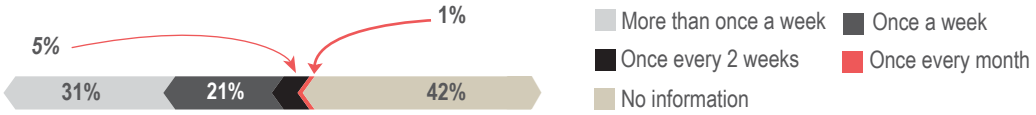
WASH

Years of conflict have eroded Syria's waste management system. The organic substance and humidity of household rubbish provide for an environment highly conducive to sandfly breeding. KIs in 19% of assessed communities reported that people most commonly disposed of garbage by leaving it in the streets and public areas. The inadequate management of garbage dumping places could contribute to increased vector breeding. In northwest Syria, sanitary conditions are especially dire due to the large scale displacements to IDPs sites throughout 2018, further contributing to a deterioration of already overused WASH facilities.[4]

Most commonly reported method of garbage disposal in assessed communities:

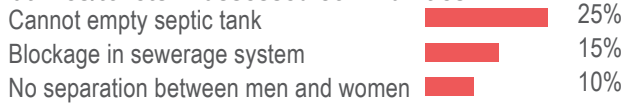


Most commonly reported frequency of garbage collection in assessed communities:



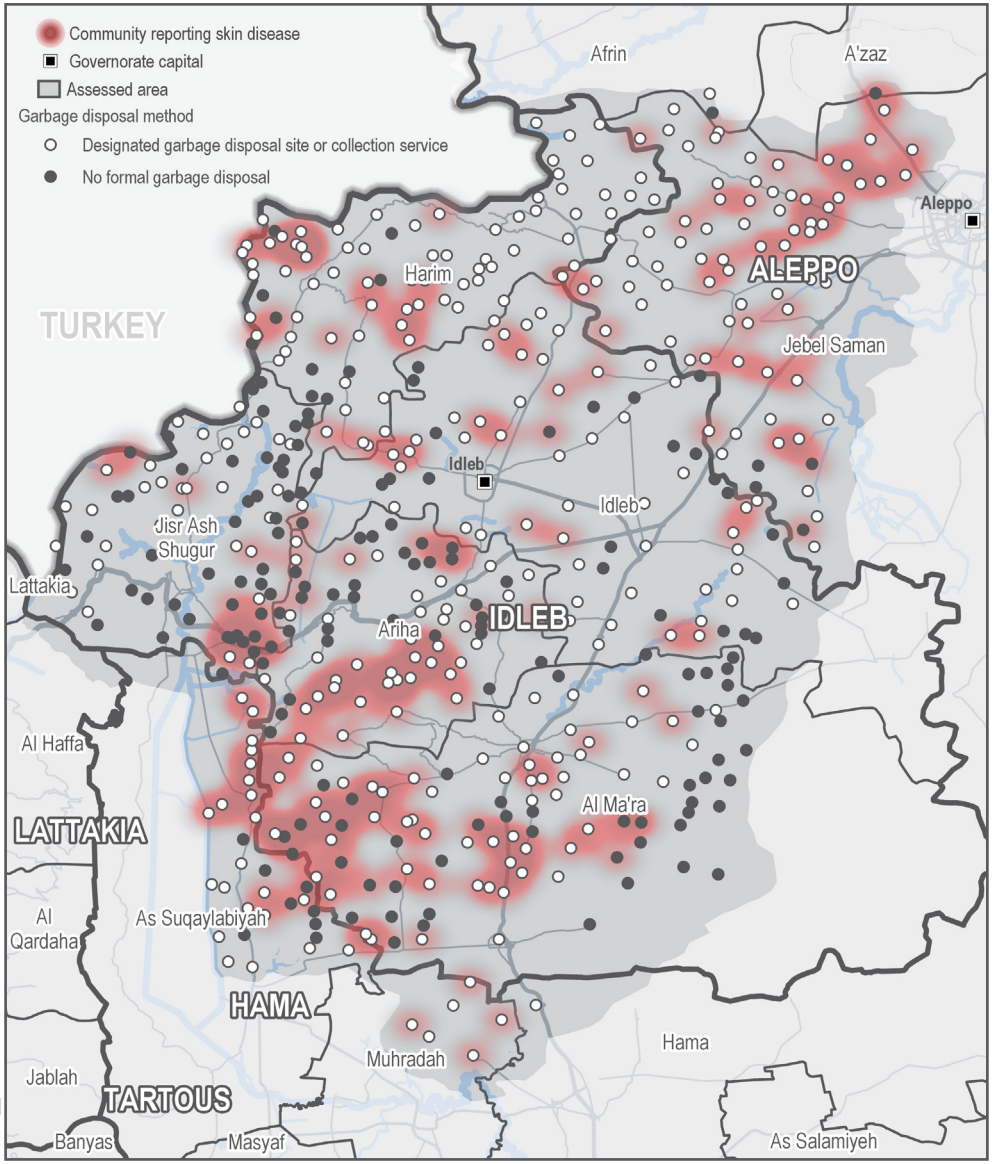
Damage to water, sanitation and hygiene (WASH) facilities has further spurred the spread of leishmaniasis across northern Syria. It is estimated that at least 70% of the sewage is left untreated across Syria and less than 50% of the sewerage systems are fully functional. The lack of functional wastewater treatment systems and sewerage systems causes a discharge of raw sewage into open areas, spoiling water sources and soils. The dysfunctionality of sewerage systems has increased public health risks considerably, while also placing refugees and IDPs hosted in camps and sites at a particular risk due to substandard conditions of sanitation facilities and overcrowding.[4]

Top 3 most commonly reported problems with latrines/toilets in assessed communities:



> "There's no proper waste management in parts of Syria. The garbage is where they prefer to breed."
>
> Medical worker of the Mentor Initiative interviewed by WHO, 23 October 2017.[9]

Map 4. KIs reporting skin diseases as a common health problem and KIs reporting main method of garbage disposal in their community



COMPOUNDING FACTORS

FOOD SECURITY & LIVELIHOODS

Since the outbreak of the Syrian conflict, socio-economic conditions have severely deteriorated, resulting in over 80% of the population living below the poverty line.[4] Over half of the potential members of Syria's workforce (between the ages of 18 and 65) are without sustained employment.[4] Hence, harmful coping strategies stemming from insufficient income, such as meal reduction coupled with a lack of access to health care services have been linked with increased rates of malnutrition.[4]

Most commonly reported level of food sufficiency in February 2019:

59% Food is somewhat sufficient
28% Food is sufficient
12% Food is insufficient

Of the assessed communities, KIs reported that the most common barriers to accessing enough food were a lack of resources to buy available food (69%), some types of food were too expensive (56%), and local food production had decreased (30%).

Most common sources of income:

Unstable daily employment	89%
Farm owner	81%
Business/Trade	54%

KIs estimated that over 80% of civilians living in the assessed communities were reliant on unstable daily employment and farming. Individuals working with livestock and other forms of farming are at a heightened risk for infection due to their exposure to environments favorable to vector borne diseases, largely due to improper disposal of animal droppings and rubbish.[13]

KIs in 91% of assessed communities reported that the monthly income was insufficient to support household needs, leading to harmful coping strategies such as sending children to work or beg and reducing the size of meals. Moreover, KIs in 84% of assessed communities estimated that the monthly household income in February was less than 50,000 SYP (less than $100).* The lack of income and high living costs often result in repeated displacement, which can further increase exposure to vectors and other risk factors of leishmaniasis.

Top 4 most commonly reported coping strategies to deal with a lack of income in assessed communities:

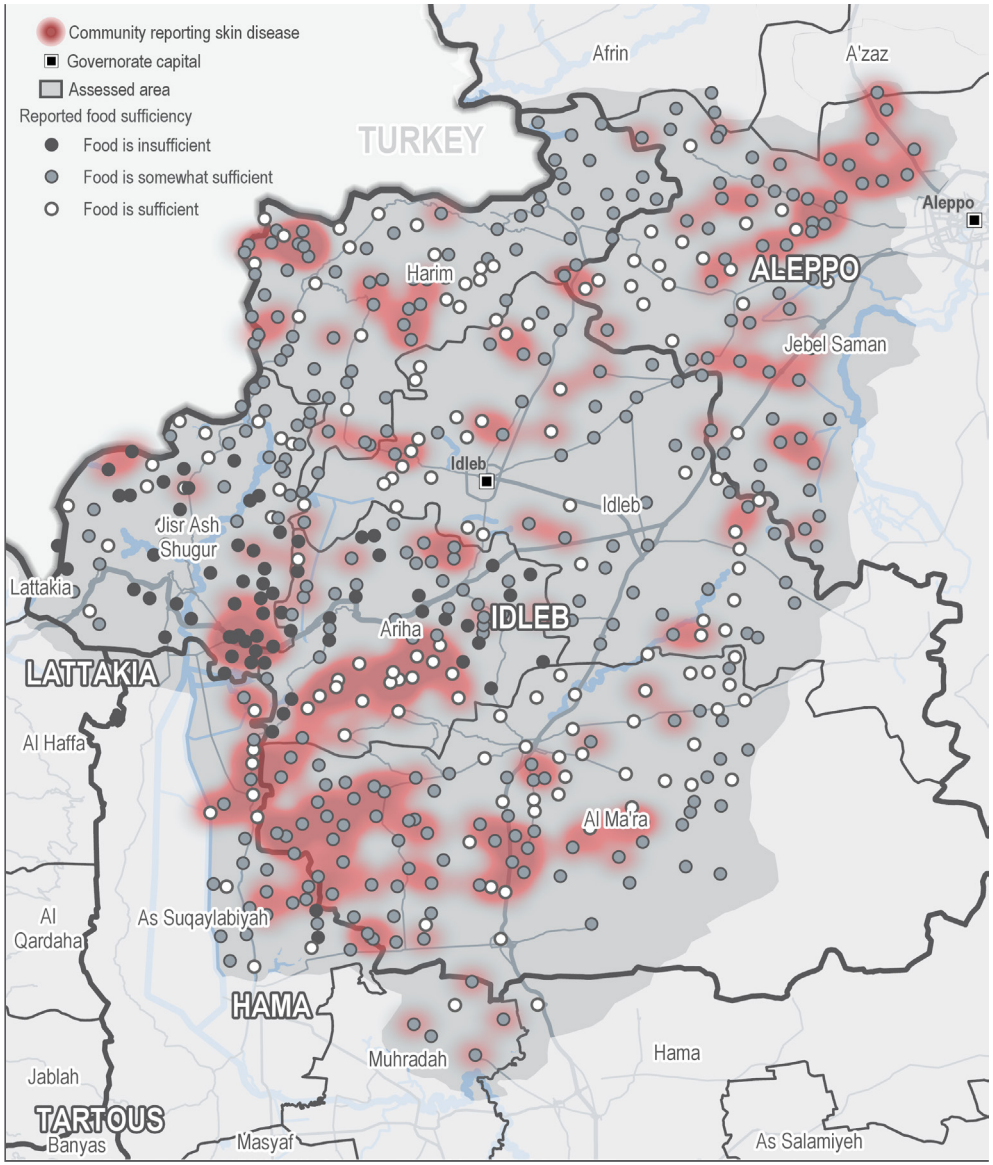
Borrowing money from family/friends	66%
Children sent to work or beg	55%
Reducing the size of meals	26%
Skipping meals	19%

"I didn't know that dung could be a place for the 'Aleppo Boil' parasite to live"

Livestock keeper from Jarjisa in Hama governorate, interviewed by UNICEF, 2019.[13]

Map 5 shows that in a high proportion of assessed communities where KIs reported skin diseases in their community, KIs also reported some level of food insufficiency.

Map 5. KIs reporting skin diseases as a common health problem and KIs reporting level of access to food (insufficient, somewhat sufficient, sufficient)



*According to an exchange rate of 1 USD = 540 SYP (see Syria Market Monitoring Dataset April 2019).

RECOMMENDATIONS

The following recommendations aiming to reduce the prevalence of leishmaniasis in northwest Syria were developed with the support of the Health, WASH and FSL clusters.

1. A **multi-sectoral integrated approach** is required to tackle the complex causes of leishmaniasis and to decrease incidence of the disease in northwest Syria.
2. An **establishment of a multi-sectoral working group** that will guide and coordinate leishmaniasis efforts is recommended.
3. **Sufficient and predictable funding streams** for leishmaniasis control and prevention must be maintained. Funding gaps can interrupt essential preventative measures at critical stages of the vector breeding cycle.
4. **Raising awareness** among donors regarding leishmaniasis and its prevention and treatment should remain a priority.
5. **Increasing the number and building the capacities** of new and existing **humanitarian actors responding to leishmaniasis** in northern Syria is recommended to achieve better coverage of leishmaniasis prevention and treatment efforts.
6. **Vector control measures**, notably Indoor Residual Spraying (IRS), should be implemented according to the World Health Organization's (WHO) standards. Vector control measures should also include a strong monitoring component to avoid vector resistance and exposure of population to additional health risks.
7. Treatment should be available for all types of leishmaniasis through continued **capacity building of health care workers, health care facilities**, as well as availability of adequate diagnostic and treatment supplies.
8. A **medical leishmaniasis hotline** for information and treatment support should be established and maintained.
9. **Implementing solid waste management systems** in accordance with existing WASH-cluster guidelines should be prioritised. The focus of environmental sanitation efforts should be the reduction of garbage left in open spaces, which can serve as vector breeding sites.
10. To promote effective waste management, FSL actors should consider **ways to reduce packaging and waste from food baskets** by working with suppliers and relevant sectors as well as beneficiary communities.
11. **Community knowledge, engagement and local partnerships** should be developed to improve the effectiveness of prevention measures and promote early diagnosis and treatment.
12. **Key messages on leishmaniasis prevention and treatment** should be developed for dissemination by all sectors interacting with communities through various modalities.
13. Based on their higher level of risk of contracting leishmaniasis, assisting and supporting **IDPs and other vulnerable groups should be considered a priority**.
14. **Existing monitoring and reporting mechanisms should be enhanced** to track response efforts to communities in order to ensure those most at risk are being effectively targeted by all the sectors.

About REACH

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. The methodologies used by REACH include primary data collection and in-depth analysis, and all activities are conducted through inter-agency aid coordination mechanisms. REACH is a joint initiative of IMPACT Initiatives, ACTED and the United Nations Institute for Training and Research - Operational Satellite Applications Programme (UNITAR-UNOSAT). For more information please visit our website: www.reach-initiative.org. You can contact us directly at: geneva@reach-initiative.org and follow us on Twitter @REACH_info.

Endnotes

1 REACH (2018). IDP Situation Monitoring Initiative (ISMI). Monthly Overview of IDP Movements in north-west Syria, November 2018. Available online.

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