Heavy rains, strong winds and cold temperatures caused by storm Norma, which hit Lebanon on 8 January, have severely affected over 11,300 Syrian refugees, including 6,000 children, in more than 360 settlements sites. The makeshift housing arrangements are not adequate to deal with the harsh conditions (UNHCR 10/1/2019; Middle East Eye 9/1/2019). At least 700 Syrian refugees have been evacuated and 900 Syrian refugees are displaced by the impact of the storm (IFRC 9/1/2019; Syria Direct 9/1/2019). Akkar, Baalbek-Hermel and Bekaa governorates are worst hit by heavy snowfall and flooding. Priority needs are shelter, winterisation kits including blankets, warm clothes, and heating fuel as well as health, WASH and food assistance.

**Anticipated scope and scale**

<table>
<thead>
<tr>
<th>Need for International Assistance</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not required</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

| Very low | Moderate | Major |

Across 850 settlements over 70,000 Syrian refugees are at risk, including 39,900 children, of being heavily impacted by the storm (UNHCR 10/1/2019; UNHCR 8/1/2019). A fast response including winterisation assistance, the implementation of water drainage systems, and the weatherproofing of (damaged) critical infrastructure is urgently needed as another cold storm is expected on 13 January. Refugees are at risk of death if urgent assistance does not reach the affected population. Another cold spell will further weaken the resilience of refugees to cope with the below freezing temperatures (The Daily Star 10/1/2019; IFRC 9/1/2019).

**Key priorities**

- **urgent NFI needs for Syrian refugees**
- **1,600+ displaced or evacuated**
- **70,000+ need urgent winterisation response**

**Humanitarian constraints**

Humanitarian operations are challenging especially in flood-affected Bekaa governorate. Road access is still limited as some mountainous roads are only partially functional due to blockages by snow, floodwater and mudslides (L’Orient le Jour 11/1/2019; UNHCR 8/1/2019). Restrictive national policies mean that bureaucratic impediments can inhibit international agencies response efforts (Crisis Watch 6/2018; GDPC 12/10/2017).

**Limitations**

Even though all of Lebanon is affected, this report mainly focuses on the worst affected governorates of Akkar, Baalbek-Hermel and Bekaa. It further concentrates its analysis on Syrian refugees only, even though vulnerable Lebanese households, especially in affected host communities, are impacted. Detailed information about the numbers of displaced and evacuated Syrian refugees is lacking.
Crisis Impact

Since 6 January, storm Norma is causing heavy rains, snowfall, erosion, and cold temperatures, across Lebanon. The storm has affected around 11,300 Syrian refugees residing in at least 360 settlements, mainly in the north and eastern governorates of Akkar, Baalbek-Hermel and Bekaa. Pre-storm assessments indicate that the most vulnerable Syrian refugees reside in these governorates (UNHCR 10/2018, UNHCR 10/1/2019, Middle East Eye 9/1/2019, The Journal 9/1/2019, UNHCR 10/9/2019). In total, at least 361 formal and informal refugee sites have been affected. Over 200 of these sites have been severely damaged or totally destroyed. The majority of affected informal settlements are in Bekaa and Baalbek-Hermel governorate. (UNHCR 7/1/2019, UNHCR 8/1/2019, UNHCR 9/1/2019)

One child died in the floods in Minyeh town, North governorate (AAWSAT 9/1/2019, BBC 9/1/2019, Syria Direct 9/1/2019; Union of Medical Care and Relief Organization (UOSSM) 8/1/2019).

70,000 Syrian refugees living in 850 informal settlements are at risk of needing emergency assistance due to the extreme weather, including 33,000 people living in flood risk areas and 3,600 people at risk of exposure to extreme snowfall (more than 50cm). Around 35,000 refugees are living at altitudes above 1,100 metres and are exposed to extreme cold (UNHCR 8/1/2019, UNHCR 8/1/2019).

Some villages have been isolated as roads have been blocked with snow or floodwater and landslides (Lebanese Broadcasting Channel International (LBCL) 9/1/2019, L’Orient le Jour 11/1/2019).

The storm weakened on 9 January; however, temperatures are forecast to remain below average in most affected areas (NRC 9/1/2019). Another cold storm from Central Europe is expected to deteriorate the situation from 13 January and last for at least three days (Vajju 9/1/2019).

**Shelter:** 55% of Syrian refugees in Lebanon live in inadequate and makeshift shelters (UNHCR 10/2018). The storm has impacted the living conditions of thousands of people, especially Syrian refugees residing in informal settlements. Many tents have been flooded with water and mud or, as temperatures dropped, many are covered in snow and at risk of collapse. Widespread tent repairs are needed as rain and snow have weakened their structure. Heating is a major need (AAWSAT 9/1/2019, UNHCR 8/1/2019, Independent 9/1/2019, Med Global 9/1/2019). Additionally, there is a high need for NFIs such as new tents, blankets, mattresses and winterisation kits (IFRC 9/1/2019, UNHCR 8/1/2019).

**North and Akkar governorate:** More than 400 tents were destroyed in 76 informal settlements, affecting more than 2,000 Syrian refugees. Most affected areas are Ouadi El Jamous, Bebnine, Kouachra, Mohamarret, Semmaqieh (UNHCR 8/1/2019).

**Bekaa and Baalbek-Hermel governorate:** More than 117 informal settlements were affected, including 67 heavily and 38 moderately (UNHCR 8/1/2019). The informal tent settlements in eastern Bekaa Valley are mainly affected by flooding. The situation in Arsal region, Baalbek-Hermel governorate, is of particular concern as refugees are exposed to extreme cold and heavy snowfall (Syria Direct 9/1/2019, Independent 9/1/2019). In total, UNHCR assessed 315 sites at risk of flooding and or snow accumulation, of which 86 are at high risk and 229 at high altitude (above 1,100m). Shelter for 1,500 refugees is available in schools (UNHCR 9/1/2018).

At least one settlement in Arsal is completely covered and cut off by the snow. Many tents have been damaged by the weight of the snow and some have completely collapsed. Some families are trapped in their homes (BBC 9/1/2019). Families are burning clothes in order to keep warm (Syria Direct 9/1/2019). The risk of further damage is high as temperature rises and/or more snowfall occurs.

**Displacement:** At least 700 Syrian refugees from 20 different refugee sites have been evacuated and more than 900 have been displaced due to floods and heavy snowfall in Akkar and Bekaa governorates (Syria Direct 9/1/2019). According to UNHCR, in both regions, alternative sites have been identified to accommodate families displaced by the storm (Spurk 9/1/2019). According to local sources, the alternative sites are, often overcrowded and facilities overstretched (WLRN 9/1/2019). It is assumed that more refugees have been, and will be, temporarily displaced if weather conditions do not improve, or worsen. Since reports are limited in detail, the risk of double counting of evacuees cannot be eliminated.

**Akkar governorate:** The Lebanese Red Cross evacuated more than 500 people from Akkar’s Semmaqieh refugee settlement on 7 January due to flooding (Daily Star 9/1/2019). Most refugees are joining other relatives in adjacent areas. Others are have found to temporary shelters in schools and mosques (UNHCR 8/1/2019).

**Bekaa governorate:** A minimum of 70 refugees from Houch el Harime in the Bekaa Valley found temporary shelter in URDA camp and Kanzani and Sawa schools and mosques on 9 January where they are still residing (UNHCR 8/1/2019, Syria Direct 9/1/2019, Independent 9/1/2019). In Bar Elias municipality, 600 individuals have been sheltering in and around Sawa school from neighbouring locations. Additional 230 displaced Syrian refugees in Majdal Anjar have found refuge in two schools (UNHCR 9/1/2018).

**Baalbek-Hermel governorate:** Inhabitants, including refugees, of the localities of Ham and Maaraboun, Baalbek District, were isolated by the snow, but have been rescued (L’Orient le Jour 11/1/2019). More detailed information on their whereabouts is lacking.

**Food:** As many shops and markets are inaccessible, damaged and closed, access to food is limited. Blocked roads further limit the availability of food. Some refugee households report that they have no bread (The Journal 9/1/2019, NRC 9/1/2019). More than one-third of all Syrian refugees are moderately to severely food insecure (VASyr 2018).
Health: The storm affected health services throughout Lebanon. (Medical Teams International 10/1/2019) Access to primary and secondary health care, already difficult for Syrian refugees, is now further restricted in the affected areas (UNHCR 10/2018). Transportation options to health facilities are limited due to road blockage by flooding or snow (Washington Post 8/1/2019). Blood units are needed in local hospitals (IFRC 9/1/2019; UNHCR 2018/2019; UNHCR 9/2018). Syrian refugee populations in Lebanon are highly vulnerable to severe health risks as they have been lacking warm clothes, fuel for heating, and medical care. (Sputnik 9/1/2019; Syria Direct 9/1/2019)

WASH: Personal hygiene items are urgently needed (IFRC 9/1/2019; UNHCR 8/1/2019). Sanitation facilities are often inadequate in both formal and informal refugee settlements. In Bekaa governorate, wastewater has contaminated flood water. While the risk of contracting diseases through contaminated water is high, there is a lack of reporting on the severity of this issue. (Vaja 9/1/2019).

Information is lacking about specific WASH needs; however, given that 15% of all Syrian refugees in Lebanon have no access to drinking water it is very likely that current weather conditions are exacerbating the situation (UNHCR 10/2018).

Education: The Lebanese education minister closed all schools on 8 January (Washington Post 8/1/2019; Medical Teams International 10/1/2019). As of 11 January, they have not yet reopened. Less than half of all school aged refugee children in Lebanon are enrolled in primary or secondary education (VASYR 2018).

Vulnerable groups affected

Among the Syrian refugee community, children, elderly, people with special needs and pregnant and lactating women form the most vulnerable group as they depend on additional external help to overcome to cold and wet conditions. UNICEF estimates that at least 6,000 children are already directly impacted by the extreme winter conditions (UNICEF 10/1/2019). Out of the 70,000 Syrian refugees at risk, around 39,900 are estimated to be children (UNHCR 9/1/2019). As savings and livelihood opportunities may deplete, the risk of early child marriage increases. Currently, 29% of all Syrian refugee girls from age 15-19 years are married, an increase of 7% compared to 2017 (VASYR 2018).

Female-headed household are more vulnerable as their income sources are lower and more female-headed household live in non-permanent and makeshift shelter arrangements than male-headed households (VASYR 2018).

The storm exacerbates severe vulnerabilities that already exist among the refugee population. While all people living in storm-hit areas are affected, Syrian refugees are most impacted. As 69% of Syrian refugees live below the poverty line and have severely limited livelihood/employment opportunities, their living arrangements are often inadequate to provide for the winter. Most households have no means to cope with the cold temperatures, or buy winter clothes and fuel for heating. 41% live in precarious and unsafe housing (VASyR 2018; UNHCR 10/2018, UNHCR 11/10/2018; Middle East Eye 9/1/2019; UOSSM 8/1/2019). According to a UNHCR report, more than 732,000 Syrian refugees are not adequately equipped for the winter period (UNHCR 2018/2019; UNHCR 9/2018).

Humanitarian and operational constraints

Due to the fact that there are no official camps, hundreds of small settlements are built, which makes the response slow and more difficult to coordinate. Some refugee settlements in the Bekaa Valley have been flooded with over 50cm of water (UOSSM 8/1/2019). Efforts to pump the water accumulating in informal tented settlements remain challenging since some settlements lie below road levels and water pours back. Work will resume once the rain stops. (Sputnik News 8/1/2019; UNHCR 8/1/2019).

Since the storm, multiple roads between Beirut and Damascus, Syria, and Beirut and the governorates of Bekaa and Baalbek-Hermel have been blocked by snow or floodwater and/or closed by police forces due to security reasons. As of 11 January, some roads have begun to reopen, however roads linking Tarchiche to Zahle, Kfardebiane to Habeth-Baalbeck, Qammoua to Qobayate and Qammoua to Hermel remain closed. Transportation throughout Lebanon is often disrupted and not reliable. If the storm worsens again, access will remain a problem. Roads will be blocked again, particularly to and from remote localities and in mountainous areas that face the risk of being blocked by landslides. Access in Bekaa Valley remains especially limited (L’Orient le Jour 11/1/2019; UNHCR 8/1/2019; Garda World 7/1/2019; IFRC 9/1/2019; Washington Post 8/1/2019; AAWSAT 09/1/2019). In anticipation of the storm that will hit on 13 January, no cars are allowed on mountainous roads unless they are equipped with snow chains (L’Orient le Jour 11/1/2019).

Power outages can be expected in affected areas over the coming days (Garda World 7/1/2019).

General access for international humanitarian workers remains limited in Lebanon. Restrictions on residency permits for UNHCR’s international staff, limitations in operational scope, and the restrictive refugee registration policy prevent UNHCR and other international partners from fully implementing their humanitarian programmes to address refugees’ needs (CrisisWatch 07/2018; Al Jazeera 06/2018; Aid in Danger 05/2018).

Aggravating factors

Onset of new storm ‘Tracy’ on 13 January

Another storm, Tracy, from Central Europe will reach Lebanon on 19 January, hitting Lebanon with extreme weather conditions and it is expected to last for three days. Another drop in temperatures, snowfall at even lower altitudes and heavy rains are expected, worsening the current situation. As housing infrastructure and roads are in
need of repair and as the coping capacity from many affected people is already stretched, the onset of storm Tracy will have to ice over further complicating access (The Daily Star 10/1/2019; Vaaju 9/1/2019).

**Inadequate infrastructure in Syrian refugee settlements**

The infrastructure in both formal and informal Syrian refugee settlements in Lebanon is fragile and not adequate for winter (VASyR 2018). The Lebanese government put several policies in place in order to avoid permanent settlement of Syrian refugees in Lebanon. The government has refused to set up any official refugee camps and imposed restrictions on materials that refugees can use to build their shelters. Therefore, the majority of Syrian refugees in Lebanon are living in makeshift tents and improvised wooden and plastic structures (BBC 9/1/2019; Middle East Eye 9/1/2019; UOSSM 8/1/2019). As a consequence, one-third of all refugees live in overcrowded shelter arrangements. 30% of refugees live in shelter arrangements below humanitarian standards with 5.5% in dangerous living conditions (VASyR 2018). In Bekaa governorate, informal makeshift settlements are often built on agricultural land that is very prone to flooding (Vaaju 9/1/2019). The protracted refugee crisis in Lebanon also puts pressure on the health and education systems, making it harder for both refugees and host communities to access basic services. Tensions between host and refugee populations are frequent (WAAD 16/11/2018; VASyR 2018). Drainage systems as well as other critical infrastructures such as schools, hospitals and roads in camps and informal settlements are in high need of repairs and weatherproofing in order to ensure security and continuous provision of services (UNHCR 09/2018; Independent 9/1/2019; NRC 9/1/2019).

**Undocumented refugees**

Lebanon has the highest per capita concentration of refugees worldwide, hosting more than 1.5 million Syrian refugees, from which only around 952,000 are registered. The lack of documentation prevents refugees from accessing basic services and from being legally protected. It also limits their free movement and puts them at risk of fines, arrests, detention, exploitation, and deportation (L’Orient Le Jour 13/06/2018; HRW 20/04/2018 Al Araby 20/04/2018). The unofficial number of people in need is, therefore, difficult to estimate and makes the response more challenging.

**Return movement to Syria**

With the support of Russia, the Lebanese government has taken on an active role in facilitating the return of Syrian refugees back to their home country. The government claims that 90,000 refugees have gone back to Syria, while only 2,000 Syrians are estimated to have returned (Reuters 11/12/2018; UN News 10/1/2019). Many refugees have expressed concern about eventually forced returns due to arrests upon arrival by the Syrian forces declare (Refugees Deeply 08/08/2018; Reuters 11/12/2018, IRIN 11/12/2018) The government could take the opportunity to use the storm crisis in order to push for more refugees to return to Syria (Independent 9/1/2019, Syria Direct 9/1/2019; UN News 10/1/2019)

**Dysfunctional government may be unable to respond**

For more than seven months, prime minister-designate, Saad Hariri has been trying to form a government. However, the power play between sectarian opposition groups, particularly Hezbollah and its allies who made significant gains in the May elections, hinder political progress. The political deadlock worsens public service delivery and negatively impacts the economic situation (UN News 10/1/2019; Reuters 1/12/2018; The Star 22/11/2018; World Bank 11/10/2018) Any government attempt to support the response to the impact of the storm may be slow or inefficient, in part due to the political deadlock delaying potential decision making.

**Key characteristics**

- **Total Lebanese population:** 7.53 million (World Bank 2017)
- **Refugee figures:**
  - Total No. of registered Syrian Refugees: 948,849 (UNHCR 31/12/2018)
    - Akkar governorate: 105,113 (UNHCR 30/11/2018)
    - Baalbek-Hermel governorate: 118,143 (UNHCR 30/11/2018)
    - Bekaa governorate: 222,449 (UNHCR 30/11/2018)
  - Estimated No. of Syrian refugees in Lebanon: 1.5 million (UNHCR 31/12/2018)
  - Total No. of Palestine Refugees (RPS and PRL): 291,460 (UNHCR 10/2018)
- **Shelter arrangements of Syrian refugee families** (VASyR 2018, UNHCR 10/2018)
  - living in substandard shelter conditions: 55%
  - living in informal settlements: 19%
- **Food security figures of Syrian refugee families** (VASyR 2018, UNHCR 10/2018)
  - some level of food insecurity: 90%
  - moderately to severely food insecure: 34%
- **Health statistics of Syrian refugee households** (VASyR 2018, UNHCR 10/2018)
  - Unable to access needed primary healthcare: 13%
Unable to access needed secondary health care: 23%

- WASH statistics of Syrian refugee households (VASyR 2018)
  - Access to drinking water: 91%
  - Used of basic drinking water services: 85%
  - Rely on bottled drinking water: 43%

Response capacity

Local and national response capacity

Most of the response has been done through national teams of volunteers from the Lebanese Red Cross and local NGOs. Local activists have also set up an independent fundraising initiative to help refugees in storm-affected areas (Syria Direct 9/1/2019; Independent 9/1/2019; IFRC 9/1/2018). Refugee volunteers already working with (I)NGOs are supporting active communication between affected communities and response partners (UNHCR 8/1/2019). The Beirut Mount Lebanon Protection Helpline is operational (UNHCR 9/1/2019).

On 10 January the Lebanese government announced a series of emergency measures in order to be prepared for a storm expected on 13 January and due to last for at least three days (The Daily Star 10/1/2019; Vaaju 9/1/2019). Preparedness measures include the usage of snow chains on high-altitude roads, the cleaning of drains and river channels to prevent flooding, the cleaning of roads from mud, snow and rocks, and the rebuilding of emergency infrastructure. The governmental Social Development Centres have not yet been active in providing response. In order to improve the response effort there is reportedly a plan in place to establish a government coordinated crisis management body (L’Orient le Jour 11/1/2019; The Daily Star 10/1/2019).

International response capacity

UNHCR and other international NGOs are distributing emergency supplies under their ongoing winter assistance program including blankets, shelter kits and other emergency supplies on top of existing monthly cash assistance packages. The response is co-ordinated Lebanese Ministry of Social Affairs (MoSA) and UNHCR, who are cooperation closely with affected municipalities where most NFIs are stocked (Syria Direct 9/1/2019; UNHCR 10/1/2019; The Journal 9/1/2019; UNHCR 8/1/2019)). Inter-Agency coordination meetings are held in several governorates among different partners involved to coordinate assessments and enhance international response, which is mainly provided via Beirut (UNHCR 8/1/2019).

Population coping mechanisms

As many Syrian refugees are already experiencing their eighth winter and their financial situation is limited, coping capacity to deal with shocks remains low. As people have limited savings and empty food stocks, many relay on negative coping strategies such as eating only one meal a day or burning essential NFIs such as furniture and clothes to heat their homes (CNN 10/1/2019; Independent 9/1/2019; Syria Direct 9/1/2019).

Information gaps and needs

- Data on the displaced and evacuated refugees. Data segregated by gender and geographic area is conflicting and/or lacking.
- Information on the state of critical infrastructure, especially in Syrian refugee settlements, is not available.
- There is a lack of information about the organisations available to respond to this crisis (CNN 10/1/2019; UNHCR 2018/2019).

Lessons learned

UNHCR and other partners are providing winterization assistance to refugee families. However, funding challenges limit the reach of the operations. The beneficiaries constantly report that the additional income source during the winter months is needed as they are better able to deal with the challenges of winter, including shelter preparation, food coping strategies and higher winter-related expenditure (UNHCR 2018/2019).
Map: Most affected areas by Storm Norma

Yellow highlighted areas indicate most affected areas by Storm Norma as of 9 January

Source: UNHCR 9/1/2019