

THE TURKEY–SYRIA EARTHQUAKE

An overview of the 6 February earthquake and its
impact on northwest Syria

February 2023

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Damage to Bseniah village, northwest Syria. (Source: Mercy Corps Syria, 2023).

Cover photo: Teams work to clear rubble in Aleppo (Source: AP/Omar Sana-diki)

Introduction

The 6 February earthquake, its aftershocks, and its trans-border aftermath constitute a generational tectonic event with unimaginable impact atop a prolonged crisis. The confluence of these factors has exposed not only the complexities of a contextual stalemate but also the inherent systemic weaknesses: supply chain bottlenecks, splintered coordination mechanisms, strained resources, and the competition between political differences and altruistic rescue and response efforts. Given these weaknesses, the emergency response in northwest Syria has been characterized by many – most markedly local actors such as the Syrian Civil Defense – as slow, ineffective, under-resourced, and poorly implemented.

“We have so far failed the people in north-west Syria. They rightly feel abandoned. Looking for international help that hasn’t arrived. My duty and our obligation is to correct this failure as fast as we can. That’s my focus now.”

Under-secretary-general for humanitarian affairs and emergency relief coordinator, Martin Griffiths

This situation report provides a preliminary overview of under two weeks of events that transpired after the 6 February earthquake. Epicentered in southern Turkey, the quake has devastated Turkish and Syrian communities, overwhelming local response, coordination, and governance actors. In Syria, the earthquake has [left](#) 5,791 dead, 10,041 injured, and 11,000 families homeless or seeking shelter. Though speculative, the death count is likely to sharply rise in northwest Syria as debris is removed, piece by piece.

With a primary focus on opposition-held northwest Syria, this report assesses the weaknesses in administrative and military structures, stemming from a multitude of factors: the legacy of cross-border UN Security Council resolutions; poor coordination, and lack of capacity at the local, regional, and international levels; and the influence, interference, and control of 4.5 million individuals in northwest Syria by at least five governing authorities (SSG, SIG, Autonomous Administration, Syrian government and Turkey), six armed actor umbrellas and militaries (HTS, SNA, SDF, Syrian government, Russia and Turkey), and numerous international actors, including multilateral institutions and response organizations, as well as regional and international stakeholders.

Ultimately, this report argues that the inherent systemic weaknesses have contributed to the current status of the earthquake response, but will have lasting effects underpinned by increased resource competition, distrust and lack of confidence between actors, duty bearers, and the international community, and potential opportunistic shifts in (geo-)political bargaining specifically related to the future of northwest Syria.

Finally, the report concludes by offering potential perspectives in the utilization of existing data sets for identifying and prioritizing resource allocation and response activities, in the absence of robust, complete datasets. While nowhere near perfect, response actors must think creatively when considering the array – and lack thereof – of evidence for emergency and short-term earthquake response activities.

As an addendum in a separate report PDF, the HAT has published ten urban profiles for select cities throughout northwest Syria. Each mini-profile contains remote-sensed damage assessments and night light reflectance (NLR) that compares average NLR for January 2023 with NLR for 7 February and 12 February. The ten cities were selected based on a balance along three parameters: Syrian Salvation Government and Syrian Interim Government control, Assistance Coordination Unit reporting on destruction, and vital market and commercial hubs as per REACH’s September 2021 [market network assessment](#).

Immediate response

De facto local governments, authorities, and first responders, all with varying capabilities and resources, put procedures in place to deal with the earthquake. Ministries and local councils allocated significant resources, providing heavy equipment, rescue teams, humanitarian aid, and temporary shelters for the displaced. However, local capacities proved minuscule compared to the magnitude of the disaster and the herculean challenges which it posed. Local actors have continued to call on the UN and international organizations to provide support: primarily rescue teams to aid the displaced and specialized machinery to assist in rescue operations to remove civilians stuck under the rubble. However, the UN and the international community failed to respond adequately, while much-needed aid was delayed in the first three critical days following the earthquake due to a variety of factors, including widespread destruction in southern Turkey, as well as logistical and political struggles.

Local actor response

Syrian Interim Government

Areas under the control of the Turkish-backed Syrian Interim Government (SIG) in northern Aleppo were [declared](#) a disaster zone on 6 February. The SIG put its available resources to assist residents of affected areas, and intensified its communication with international actors to secure support. Crossings with Turkey were made ready to receive shipments of international aid. SIG ministries, however, do not have direct authority over local action, and so were limited to coordinating with the affiliated local councils and the Syrian National Army (SNA) during the response. Representatives from SIG ministries were present in affected areas to show their support and supervise the clean-up effort. The Public Grain Establishment [distributed free bread](#) to people in the hardest-hit locations; 15–20 tonnes of bread is being distributed by the General Authority for Bakeries on a daily basis, funded by the [Syria Recovery Trust Fund](#).

Local councils coordinated directly with Turkish authorities in the neighboring southern Turkish governorates; though formally under the authority of the SIG's Ministry of Local Administration and Services, many local councils in northern Aleppo have long since depended on and coordinated with governor-level Turkish authorities. Turkish governorate officials, however, were understandably preoccupied with their own response to the earthquake, particularly during the first two days. This delayed the immediate response from the local councils, who were expecting instruction and coordination efforts from Turkey. On the second day following the quake, local councils mobilized, providing equipment to assist the rescue teams, preparing shelters for the displaced, and organizing the delivery of aid and the distribution of donations from community initiatives and local organizations. In terms of an administrative function, local councils formed committees to assess damaged buildings, evacuate residents due to unstable dwellings, and supervise the documentation and burial of victims. They also cooperated with security forces in their areas to protect the damaged buildings and prevent looting. Members of local councils have since been accused of serving their own interests, by attempting to redirect rescue teams and aid toward their own needs. In most cases, the attempts to redirect rescue and response efforts were largely ignored by rescue teams and community leaders.

Syrian Salvation Government

In opposition-held areas of Idleb, the Syrian Salvation Government (SSG), was quick to demonstrate its capabilities at the ministerial and local council level in the immediate aftermath of the disaster. An Emergency Response Committee [was formed](#) on 6 February to coordinate relief and rescue efforts and

assess the scale of damage caused. Ali Keda, the newly reappointed SSG prime minister, [directed](#) the various ministries:

- Healthcare workers from the Ministry of Health were placed on high alert and all public and private hospitals were directed to receive the wounded.
- Police officers from the Ministry of Interior were on high alert to assist residents impacted by the earthquake, protect their property, and facilitate ambulances driving to and from hospitals.
- The Ministry of Development opened temporary shelters to welcome affected families and help provide for their immediate needs, while vehicles were set up to transport humanitarian assistance when needed.
- The Ministry of Local Administration directed vehicles to assist in rescue operations and reopen roads, and formed a Safety Committee to assist residents in assessing the structural integrity of the buildings which remained standing.
- The Ministry of Education suspended schools.

The SSG, in solidarity with communities in northern Syria, sent aid and rescue teams to SIG areas. In a first-time visit, the leader of Hay'at Tahrir al Sham, Abu Mohamad al-Jolani, and the Minister of Development [visited](#) the heavily affected SIG/SNA-controlled Jandairis city on 12 February.

Local councils were the first to immediately respond based on directives from SSG ministries according to their capabilities; local reports suggest that in comparison, the SSG's response by local authorities was faster to act with stronger coordination than in SIG areas. Local councils in SSG areas have since been responsible for organizing first responders and equipment to assist rescue teams, opening shelters for the newly displaced and providing emergency aid, and supervising the distribution of donations from the SSG and the communities. Localized committees have also been formed to assess damaged buildings and evacuate in case of potential collapse. Like SIG areas, SSG local councils coordinated with local SSG security forces to prevent potential looting in the earthquake's aftermath.

White Helmets

The Syrian Civil Defense (White Helmets), an emergency response organization made up of volunteers and established in 2014 to save civilians during conflict, was best equipped to immediately respond to the earthquakes. Despite this, the scale of the tragedy meant they were understaffed and under-resourced. In the hour after the first earthquake hit, the White Helmets declared the northwest a [disaster zone](#); it deployed rescue teams to help people stuck under the rubble and began [sending out](#) instructions to residents to evacuate buildings, go to open spaces, and on how to act in the event of aftershocks. The organization's teams have been working tirelessly across opposition-held areas to rescue survivors, tracking the number of casualties and survivors, and updating local authorities and the international community.

Early on, White Helmet volunteers warned that they would run out of fuel needed to operate the rescue equipment, and called for the international community to provide support. Raad Saleh, the organization's director, has been vocal in his criticism of the international response – he has called for an [investigation](#) regarding the UN's failure to mobilize aid into Syria, and said the EU had offered assistance, which had not materialized. On 10 February, [Saleh](#) stated that the chances of finding survivors were extremely low (over 100 hours had passed since the first earthquake hit), and so rescue operations would be scaled down, although volunteers would continue searching for bodies.

Cross-border aid

Despite local efforts, the scale of the disaster is beyond the capacities of the organizations and administrations in the northwest to be able to deal with. The [SIG](#), [SSG](#), and [White Helmets](#) have all called for international assistance, in the form of rescue teams, medical professionals, machinery and emergency humanitarian aid. International pledges of support were swift, however aid was initially unable to enter northwest Syria from Turkey, through the sole [UN-authorized](#) crossing at Bab Al-Hawa, due to [logistical](#) and operational issues, including damaged Turkish roads and a lack of staff to administer the border crossing. Aid was delayed for three days before the first UN convoy crossed into the northwest, and has since been gradually increasing. The UN and other international organizations were [reluctant](#) to use the other crossings, without permission from either the Security Council or the Syrian government – throughout the first week following the earthquakes, [Damascus initially refused](#) to open additional border crossings from Turkey, asking that aid be coordinated crossline from government-held areas. Then, on 13 February, a week after the disaster, Bashar al-Assad [approved](#) the opening of two border crossings, at Bab al-Salama (in Azaz) and Al Ra'ee (Al Bab), for three months to facilitate aid deliveries. The UN and other international actors failed to send cross-border aid for the first three days, after which UN aid convoys and other international aid gradually started to enter.

In addition to a halt in aid deliveries, emergency medical patients were no longer transferred to Turkish hospitals through Bab Al-Hawa, however bodies of Syrian victims were transported from Turkey to their families in Syria. The situation was similar at the Bab Al-Salamah crossing which was restricted to pedestrians with permission to enter and exit to and from Turkey. Historically, the border crossings linking Turkey and northwest Syria (Bab Al-Hawa, Bab Al-Salamah, Al Ra'ee, Jarablus) are used for non-UN medical, relief, and food supplies; with restrictions of movement, concerns were raised over food, medicine and fuel shortages, however these appear to have been short-lived.

Cross-line aid

Despite the degree of need in the northwest, cross-line aid deliveries have been politicalized by multiple actors. The Syrian government required [guarantees](#) that aid be delivered to northwest Syria by ‘trusted’ response actors, including the ICRC and the Syrian Arab Red Crescent, before it would permit cross-line aid into Idlib. On behalf of HTS, [Jolani](#) claimed insufficient security personnel to escort aid through the Saraqib crossing from government-held areas; that Bab Al-Hawa crossing was open, and Jolani emphasized that aid should be delivered across the border from Turkey. There is the potential that Damascus, keen to ensure that all UN aid allocated for the disaster response did not go directly to opposition-held northwest Syria, was compelled into approving the other two border crossings with Turkey as an alternative measure.

In Aleppo, aid trucks from the Autonomous Administration in the northeast were blocked by the SIG at Al Hamran crossing. However, similar to Jolani’s statement, the SIG announced border crossings at Bab Al-Salamah and Al Ra'ee were ready to receive international aid from Turkey. Relations between the Autonomous Administration and the SIG remain strained, with Turkey continuing its offensives against Kurdish influence in the northeast. The SIG defended its position against allowing the aid trucks through, to prevent the Administration (and its Syrian Democratic Forces (SDF) from what SIG officials explained as “[exploiting the issue](#) for political gains”. This [decision](#) was eventually overturned, and on 12 February Al Hamran crossing was opened to humanitarian convoys – with the explanation from the SIG that the cross-line support was provided by tribes and clans of northeast Syria, rather than the Autonomous Administration, SDF, or any of its affiliates. Since 13 February, two convoys of over 100 trucks have arrived in Aleppo and Idlib from the northeast.

Impact assessment

Overview

Immediate term

Needs, aid/assistance, and response

- Though the resumption of cross-border aid convoys has taken place, albeit at a very slower rate as compared to the average number of aid convoys over the past 24 months. According to OCHA data, approximately 650–700 trucks have crossed per month over the previous two years, on average. As of 14 February, 95 trucks with aid from six UN agencies have crossed from Turkey into northwest Syria, according to [OCHA](#).
- Humanitarian aid, mostly consisting of food baskets and NFI kits, crossed into northwest Syria primarily to target the immediate displacement of households evacuated or forced out of their homes. Aside from a small number of specialized international teams for search, rescue, and recovery, authorities, response actors, and communities were left with what was at their disposal prior to 6 February.
- Given the earthquake's immediate impact on household needs, the preexisting breadth and severity of humanitarian needs (particularly related to shelter, WASH, and NFIs; see Annex I), compounding impact the earthquake has had on these needs, it is unlikely that the aid provided through the limited number convoys entering northwest Syria will match preliminary requirements for an adequate response.
- Unsurprisingly, and unfortunately, questions and accusations of the politicization of aid emerged very quickly in the quake's aftermath.

Markets and supply chains

- Though at a standstill in the days subsequent to the earthquake, cross-border commercial trade into the northwest has resumed. Markets in the area rely on Turkish supply chains; with disruptions to supply and transportation in Turkey, it is likely that commercial traffic into the northwest will not be at scale to meet pre-earthquake demand.
- The opening of Bab Al-Salamah and Al Ra'ee border crossings, as well as a 10 February fuel shipment into northwest Syria through Bab Al-Hawa, is an encouraging sign that logistics infrastructure and supply chains in Turkey are still somewhat functional.
- Initial rapid assessments led by REACH suggest that local markets are showing resilience; while the degree of operational vendors does not match pre-earthquake levels, the earthquake has not disrupted trade, commerce, and local vendors en masse, according to the [assessment](#).
- Contradictory reports have emerged regarding food availability and prices in the northwest. On one hand, media sources reported a 20% increase in bread production costs one week after commercial trade resumed. On the other hand, local sources reported bread has been more available more than usual in the Idleb countryside and that staple food prices have been relatively stable due to large amounts of food aid delivered by humanitarian organizations and de facto authorities operating in the area. It is difficult to ascertain the accuracy of the abovementioned reports at a time when market dynamics, as a result of the earthquake, have atomized - what might be taking place in one community might be different in the next.

Armed actors and authorities

- Typically competing actors, the SSG, SIG, Autonomous Administration and the Syrian government, have shown limited signs of cooperation and support for one another.
- The Syrian government and opposition have shown no significant signs of cooperation. The government was initially reluctant to allow cross-line aid and eventually agreed to it under certain conditions. However, after the government agreed to move forward with it, HTS refused to facilitate cross-line aid deliveries.

Short to medium term

Needs, aid/assistance, and response

- As of 14 February, approximately 4,400 deaths and more than 7,900 injuries have been reported, according to OCHA. These figures will continue to increase.
- Inequitable provision and politicization of aid is likely to continue, as both aligned and opposing authorities try to respond to the needs of their direct constituencies as well as cross-border and cross-line counterparts.
- Jandairis, Salqin, and Afrin have seen significant damage, resulting in hundreds of buildings being demolished or partially damaged in the earthquake.
- Jandairis, Salqin, and Afrin have seen the highest levels of NFI and heating diesel needs.

Markets and supply chains

- The amount of remittances and assistance coming into northwest Syria from Turkey, among other factors, has resulted in a shortage of US dollars, leading many money transfer agencies either to increase their fees or deliver the money in installments instead of the full amount outright.
- The Turkish government will be injecting billions of Turkish lira into the economy in response to the earthquake. While this will have a positive impact in the short term, it could increase inflation as the supply of Turkish lira is significantly increased, hurting purchasing power and market functionality in the northwest.
- Similar to construction-related materials, machinery required for debris removal may also be in low supply.

Armed actors and authorities

- The lack of formal response coordination between the SIG and SSG will continue; SIG, for one, would likely want to avoid becoming perceived as too close to the SSG, in addition to on-the-ground practicalities and priorities. Similarly, the durability (including frequency and volume, as well as approval) of assistance from northeast Syria to SIG areas is unlikely to be tenable in the medium term.
- As the shock of the earthquake and its aftermath transforms into grief, the possibility of competition (perhaps turning violent) over scarce resources (market and aid) poses a large threat, particularly between HTS- and SNA- affiliated armed groups.
- Competition over resources may also harden ideological, political, and institutional boundaries between the SIG and SSG.
- As individuals, households, and communities process the significant collective and individualized trauma, authorities may struggle to appropriately handle the transition of initial shock and grief to anger and despair – particularly if anger is directed at local authorities and controlling actors.

Long term

Needs, aid/assistance, and response

- The reputation of international aid actors – both INGOs and UN agencies – has taken a hit. Though speculative, it is very possible that in the long term, acceptance of international actors by local households, authorities, armed actors, and community leaders may be a significant challenge. Trust and confidence will need to be restored.

Markets and supply chains

- Assuming that infrastructure in southern Turkey has not been decimated, markets and supply chains are likely to resume functioning. However, without appropriate measures, continued inflation of the Turkish lira is possible, given the need for the Turkish government to finance response and reconstruction efforts within its own borders.
- The cost of construction-related materials related to the rehabilitation of infrastructure and shelters will also likely increase, given the likely scale of future demand to rebuild in southern Turkey, government-controlled Syria, and northwest Syria. In turn, this may prolong the sharply increased shelter needs, while households and communities rely increasingly on makeshift and informal settlements.

Compounding crises

Syria has been suffering from a series of compounding crises that have worsened the humanitarian situation in the country. The 12 years of conflict have nearly decimated the country's infrastructure costing more than \$117 billion in [material damages](#) and more than 400,000 [lives lost](#). The Syrian pound has depreciated by more than 105% in the past year, reaching an all-time low of 7,250 SYP per USD. The steep decline in the national currency was accelerated by structural issues in the Syrian economy, including decreasing foreign currency revenue streams, sanctions, low foreign currency reserves, and rampant corruption in state institutions.

Controlling actors in the northwest attempted to mitigate the impact of the failing pound by adopting the Turkish lira in June 2020; however, the lira has also depreciated, by 40% in the past year (and as high as 85% annualized in November 2022, reaching an all-time low of 18.84 TRY per USD). Moreover, Syria's already resource-drained healthcare sector had struggled with the COVID-19 pandemic in 2019, and the cholera outbreak in 2022, finding itself ill-equipped to cope with the large number of patients coming in to receive treatment.¹

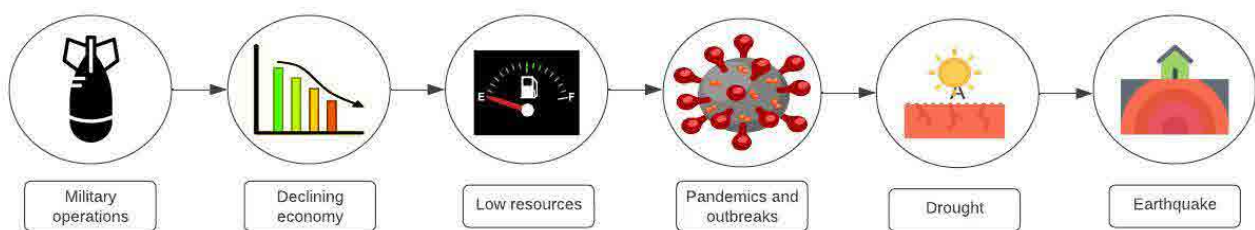


Figure 1. Syria's compounding crises

When the earthquake hit on 6 February, people in the northwest found themselves having to live through one of the worst natural disasters this century. The humanitarian situation was already desperate: The availability of shelter was a significant issue, with approximately 1,720,000 people (almost half of the area's population) living in informal camps. These camps are often [overcrowded](#) with less than 29m² of living space available on average per person. Moreover, 76% of camps do not have proper camp management in place to coordinate and monitor humanitarian assistance, disseminate information and maintain infrastructure – adding to the chaos and lack of coordination in the aftermath of the earthquakes. In addition, preliminary data and assessments suggest that the earthquake has damaged, contaminated, or otherwise rendered many boreholes throughout the northwest out of commission. Residents in the northwest had previously faced water shortages as a result of mismanagement, government neglect, and military operations (damaging infrastructure). This forced residents to drill [boreholes](#) to meet their water needs; around 1,000 boreholes were registered with the SSG Water Resources Department as of August 2022.

On 13 February, both the SSG and SIG stated that their residents have reported pressing need for NFIs, water, and shelter. Pre-earthquake needs data from November 2022 can offer insight into the potential geographical prioritization of humanitarian assistance based on these statements. In SSG-controlled areas, 97% of communities reported NFI needs, with 44% of their population on average identifying it as a priority need. 96% of communities reported shelter needs, with 31% on average identifying it as a priority need. Water needs were unmet in 97% of communities, with an average of 56% of their populations identifying it as a priority need.

In SIG-controlled communities, 77% of communities reported NFI needs, with an average of 20% of the

¹ Drought, another compounding factor for a decline in living standards, caused the Euphrates river's water levels to be reduced and sewage water irrigation to affect water quality because of the consequent reduced water levels.

population identifying it as a priority need. 58% of communities reported shelter needs, with an average of 20% of the population identifying it as a priority need. Lastly, 91% of communities reported water need, with an average of 29% of their population reporting it as a priority need.

Ultimately, communities in SSG-held areas report higher levels of need for NFI, water and shelter when compared to those living under the SIG. Community-level maps reflecting November 2022 NFI, Shelter, and WASH needs in both SIG and SSG can be found in Annex I

Post-earthquake impact

According to Assistance Coordination Unit (ACU) data released on 13 February, the need for food, heating fuel, and shelter-related aid is rising to a critical level in some affected communities. The descriptions and figures below reflect data published by the Assistance Coordination Unit (ACU) released on 13 February of ten communities; these communities were selected by HAT to indicate overall geographic trends of the earthquake’s impact in northwest Syria, based on reported high levels of damage, large populations centers, and importance as primary market hubs as determined by REACH in [September 2021](#).

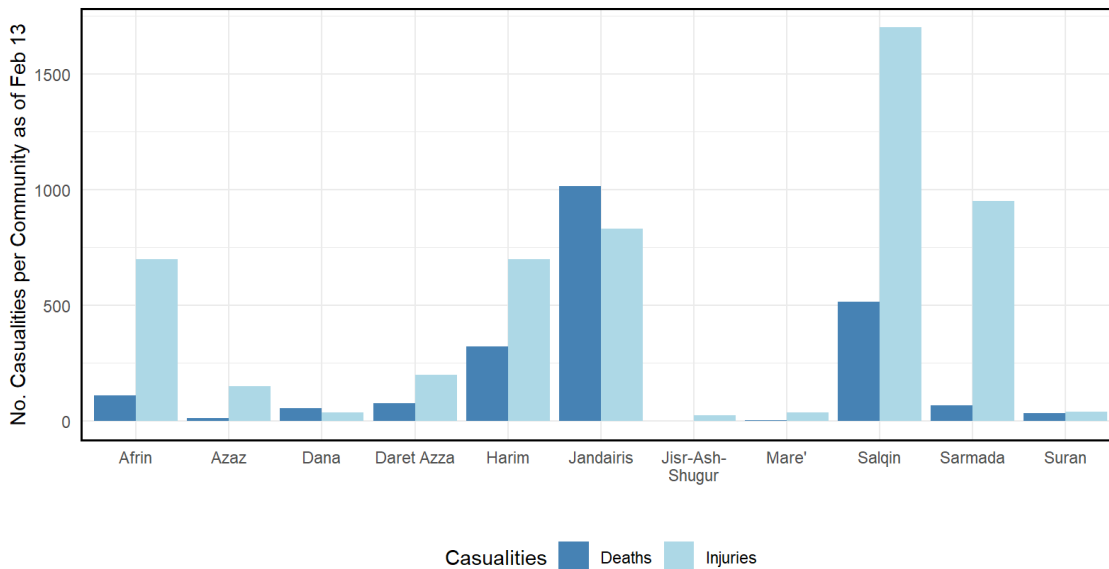


Figure 2. The number of deaths and injuries in ten select SIG and SSG controlled cities, as of 13 February (Source, ACU)

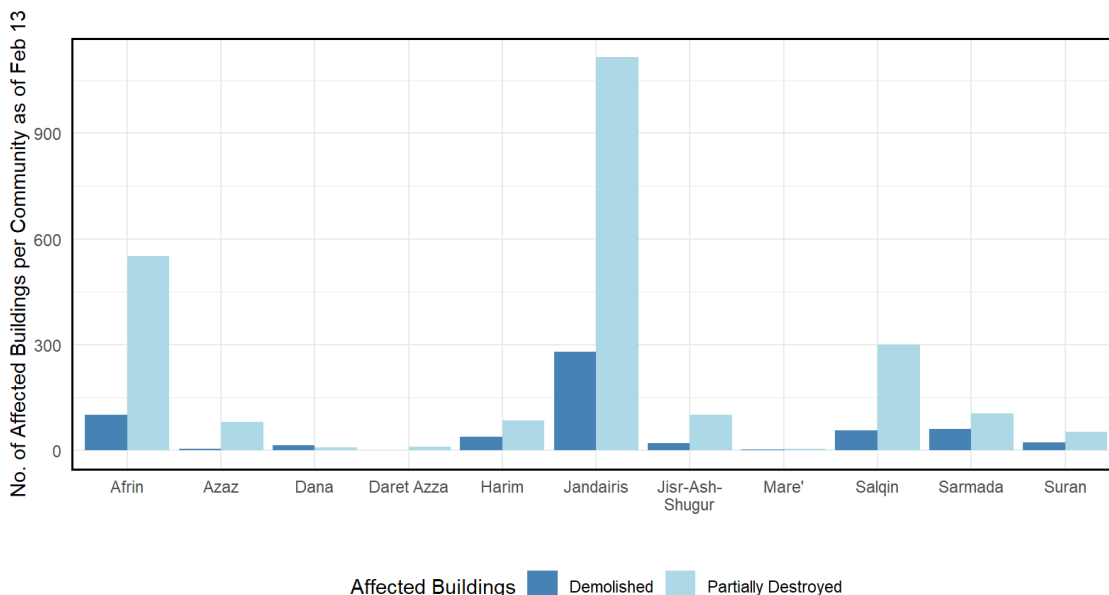


Figure 3. The estimated number of destroyed and partially destroyed structures in ten select SIG and SSG controlled cities, as of 13 February. (Source, ACU)

Starting with the total number of victims as of 13 February: Jandairis, Salqin, and Harim reported the highest death tolls, with 1,015, 515, and 320 deaths, respectively. The only community where there were more fatalities than injuries reported was Jandairis. With 1,700 injured persons, Salqin had the most injuries, followed by Sarmada with 950 injuries and Jandairis with 830 injuries. Figure 2 indicates the casualties of the ten selected communities as of 13 February.

Building destruction in the selected communities is shown in Figure 3. Jandairis experienced the highest level of destruction, with 280 buildings completely destroyed and 1,115 partially damaged. The next three cities are Afrin (100 completely destroyed buildings and 550 partially damaged structures), Sarmada (60 fully destroyed buildings and 105 partially damaged), and Salqin (55 destroyed buildings and 300 partially destroyed).

Satellite damage assessments

To triangulate the ACU's structural damage and destruction data, the HAT produced damage assessments for ten communities severely impacted by the earthquake. Using Sentinel-1 satellite imagery,² pixel intensity values from images before (29 Jan.) and after (11 Feb.) the earthquake were compared, and pixels with very high rates of decline³ in intensity were categorized as areas where earthquake-related damage likely occurred.⁴ Figure 4 shows the percentage of pixels in the community that were identified as likely damaged areas. According to the analysis, Salqin had the highest percentage of pixels identified as damaged areas, and Daret Azza had the lowest proportion of its total area identified as damaged.

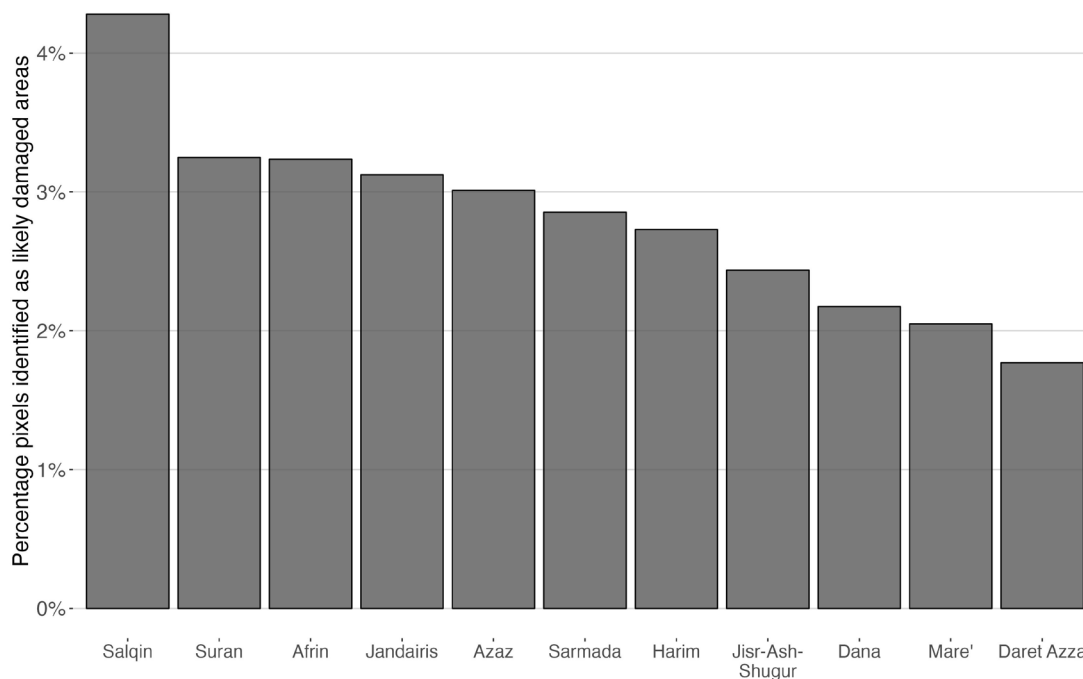


Figure 4. The proportion of pixels identified as likely damaged areas. (Source: HAT).

According to the ACU, Salqin had the greatest demand for tents, requiring 3,000, Jandairis was next, needing 2,500 tents, and Afrin needed 800. The main three areas with the highest need for mattresses and blankets are Salqin which requires 30,000, Jandairis at 25,000 and Afrin at 8,000. Jandairis has the largest reported food need, of 10,000 meals per day, followed by Salqin (6,000 meals per day), and Afrin (3,200 meals per day). Figure 5 shows the most pressing needs of the selected communities.

² Sentinel-1 imagery is not affected by cloud cover.

³ Pixels intensity that decreased by a factor of five or more.

⁴ The results are approximations that will be refined in future HAT research, with the motivation being that the approach is relatively rapid (satellite passes over every 12 days) and uses freely-available satellite imagery.

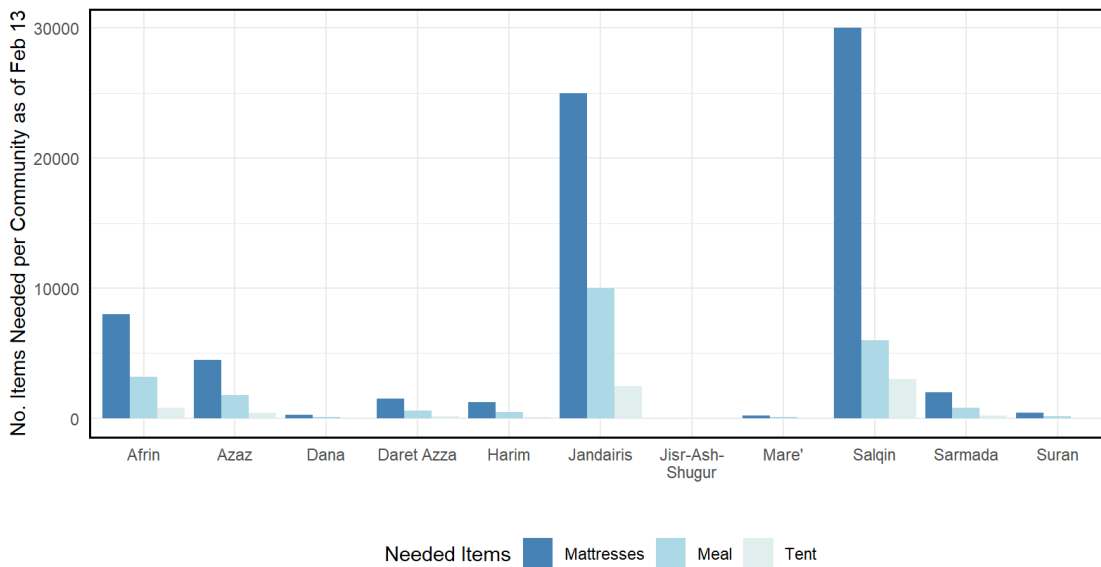


Figure 5. The estimated number of required items to meet immediate needs in ten select SIG and SSG controlled cities, as of 13 February. (Source, ACU)

Salqin, Jandairis, Afrin, and Azaz are the four cities with the largest daily fuel needs for heating, with 900,000, 750,000, 240,000, and 135,000 liters per day required respectively. Figure 6 depicts the need for fuel for heating per community.

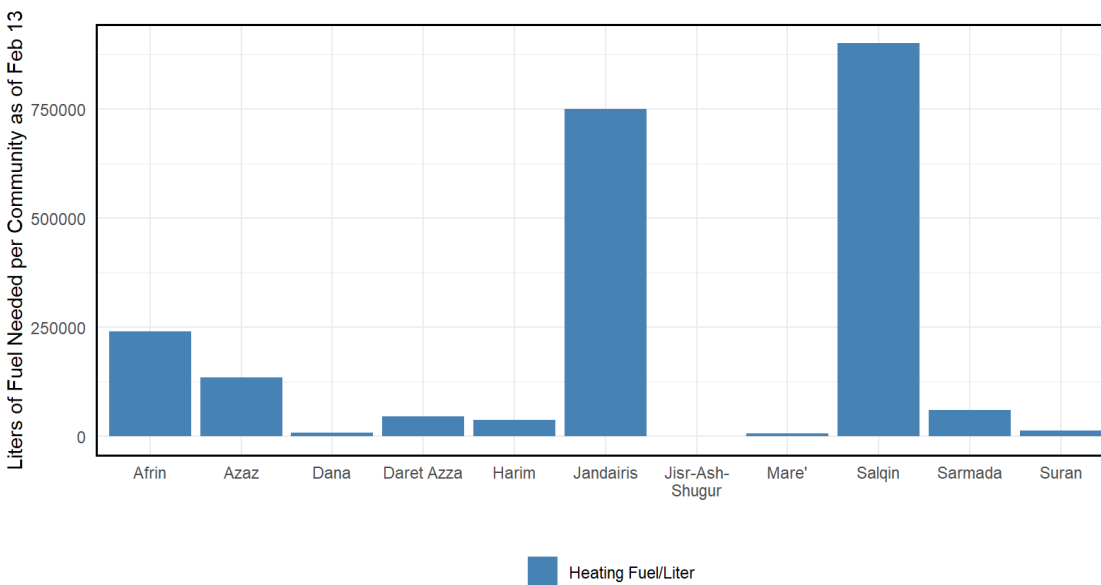


Figure 6. The estimated liters of fuel needed meet immediate needs in ten select SIG and SSG controlled cities, as of 13 February. (Source, ACU)

Failing health sector

The health sector in the northwest has found itself ill-equipped for the herculean task ahead of it. In an area where [over 80](#) hospitals and medical centers were bombed during the war, services were already scarce. Idleb health director, Zuheir Karat, said that [hospitals in the northwest are full](#) and are unable to accommodate more patients, forcing healthcare workers to [redirect](#) the incoming patients to smaller health centers and clinics. Karat emphasized the shortage in intensive care units, neurosurgery rooms, and respirators in hospitals, and highlighted shortages in basic materials such as medical gauze, analgesics, anesthetic, first aid kits, splints, and plates for bone fractures. Fortunately, large-scale destruction to hospitals caused by the earthquake has not been reported, however, the WHO [has said](#) that three secondary and one primary healthcare center in the northwest sustained damages.

Long-standing issues across the healthcare sector are likely to further reduce workers' ability to cope. Over the past few months, more than 18 hospitals and NGO-funded medical centers in the area have [lost their funding and support](#), reducing their capabilities – healthcare facilities already faced medicine shortages and a lack of specialized medical equipment.

Pre-existing public health crises, such as cholera and the COVID-19 pandemic, absorbed significant amounts of resources, time, and capacity, further weakening in the absence of sufficient support. In addition to a lack of equipment, a shortage of experienced healthcare professionals able to implement emergency processes has impacted healthcare provision. The head of the Free Doctors' Union, Walid al-Tamer, [stated](#) that a prolonged shortage of healthcare professionals has forced hospitals to increasingly rely on recent graduates from medical faculties in Idleb and Aleppo, who have become the healthcare sector's primary workforce; doctors with a specialization, such as heart doctors and surgeons, are in short supply.

Disrupted services and commercial activity

Northwest Syria is almost wholly reliant on Turkey for electricity and internet, and the majority of its fuel supply. The earthquake heavily damaged infrastructure in southern Turkey, including roads leading to the Syrian–Turkish border. This caused a 36-hour electricity outage, while internet networks were cut off for 24 hours. The earthquake also led to the collapse of numerous boreholes and damaged water pumps in Harim, Atareb, Salqin, and Jandairis, denying many residents access to their primary source of clean water.

The Turkish energy minister, Fatih Donmez, initially [said](#) that the earthquake had severely damaged the country's energy infrastructure. These initial damage assessments have since been revised to moderate, though major pipelines have stopped operating for the time being as a precautionary measure due to persistent aftershocks. LimakPort Iskenderun International Port sustained extensive damage, with large fires breaking out in the facility. Donmez added that electricity and natural gas transmission and distribution

lines were damaged, leading the state pipeline operator BOTAŞ to halt natural gas flows to Gaziantep, Hatay and Kahramanmaraş provinces. The Turkish government [dispatched](#) technicians to repair the damaged lines in addition to mobile generators to the affected regions to power essential facilities such as hospitals and bakeries. Moreover, operations in the Kirkuk–Ceyhan pipeline carrying oil from Iraq to Turkey were [suspended](#) despite it remaining intact; work at the Ceyhan oil terminal was suspended, while the Kurdistan Regional Government in Iraq also suspended the flow of oil into Turkey.

The damaged roads brought commercial activity to a halt, sparking fears of food and fuel shortages.¹ WFP Regional Director, Corinne Fleischer, [said](#) that their stocks of food were running low as a result of delays in aid deliveries, and called for more border crossings to be opened (this was prior to Assad's approval to open Bab Al-Salamah and Ar Rai crossings). The White Helmets [warned](#) of fuel shortages denying them the ability to operate mechanical equipment in rescue operations. During the initial aftermath of the earthquake, local sources reported that petrol and gas availability was nearly depleted and diesel was available in limited quantities. Since then, cross-border aid has passed through Bab Al-Hawa from Turkey, showing that roads are in good enough condition to travel. Commercial activity is gradually resuming, which will go some way to alleviating shortages – a fuel shipment arrived in Idleb from Turkey on 11 February.

¹ Local sources stated that roads leading to the border crossings on the Turkish side were unusable after cracking because of the earthquake, but noted that roads in Syria remained intact.

Impact on electricity

Preliminary Night Lights Reflectance (NRL) assessment

The HAT measured the change in night light reflectance¹ in SIG and SSG-controlled communities² immediately after the earthquake (7 Feb., shown in Figure 7) and a post-rescue period (13 Feb., shown in Figure 8) to assess the change in electricity consumption due to the loss of the electricity infrastructure and displacement. Immediately following the earthquake (7 Feb.), the average NRL grew by 17% in SSG-controlled communities and by 80% in SIG-controlled communities. NRL growth rates immediately after the earthquake were higher in less populous communities³ due to the influx of rescue crews, which compared to the small amount of NRL normally produced by less populous communities, produced large NRL growth rates.⁴

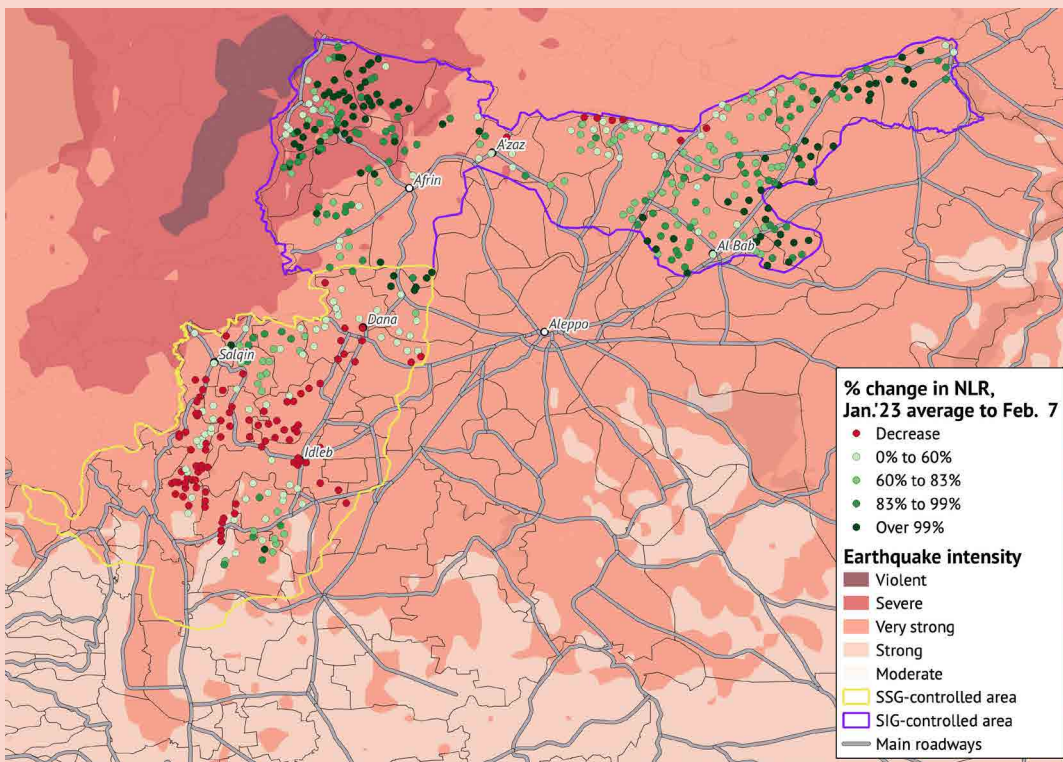


Figure 7. NRL growth rates from January 2023 (average) to immediately after the earthquake (7 Feb.).

NRL growth rates were much lower in SIG and SSG-controlled communities after the rescue efforts concluded (13 Feb.); specifically, NRL declined on average by 64% in SSG-controlled communities and by 61% in SIG-controlled communities during that period. More populous communities had higher post-rescue NRL growth rates than less populous communities in SIG and SSG-controlled areas.⁵ This suggests one, or both, of the following:

1 NRL sum within a 1km radius of the community.

2 Post-earthquake NRL was compared to the average NRL of the same day of the week in January 2023. The usability of nightly NRL images is dependent on cloud cover, meaning only communities without cloud cover on the analysis dates could be analyzed; therefore, not all communities were shown on the map or analyzed.

3 Using the latest (November 2022) population statistics from Monthly Needs Monitoring assessment.

4 In a multivariate linear regression, controlling for the intensity of the earthquake. NRL growth rates immediately after the earthquake were 35% lower in SSG-controlled communities over 20,000 people, and 49% lower in SIG-controlled communities over 20,000 people. P-values statistically significant at the 99% confidence interval.

5 In a multivariate linear regression, controlling for the intensity of the earthquake. NRL growth rates immediately after the earthquake were 30% higher in SSG-controlled communities over 20,000 people, and 36% lower in SIG-controlled communities over 20,000 people. P-values statistically significant at the 99% confidence interval.

1. That the resumption of electricity provision (electricity network connectivity or otherwise) has been faster in more populous communities, or
2. First responders and debris removal crews are more prevalent (reflected by light) in more populous communities.

Further, the positive relationship⁶ between the NLR growth rates of SSG-controlled communities immediately after the rescue period and the infrastructure damage⁷ suggest that higher NLR growth rates in the post-rescue period in SSG-controlled communities can likely be attributed to light emitted from debris removal crews.

The finding that the NLR decreased faster in less populous locations after the rescue period is supported by the REACH rapid needs assessment dataset, collected between February 9 and 11, and published on 13 February. According to the HAT's analysis of that dataset, the average population of SSG-controlled communities that reported receiving assistance after the earthquake was on average 65% less populous than communities that reported receiving assistance after the earthquake.⁸ Similarly, smaller communities tend to have slightly lower levels of service accessibility⁹ than more populous communities in SSG-controlled communities¹⁰ (unrelated in SIG communities). Therefore, humanitarian actors are encouraged to ensure the inclusion of less populous communities in post-earthquake response efforts.

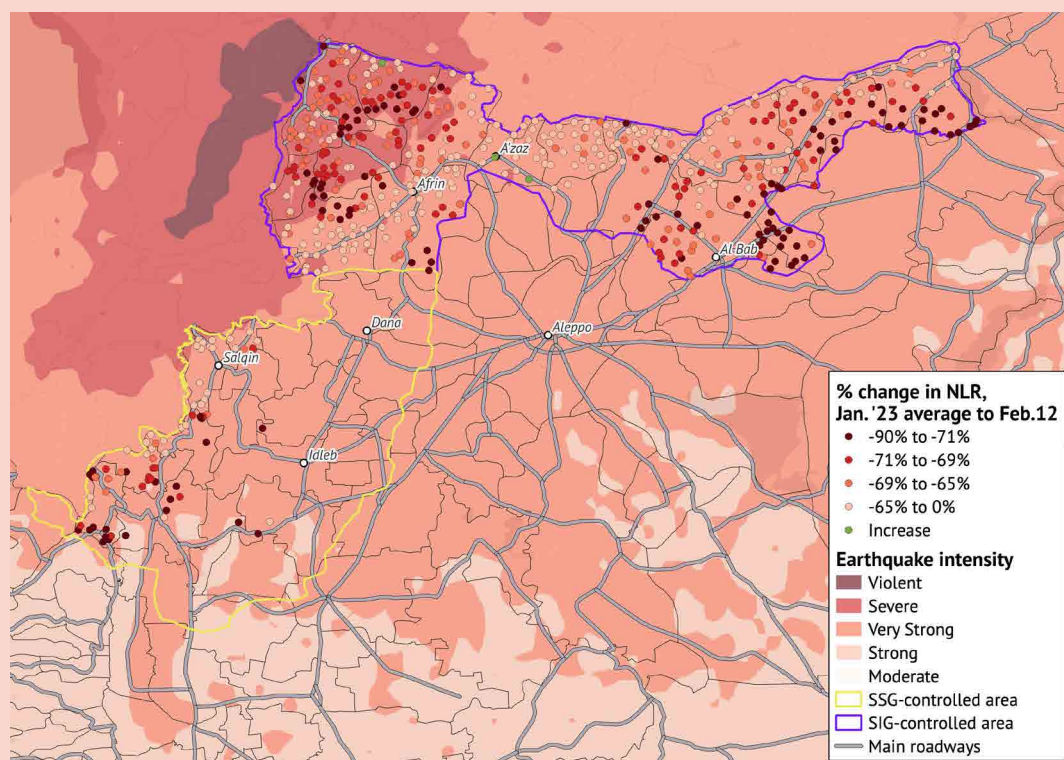


Figure 8. NLR growth rates from January 2023 (average) to when post-rescue efforts ceased (12 Feb.). Absent community data in this map is attributed to persistent cloud cover since 7 February, preventing adequate NRL data.

6 Based on a Pearson's correlation between the post-rescue NLR growth rate and a composite indicator of infrastructure damage ($r = 0.4$; $p = 0.007$)

7 Composite indicators for infrastructure damage from [REACH - Syria](#).

8 The t-test between communities reporting and not reporting receiving assistance was marginally statistically insignificant ($t = 2.001$; $p = 0.054$). No noticeable or statistically significant difference among SIG-controlled communities.

9 Composite service accessibility indicator from [REACH - Syria](#).

10 Based on a Pearson's correlation between a composite indicator of service accessibility and total population ($r = -0.28$; $p = 0.000$)

Uneasy cooperation between local actors

Despite the scale of the disaster in northwest Syria, the de facto authorities in northern Aleppo and Idleb still do not show signs of cooperating at an official level. The SIG, supported by Turkey, is wary of establishing links to the SSG (and by extension the terrorist-designated HTS). Both sides are vying for control over strategic trade routes, infrastructure and territory across opposition-held areas. In the aftermath of the earthquake, the SIG called on the international community to transport aid through Bab Al-Salamah and Al Ra'ee, both crossings which it supervises, with no mention of Bab Al-Hawa.

In turn, the SSG published [detailed data](#) on damage sustained, casualties, and response efforts which did not include northern Aleppo. However, the SSG did send rescue teams and equipment to Jandairis, a SIG-controlled town devastated by the earthquake. [Jolani](#) visited the town, however the visit was considered a provocation and a display of HTS influence in SNA areas.

Neither of the de facto governments accepted crossline aid initially, whether from Damascus into Idleb, or from the northeast into Aleppo. The SSG cited a lack of security needed to supervise shipments, while the SIG refused to accept aid from its historic enemy, the SDF and Autonomous Administration. Both governments called for an increase in international aid.

Although the administrative powers did not demonstrate cooperation, their military factions, which can have a number of conflicting affiliations, showed more flexibility. Crossings between SNA and HTS-held areas were opened to allow freedom of movement. The SNA was put on high alert and ordered to [deploy](#) and commit its equipment and capabilities to assist teams from the White Helmets in their rescue operations. Al-Jabha Al-Shamiyah, Al-Hamzah Division and Sultan Suliman Shah Division were the most active of the factions in the SNA; these groups allocated resources to respond in impacted SIG-controlled areas, mainly where their members live. HTS also contributed to rescue efforts, and helped protect civilian properties. Cooperation between armed actors is not likely to last, however, with the first cracks already appearing. Checkpoints were reopened three days after the earthquake, while competition for resources looks set to take over as the immediate emergency subsides and humanitarian need increases.

Dollar shortages and high money transfer fees

As cash-based response activities ramp up in the northwest, demand for foreign currency is putting pressure on the supply and liquidity of the US dollar. [Local media sources](#) have claimed that the effect of the earthquake is limiting the cross-border flow of dollars into the northwest, though this is unconfirmed. Reports suggest that exchange offices in northwest Syria have already refused to provide the full amount of the transferred money to many of their customers, and instead divided large amounts and delivered them as several payments ranging between \$200–300 per day. Liquidity issues have also led to an increase in the fees paid on remittances. Before the earthquake, it cost \$15 for every \$1000 transferred, at the highest estimate; reports suggest this rate has reached \$50.



Rescue teams mobilize in Dana, northwest Syria, setting up temporary shelters and support bases. (Source, Mercy Corps 2023).

The SSG's [General Organization for Cash Management](#) issued a decision warning that it would withdraw the license granted to money transfer offices if they raised transfer fees. A shortage of dollars in northwest Syria would fundamentally affect the work of organizations, volunteer teams, and associations. Some exchange offices have reportedly attempted to identify alternative means of maintaining liquidity from Turkey; this has been generally reported as transferring cash through individuals who are allowed to enter and exit from Turkey; this method is a limited solution in the short term.

According to [transfer offices](#), dollar shortages will be resolved in the next few days, as some sectors in Turkey have begun to recover, including the Turkish PTT (postal) offices, which provide substantial support to dollar liquidity needs in northwest Syria. However, considering the monetary position of Turkey, as well as a need to immediately finance earthquake response efforts domestically, it is possible that the Turkish authorities could attempt to restrict the flow of dollars out of the country. Further complicating the money supply in northwest Syria, it is possible that the Turkish lira will depreciate further, increasing inflation and making dollars more expensive to purchase; this may have a medium-term impact on purchasing power and market functionality in opposition-held northwestern Syria.



Damage caused by the earthquake in Atma village, northwest Syria. (Source, Mercy Corps 2023)

Potential long-term considerations

Economic loss impact Turkish soft power

The earthquake had a significant impact on Turkey's economy. It is [estimated](#) that the national economic loss will be between \$50–84 billion, as more than 8,000 buildings collapsed and strategic infrastructure, such as the Tarsus–Gaziantep Highway, İskenderun Port, and Hatay Airport, were moderately damaged. The loss is equivalent to 10% of the country's GDP and deals a heavy blow to the Turkish government's [attempts](#) over the past few years to stabilize both the economy and national currency. In addition to high reconstruction costs, the Turkish government has been forced to [allocate](#) \$5.3 billion for disaster relief as hundreds of families have found themselves without housing or livelihoods.

The economic and infrastructural damage resulting from the earthquake may impair Turkey's soft power projection in northwest Syria. The significant financial losses and new-found priority for southern Turkey's reconstruction may result in decreasing financial support to the SNA, the SIG, and local councils, as Turkey pays the majority of their salaries. Damage to the country's strategic infrastructure also raises the question of the country's ability to continue supplying the northwest with essential items such as food and fuel at pre-quake volumes at a time when it needs them itself. If this happens, Turkey's political influence in northwest Syria may begin to wane, particularly in the context of protests during the last half of 2022 condemning suggestions of rapprochement between Ankara and Damascus, creating a vacuum for other potential actors, such as Saudi Arabia and Qatar, to fill.

Earthquake reshuffles priorities for Erdogan

Turkey's continuous threat of ground operations, particularly in light of upcoming planned presidential elections, undoubtedly will be less of a priority. Observers speculated that Recep Tayyip Erdogan's hawkish stance regarding northern Syria was likely to shore up Turkish votes in pursuit of reelection in May 2023: The current disaster is likely to change priorities during the next few months, for both the Turkish government and Erdogan's reelection campaign, the latter of which now rests on the perception of his leadership in responding to the current disaster. Campaign rhetoric suggesting Syrian refugee returns from Turkey, one of the most sensitive and important topics in light of the [negativity](#) of Turks towards the refugees, may also abate. It is also highly likely that the presidential election will be delayed, given the three-month Turkish state of emergency will only expire at the end of April.

It is certain that the Turkish government will focus on the disaster response as its highest priority. Any military offensive during this time would be deeply costly and unpopular; the [PKK has announced](#) a ceasefire inside the borders of Turkey so all resources could be diverted to relief efforts. These factors will very likely rule out any possibility of any Turkish military action in northern Syria for the short to medium term.

Annex I: November 2022 NFI, shelter, and WASH needs data

This annex provides descriptive narrative and geographic visualization (maps) of needs data published in November 2022; while this does not reflect the impact of the earthquake, this dataset has been included in the report to offer potential insight into the areas that may be explored and considered as a priority.

The SIG-controlled Rael and Mreigel communities in Suran subdistrict in Aleppo and SSG-controlled Hazano in Idleb have reported the highest percentage of their populations identifying NFI as a priority need, with 83%, 82%, and 80% respectively. Overall, 77% of SIG-controlled communities required NFI assistance, with 20% of their residents on average identifying it as a priority need. Also, 97% of the SSG-controlled communities require NFI assistance with 44% of residents on average identifying it as a priority need. Figure A1.1 shows the percentage of the population reporting NFI as a priority need in SIG and SSG communities.

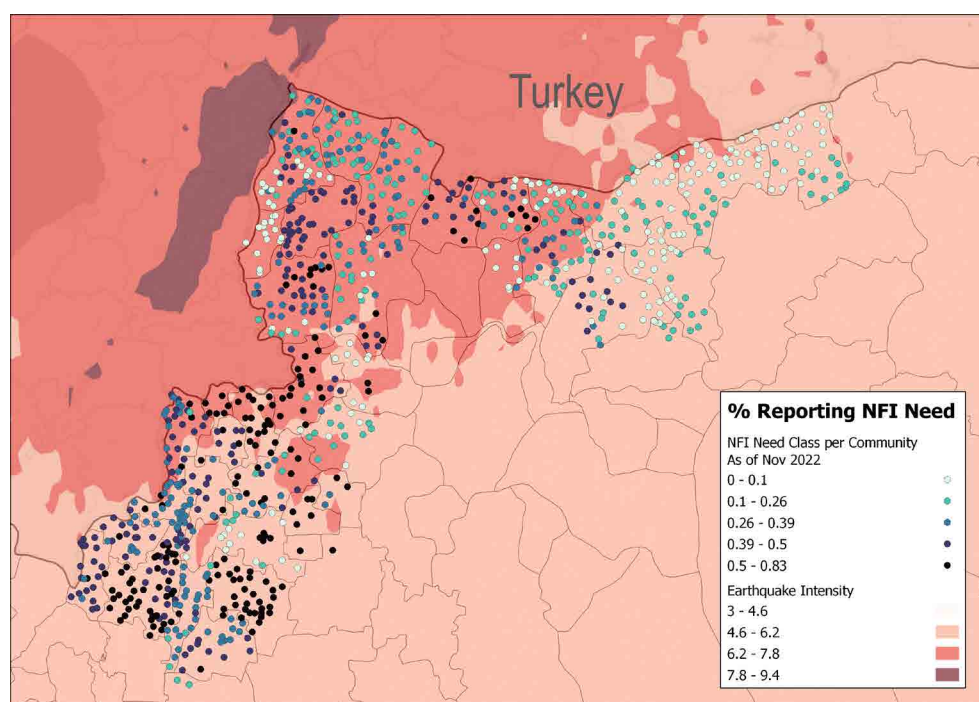


Figure A1.1. The geographical distribution of NFI needs per community in NWS, as of November 2022.

In terms of shelter, the highest shelter need was reported in Alyeh, Upper Sheikh Sindyan, and Tal Hamki with 85%, 80%, and 80% of the population respectively requiring shelter assistance. Overall, 58% of SIG-controlled communities reported shelter needs. Moreover, 20% of residents in SIG-controlled communities reported shelter as a priority need. Rael, Mreigel, and Kafr Safra registered the highest shelter need, with 78%, 77%, and 66% of their populations requiring shelter assistance respectively. Overall, 96% of SSG-controlled communities require shelter assistance, with 31% of the population on average identifying it as a priority need and 17% of SSG-controlled communities reported having more than 50% of their population identifying shelter as a priority need. Figure A1.2 displays the percentage of the population in SIG and SSG communities who list shelter as a priority need.

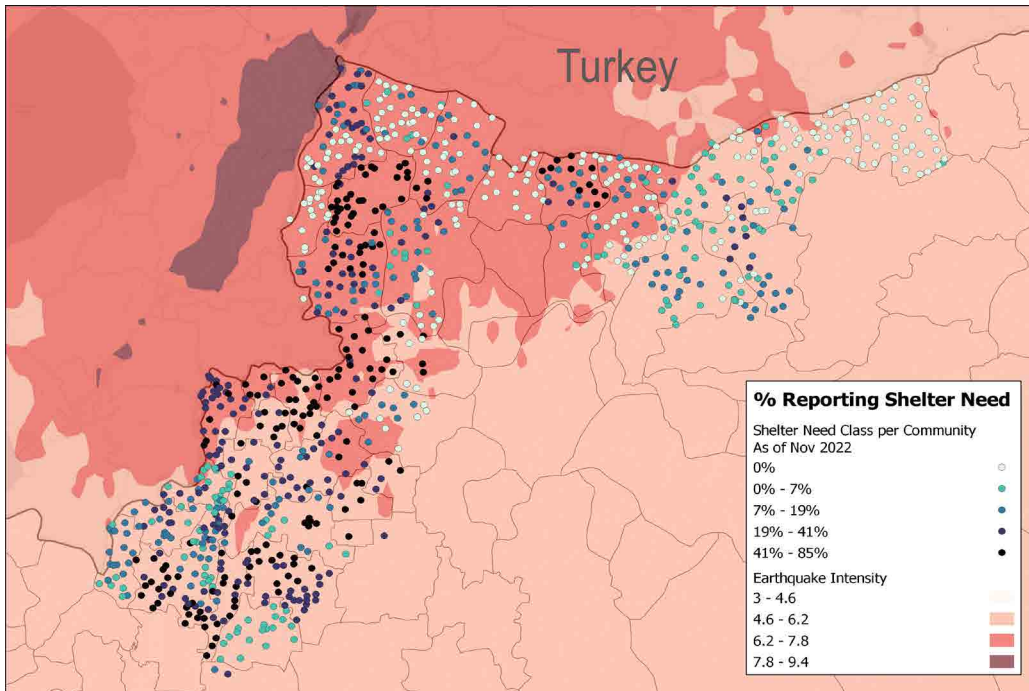


Figure A1.2. The geographical distribution of shelter needs per community in NWS, as of November 2022.

Six Idlib towns – Kafr Mars, Helleh, Bshendlaya-Rashdidiya, Kuku-Ein Eljaj, Kafr Kila, and Taltita – had 100% of their population reporting water as a need. 91% of the SIG-controlled communities report a lack of water availability. Water was identified on average as a missing essential need by 29% of the SIG-controlled population. As of November 2022, 80% of the residents in four communities – Jolaqi, Hafatro, Khalil-Khleilak, and Beylan – reported the greatest water need. 12% of the SIG-controlled communities reported water needs from more than 50% of the population. In 97% of the SSG-controlled communities, there is a water shortage. Water was listed as the main unmet need in Idlib by an average of 56% of the population. Access to water was identified as a crucial requirement by at least 70% of the residents in 25% of the SSG-controlled communities. Figure A1.3 shows the percentage of residents in SIG and SSG communities that rank water as a priority.

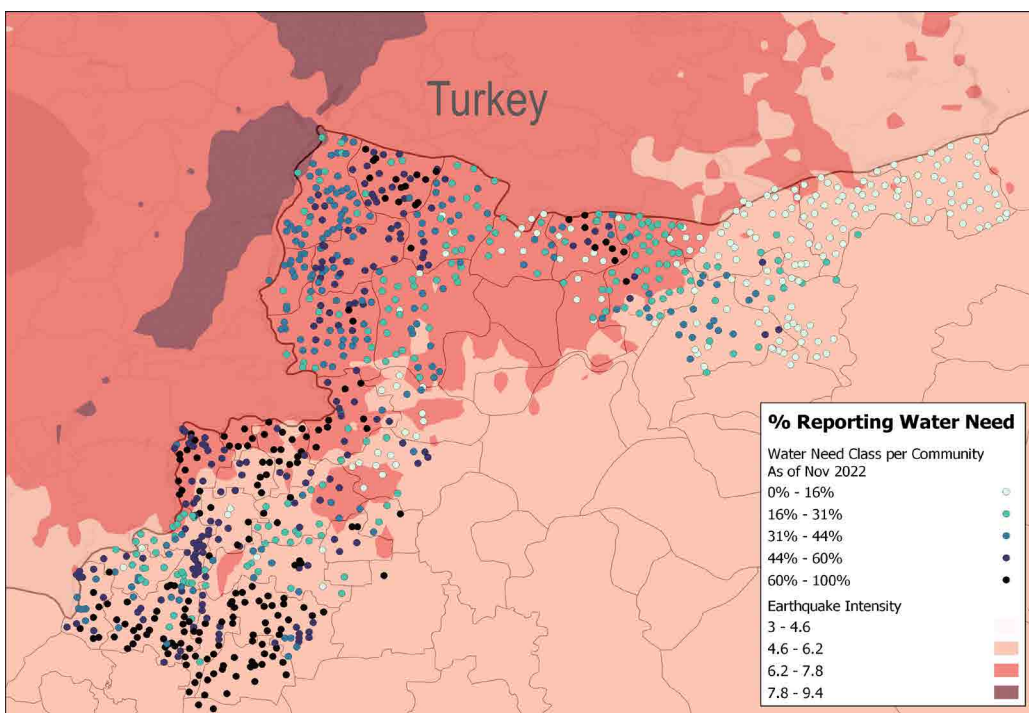


Figure A1.3. The geographical distribution of water need per community in NWS, as of November 2022.

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The Humanitarian Access Team (HAT) was established in Beirut in March 2015 in response to the collective challenges facing the remote humanitarian response in Syria. HAT's most important function is to collect and analyze disparate data and information. Since 2015, HAT analysis has provided a forward-looking template for international interventions in Syria, and facilitated an increasingly adaptive, integrated, and ultimately impactful international response to the conflict.

