

# The Impact of the Earthquakes on the Humanitarian Situation in Northwest Syria

May 2023 | Syria

## Introduction

Two major earthquakes hit southern Türkiye, close to the Syrian border, on the 6<sup>th</sup> of February 2023. While these are not the first earthquakes in this area, **both were stronger than any previously recorded in the region**. As a result, over 50,000 people are estimated to have died, and **years or decades of increased earthquake activity are expected**.<sup>1</sup>

Various organisations immediately responded to provide life-saving aid and search & rescue. In Northwest Syria (NWS), response efforts were largely led by local NGOs until the UN was able to deliver aid across the border from Türkiye to Syria.<sup>2</sup> At the same time, a number of organisations began efforts to conduct assessments of the impacts of the earthquakes – many of these assessments have been compiled [here](#). REACH was amongst these, beginning comprehensive data collection across NWS just days after the earthquakes.<sup>3</sup>

To supplement this work, the current situation overview uses data from REACH's earthquake impact assessments, and REACH's regular assessment, to provide an analysis of the impacts of the earthquakes on basic services and the humanitarian situation in NWS. Given the primary focus on basic services, some important impacts of the earthquakes will not be discussed in-depth here. These include the infrastructural damage, displacement, and the situation in displacement camps.

## Methodology Note

The following assessments, which are referenced in the <sup>superscript</sup> at the end of each sentence, are used here:

- **Earthquake Rapid Needs Assessment** <sup>RNA</sup> which interviewed key informants (KIs) about the impacts of the earthquakes; 754 communities were assessed. ([data](#), [situation overview](#))
- **Joint Rapid Assessment of Markets** <sup>JRAM</sup> which interviewed vendors about the earthquake impacts on their stores as well as on the markets they operate in; 3,395 vendors in 376 communities were interviewed. ([data](#), [situation overview](#))
- **Light IDP Situation Monitoring Initiative** <sup>LISMI</sup> which interviewed KIs about internally displaced people (IDPs) that arrived to their communities; 797 communities were assessed. ([factsheet](#))
- **Humanitarian Situation overview in Syria** <sup>HSOS</sup> which is a monthly assessment that interviews 3-5 sector expert KIs per community on the humanitarian situation in their communities; 738 communities were assessed in January 2023 and 787 in March. ([link](#))
- **Joint Market Monitoring Initiative** <sup>JMMI</sup> which is a monthly assessment that interviews vendors about the availability and prices of goods; 2,493 vendors were interviewed in January 2023 and 4,345 vendors in March. ([link](#))

**Please note** that all assessments used here are based on structured interviews conducted with key informants. As such, **all findings are indicative** of the humanitarian situation, **but do not represent the situation of all people in all communities**. Further information on the methodology of each assessment can be found in the relevant terms of references and datasets; please consult the [resource centre](#). Please note that different assessments are not directly comparable.

## Key Messages

- **Direct earthquake impacts were reported in around 80% of assessed communities, and new Internally Displaced People (IDP) arrivals in almost half**.<sup>RNA</sup>
- While **markets remained resilient**, tents and other shelter items saw limited availability.<sup>JRAM</sup>
- Food aid has helped households to meet their basic needs,<sup>8</sup> but **food needs were high across NWS even before the earthquakes and have not improved since then**.<sup>HSOS</sup>
- **The infrastructural impacts of the earthquakes have led to a worsening of the water and sanitation situation**,<sup>HSOS</sup> increasing the risk of diseases such as cholera spreading.
- **Health systems have suffered from the impacts both on their infrastructure and their staff**,<sup>15</sup> and this reduction in capacity came at the same time as an increase in needs due to earthquake-related injuries.<sup>16</sup> Furthermore, there has been a **clear increase in needs for mental health support following the earthquakes**.<sup>18</sup>

## Immediate Impacts

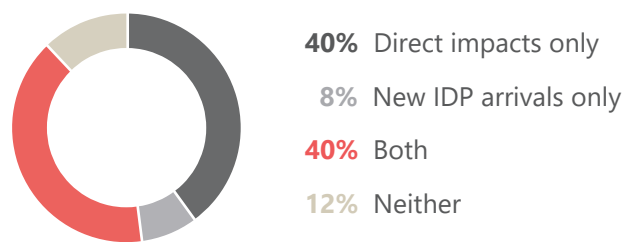
### Earthquake impacts were felt across NWS, causing damage and displacement.

The earthquakes severely affected communities across the entirety of NWS. **In 80% of assessed locations, KIs reported direct impacts**, including structural damage, service disruptions, and others (see map 1).<sup>RNA</sup> This was particularly the case in Northern Aleppo. In these communities, KIs on average reported that over half of residential buildings sustained minor damage or worse.<sup>RNA</sup> This has caused both displacement within the communities, with KIs in 45% of assessed locations having reported that some households were displaced within their communities,<sup>LISMI</sup> and a substantially less safe residency situation for those remaining in their damaged shelters.

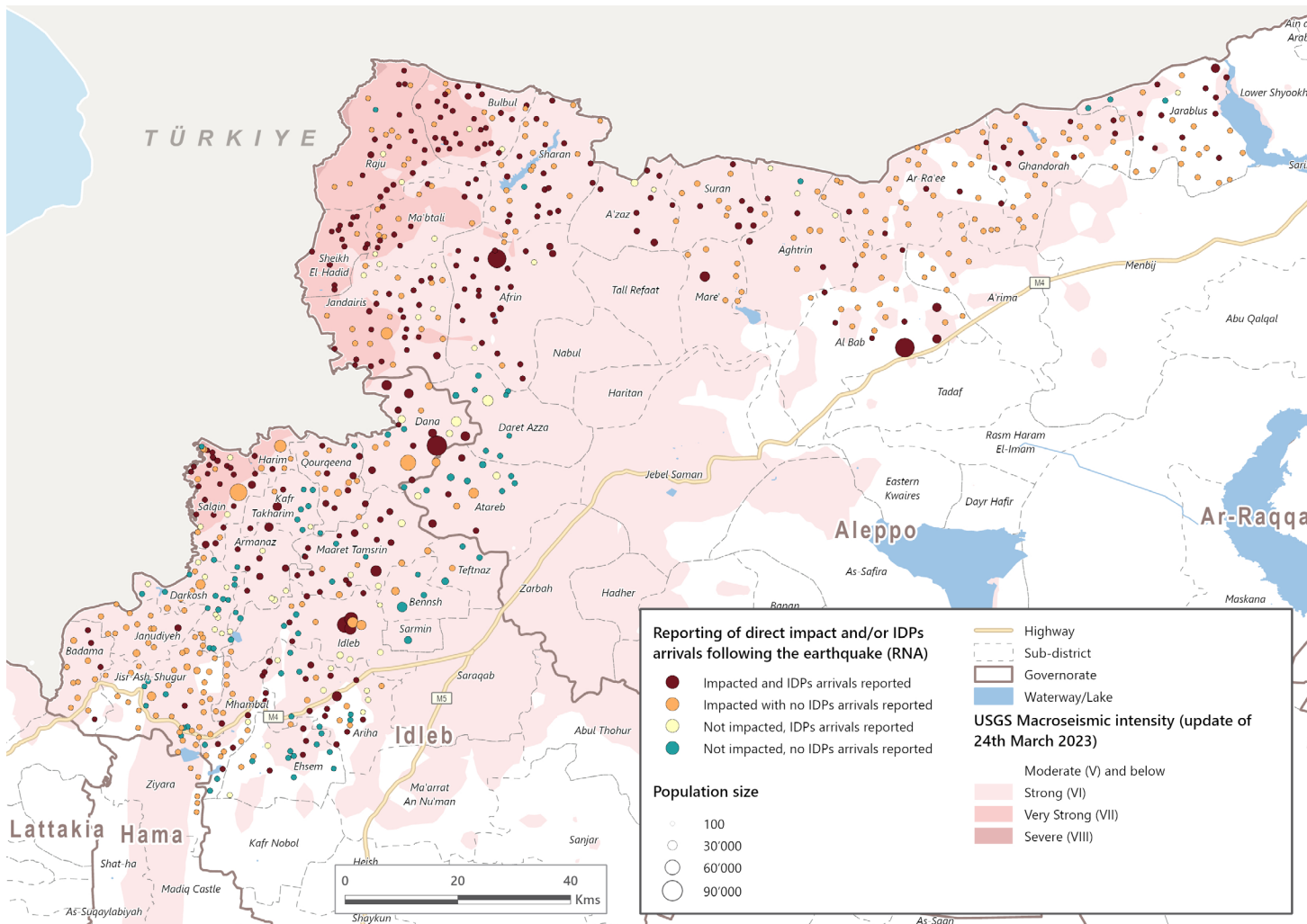
In addition to direct impacts, **KIs in almost half of all communities reported that new IDPs had arrived since the first earthquake.**<sup>RNA, LISMI</sup> These new displacements add to the trauma of the affected population, as well as adding to the strain on the limited services existing in host communities and last resort sites.<sup>4</sup> This is particularly concerning given the already extraordinary rates of

displacement in NWS, with over 60% of the population being displaced and over 40% residing in camps.<sup>5</sup> Looking at IDP camps specifically, a representative study found that almost all families that were living in camps in March had been displaced by the earthquakes, with 9% of families newly displaced and 88% having been displaced more than twice already.<sup>6</sup> This highlights how the earthquakes fit into and are exacerbating the existing displacement crisis.

**Figure 1:** % of assessed communities where KIs reported direct earthquake impacts or arrival of new IDPs in the days following the earthquakes<sup>RNA</sup>



**Map 1:** Direct earthquake impacts or arrival of new IDPs in the days following the earthquakes<sup>RNA</sup> (as reported by KIs in assessed communities)



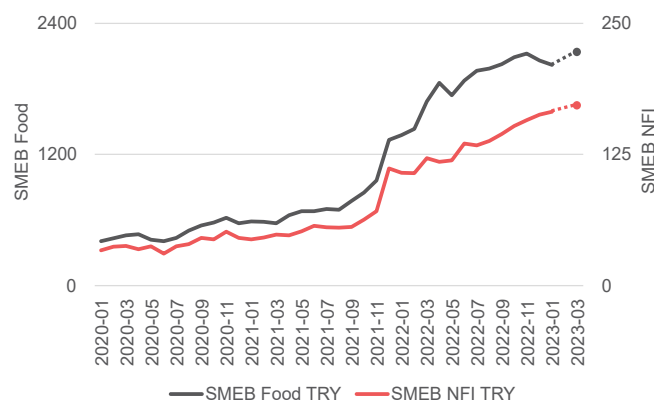
**Markets have remained resilient, though tents and other shelter items were difficult to come by.**

Within the humanitarian response, concerns were raised immediately following the earthquakes about whether markets would continue to function – in January 2023, KIs in 96% of assessed communities reported that markets were one of the most common sources of food for households.<sup>HSOS</sup> Thus, any market failure could have had severe impacts on household food security, as well as access to essential non-food items such as hygiene and shelter items.

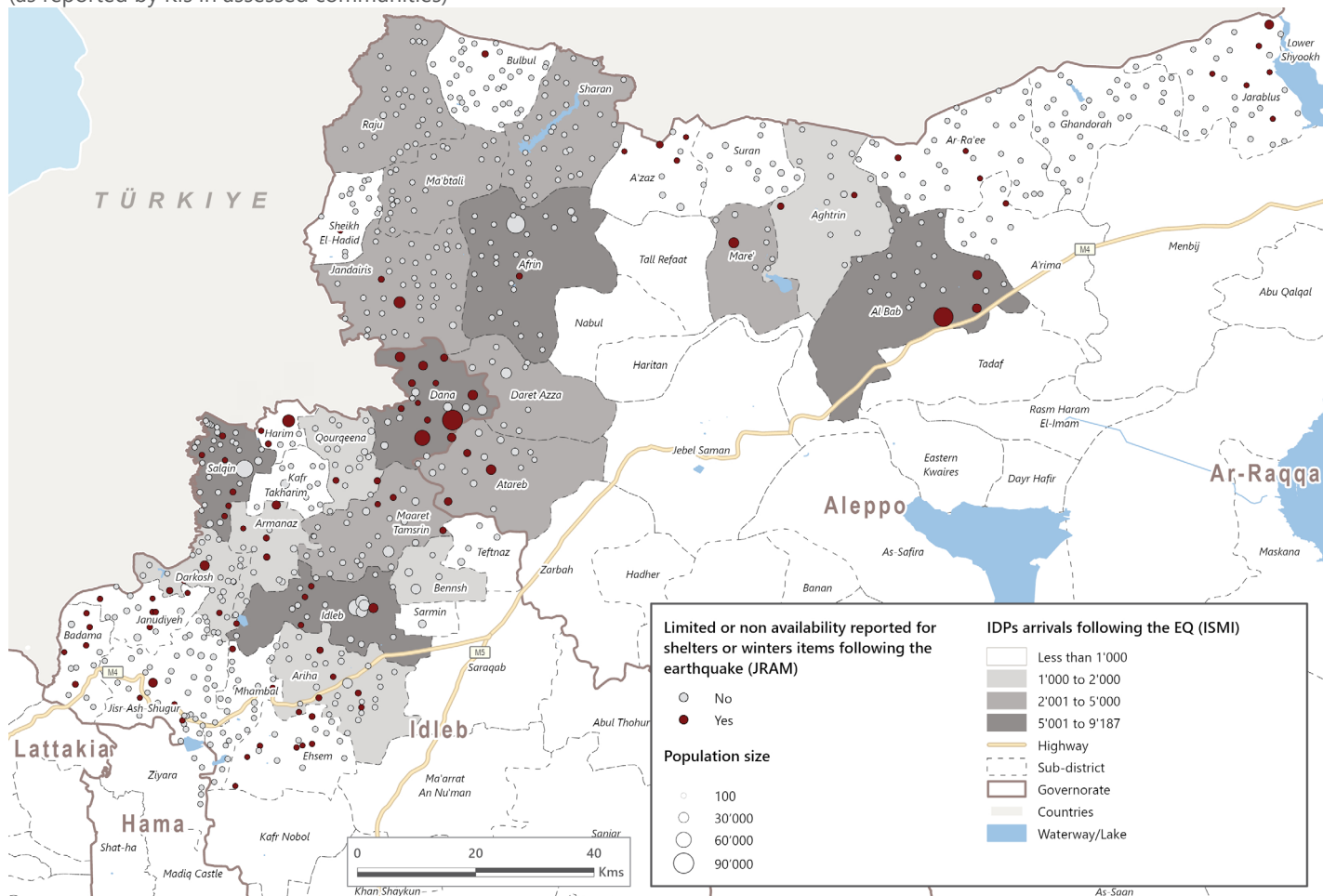
However, markets remained resilient in spite of the earthquakes. In almost all assessed communities, **KIs reported that all vendors or almost all vendors were operating by the second week after the earthquakes.**<sup>JRAM</sup> Only around a fifth saw limited availability of basic food and hygiene items – meaning that items continued to be available, though not all shops stocked them.<sup>JRAM</sup> **The impact was much more noticeable on shelter items, with over half of vendors having reported limited availability of these items** (see map 2).<sup>JRAM</sup> This is likely a product of increased demand, with many of those displaced between communities or within their own communities staying in tents,<sup>RNA,HSOS</sup> as well as initial difficulties meeting increased demand due to limited stocks within the country and problems transporting goods across the border.<sup>7,8</sup>

**By March, although tents continued to be widely limited in availability, most vendors faced no supply issues related to earthquake impacts,** but rather struggled with price inflation.<sup>JMMI</sup> Correspondingly, most included items were available in almost all assessed markets.<sup>JMMI</sup> Prices continued to rise, with the Survival Minimum Expenditure Basket (SMEB) increasing in cost by 3% from January to March 2023 in Turkish lira terms (see figure 2).<sup>JMMI</sup> However, this is largely consistent with the Turkish lira depreciation and consistent with price inflation in the months prior to the earthquakes.<sup>JMMI</sup>

**Figure 2:** Cost of food and non-food items in the Survival Minimum Expenditure Bundle (SMEB) in TRY<sup>JMMI</sup>



**Map 2:** Availability of shelter or winter items<sup>JRAM</sup> (as reported by KIs in assessed communities)



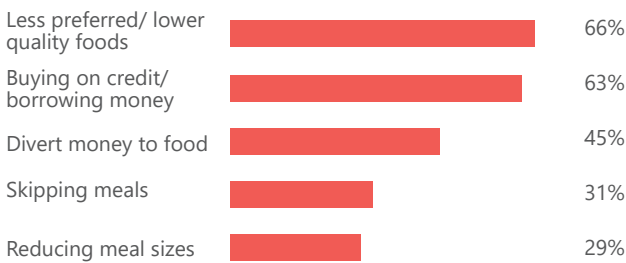


## Food Security

### Food needs remain high despite increased levels of aid.

Following the earthquakes, there was an influx of humanitarian aid. **In particular, KIs were more often aware that people in their communities were receiving cash assistance, food and nutrition assistance, and food vouchers.**<sup>HSOS</sup> In some hard-hit areas, particularly in Jandairis subdistrict, over half of the population received some form of food assistance in February.<sup>9</sup> Correspondingly, KIs tended to report fewer barriers to accessing food, and slightly fewer of them reported the use of food coping strategies in March 2023.<sup>HSOS</sup>

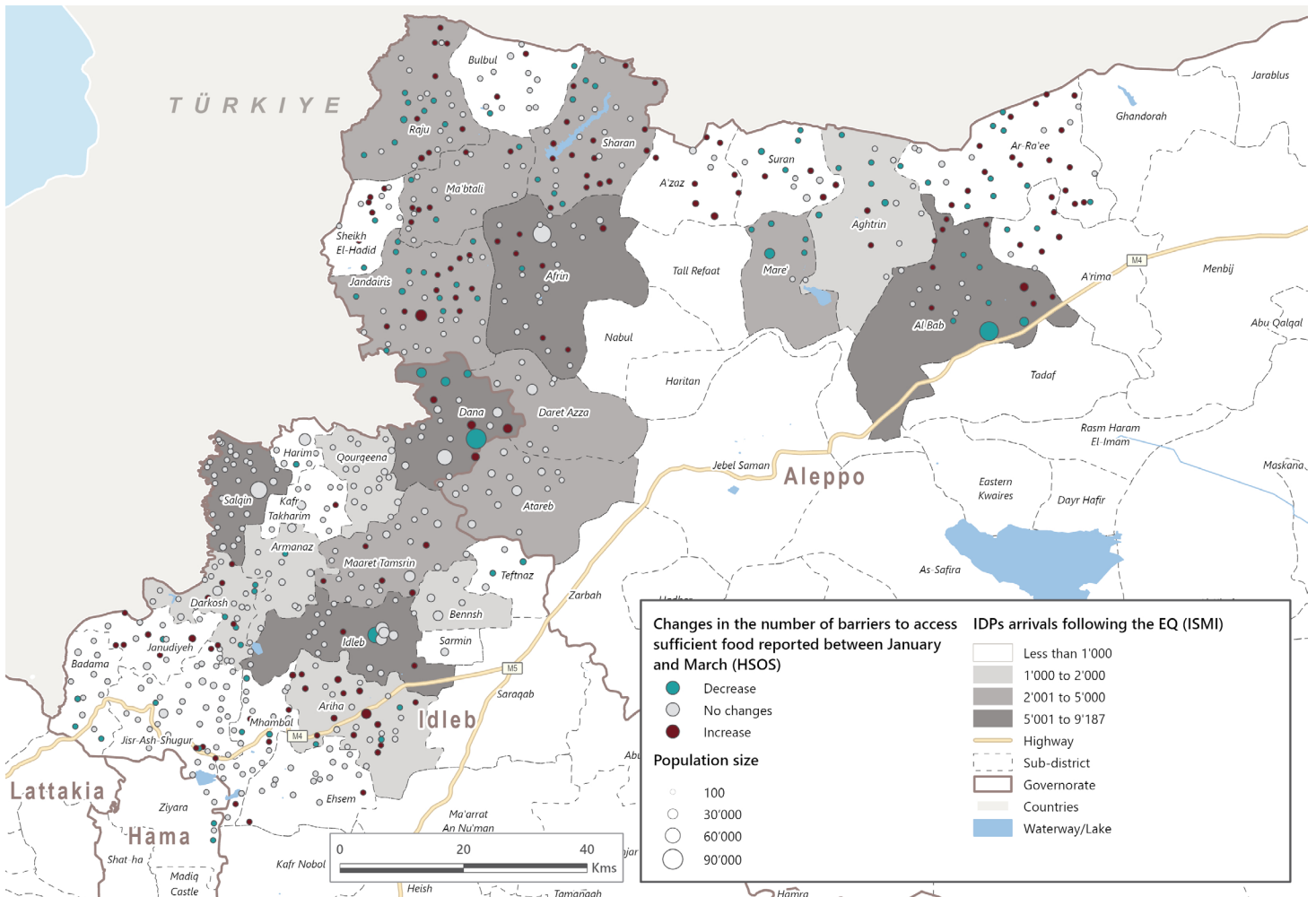
**Figure 3:** Select food coping strategies reportedly used in March 2023<sup>HSOS</sup> (as reported by KIs in % of assessed communities)



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However, there is still clearly a large gap between people in need and people that could be assisted.<sup>9</sup> Similarly, KIs in two thirds of communities reported in March that households in their communities were relying on lower quality, less preferred foods (see figure 3).<sup>HSOS</sup> Even more concerning, KIs in a third of communities were reporting that some households were skipping meals, and also in a third that some households were reducing meal sizes.<sup>HSOS</sup> **Hence, despite the support provided, it is clear that food needs remain concerningly high** (see map 3). Household-level assessments should be conducted to assess more accurately how many people are affected and which types of assistance should be provided to adequately support households in the short and long-terms.

**Map 3:** Changes from January to March 2023 in the number of barriers that KIs reported to accessing food<sup>HSOS</sup> (as reported by KIs in assessed communities)



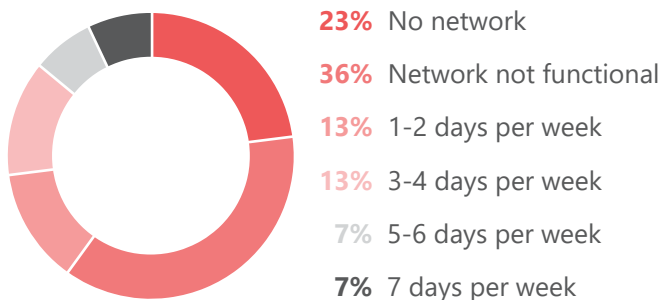
## Water, Sanitation, and Hygiene

**The water and sanitation situation has deteriorated following the earthquakes, increasing the risks of diseases such as cholera spreading.**

The WASH situation in NWS has been of particular concern due to the ongoing cholera outbreak in the region.<sup>10</sup> Cholera is a waterborne disease, transmitted most commonly where people consume water that is contaminated with faeces of infected people.<sup>11</sup> As such, any damage to water and sanitation infrastructure puts the affected population at risk of a further spread of cholera, and waterborne diseases more generally.

A rapid assessment of water station functionality in NWS post-earthquakes provided a preliminary indication that 54 of the 642 water stations were impacted by the earthquakes, particularly in A'zaz and Afrin districts, 30 of which stopped at least temporarily.<sup>12</sup> However, an in-depth assessment would be needed to better understand the types of damages and the scope for rehabilitation. **Correspondingly, the number of communities in which KIs reported that there was a water network or that the network functioned at least some days each week decreased somewhat from January to March 2023** (see map 4).<sup>HSOS</sup>

**Figure 4:** Network functionality in March 2023 (as reported by KIs in % of assessed communities)<sup>HSOS</sup>



The main source of water also shifted, with many KIs in communities that previously reported water networks as the main source of water in January 2023, reporting water trucking as the main source in March.<sup>HSOS</sup> However, KI responses between months tend to vary between the network, a combination of the network and water trucking, and water trucking only.<sup>HSOS</sup> This is likely due to the use of multiple water sources in each community and fluctuations in network functionality.

**Furthermore, KIs in around half of communities indicated that sewage networks sustained damage (in communities where a sewage network was present)** (see map 5).<sup>RNA</sup> This is particularly important as well-functioning sewage management is essential to prevent the spread of diarrhoeal diseases.<sup>13</sup> Likely as a result of previous damage to sewage networks, lack of maintenance, and other issues, KIs in 10% of assessed communities reported that the sewage system in their

communities was polluting public areas even before the earthquakes (January 2023).<sup>HSOS</sup> In March, this increased to 15%, possibly due to aforementioned earthquake damages.<sup>HSOS</sup> Note that even where sewage networks are functional, sewage is not treated.<sup>14</sup> As such, the discharge of raw sewage into the environment continues to pose a risk both to humans and nature.<sup>15</sup>

## Health

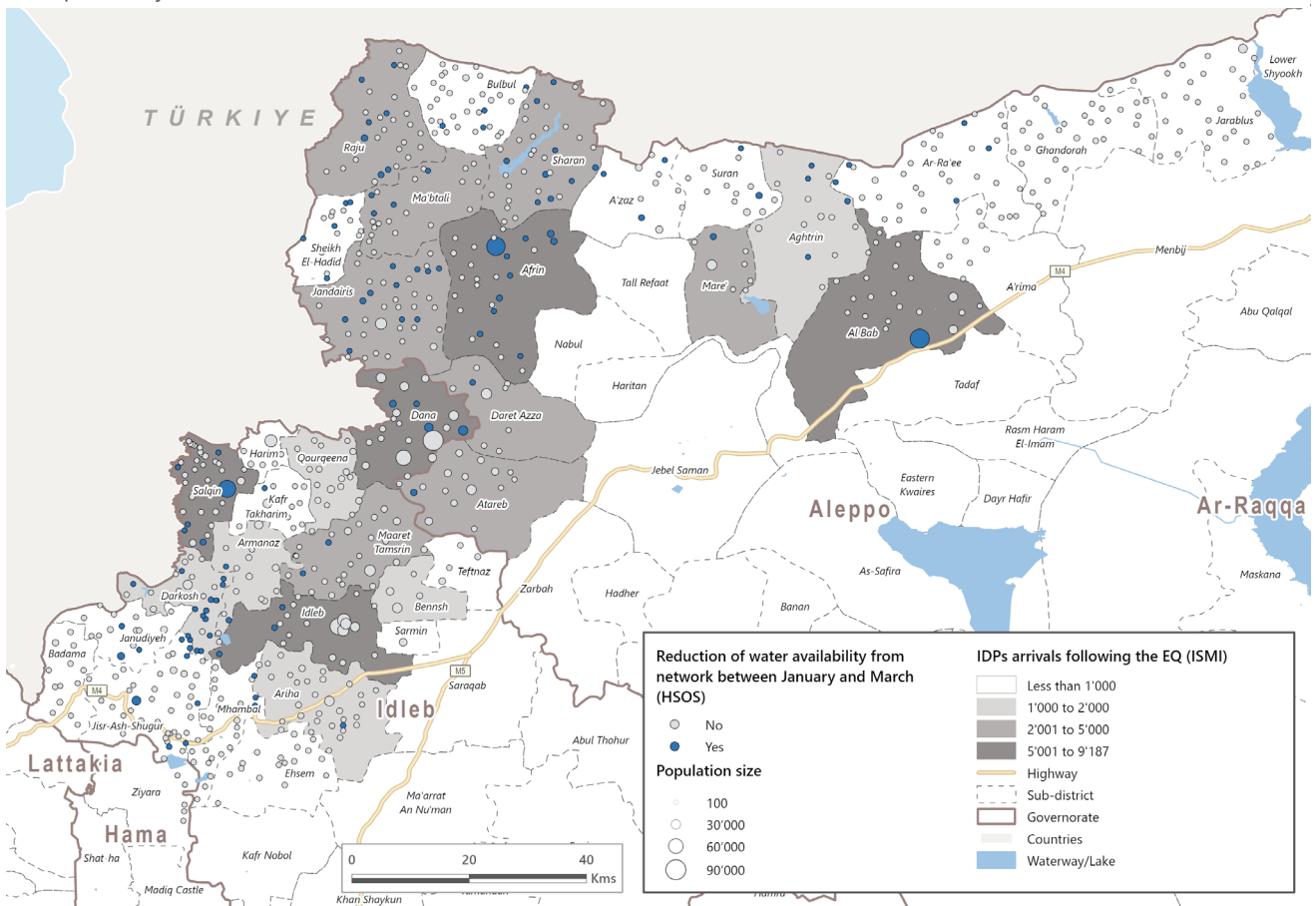
**Health services were adversely affected by the earthquakes while health needs increased.**

The section before mentions the increased risk of waterborne or diarrhoeal diseases due to infrastructural damage caused by the earthquakes. However, health facilities were also impacted by the earthquakes, with KIs on average reporting that around half of their health facilities sustained at least minor damage.<sup>RNA</sup> As a result, services in 15 health facilities were suspended.<sup>16</sup> Additionally, health facilities were initially overcrowded with patients coming in that were injured due to the earthquakes.<sup>17</sup> **These factors together may have hampered the cholera response and contributed to a resurgence in the following months.**<sup>10</sup>

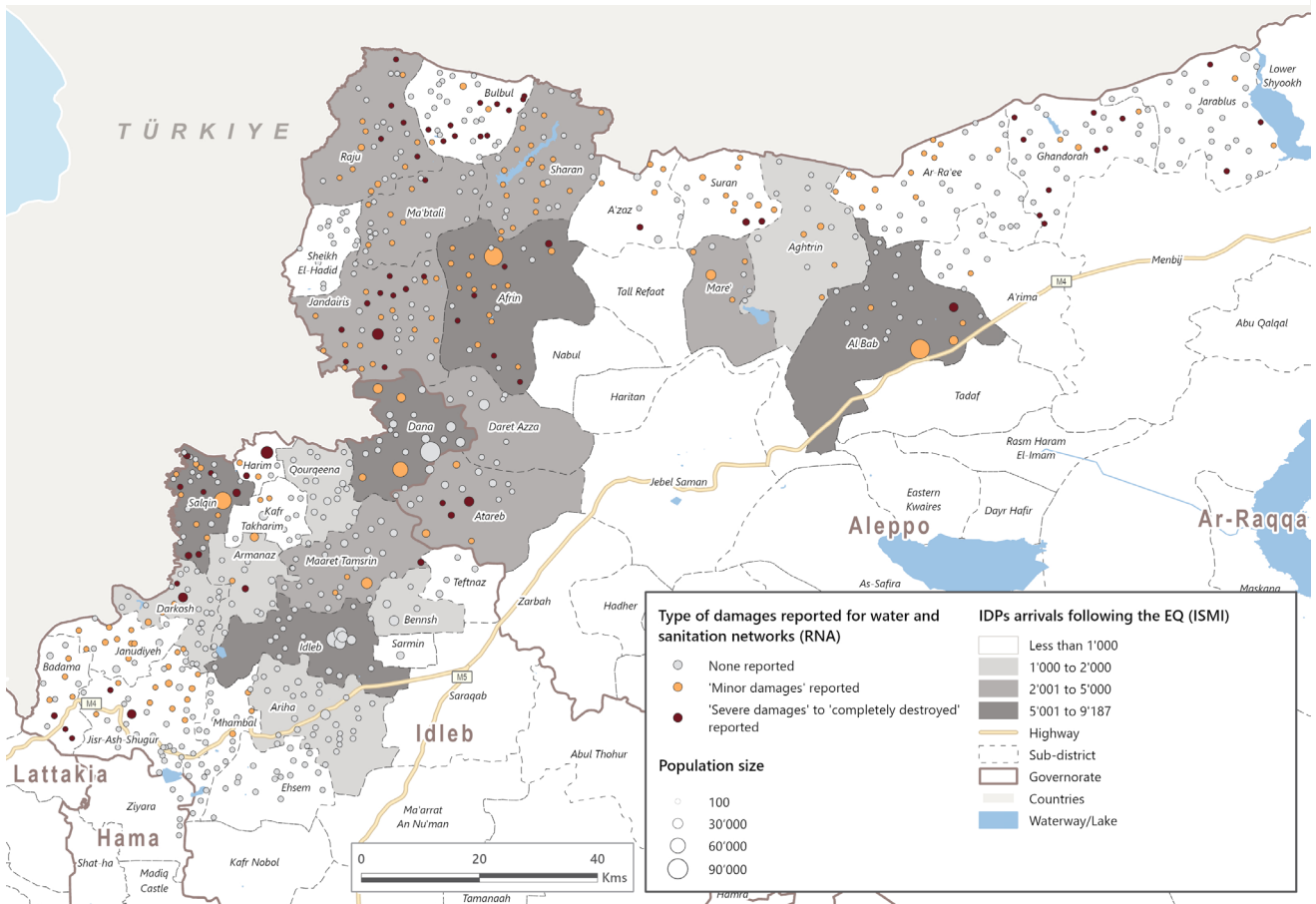
However, since then, 1.7 million people in NWS were vaccinated against cholera in a massive 10-day campaign in early March.<sup>18</sup> **Medical teams from around the world also entered the country following the earthquakes to support existing facilities with staff and equipment, and to set up mobile clinics.**<sup>16,17</sup> Hence, despite the serious and severe impacts the earthquakes had on the already limited health system in NWS, KIs did not report any worsening in availability of and access to health services in their communities.<sup>HSOS</sup>

What is notable is that **KIs were much more likely to mention psychosocial support and psychological first aid as a main protection need** in March than in January 2023, with KIs in two thirds of assessed communities having reported at least one of these in March 2023.<sup>HSOS</sup> The psychological stress of the earthquakes, including the over 10,000 aftershocks and the severe toll on human life, is considerable, and the WHO is advocating for increased psychological support.<sup>19</sup> In line with this, KIs were much more likely to report that mental health services were available in their locations or in nearby communities in March, with KIs in over a quarter of communities reporting the availability of these services (up from 12%).<sup>HSOS</sup> However, while some organisations were able to provide psychological support,<sup>16,17,19</sup> this large increase may also be due to increased awareness of KIs.

**Map 4:** Changes in water availability between January and March 2023<sup>HSOS</sup>  
(as reported by KIs in assessed communities)



**Map 5:** Extent of damage to water and sanitation networks<sup>RNA</sup>  
(as reported by KIs in assessed communities)



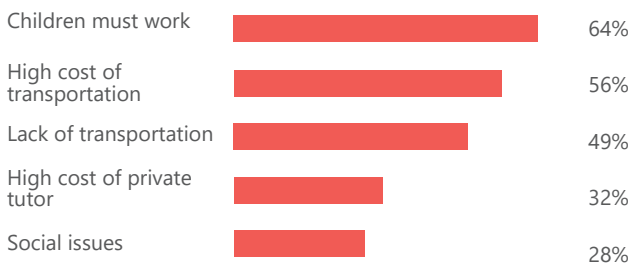
## Education

Education services have resumed, but the severe economic situation continues to prevent children from attending school.

Following the earthquakes, schools were shut down for several weeks, and only reopened in late February.<sup>20</sup> As such, KIs reported substantially reduced functionality of education services.<sup>HSOS</sup> However, KI reports of attendance rates in assessed communities did not change.<sup>HSOS</sup> This may indicate that children were still attending school when possible, or changes may be smaller than can be picked up by this assessment.

Nevertheless, **even prior to the earthquakes, KIs in the majority of communities reported that some children were missing school.**<sup>HSOS</sup> **The most common reasons for this were economic** – children having to work, and transportation to schools being too expensive.<sup>HSOS,21</sup> Even before the earthquakes, in 2022, a survey representative of households in NWS found that they were spending over three times as much as they were earning,<sup>22</sup> indicating extreme poverty in the region. Considering the adverse impact that the earthquakes are likely to have had on people’s livelihoods, this is unlikely to improve in the near future. This highlights the need for sustainable solutions, following the initial emergency response, that may help the population escape extreme poverty.

**Figure 5:** Barriers preventing access to education in March 2023<sup>HSOS</sup>  
(as reported by KIs in % of assessed communities)

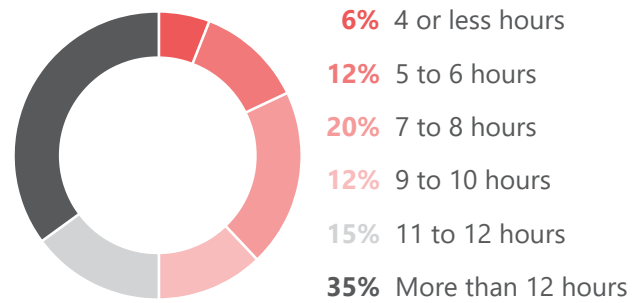


## Electricity

Electricity services were negatively impacted by the earthquakes, but further assessments are needed to better understand the situation.

Access to electricity is a crucial factor in reducing poverty, improving access to education, improving health, and other essential goals.<sup>23</sup> **However, there were major power outages immediately following the earthquakes, with electricity only starting to return the following day.**<sup>24</sup> Furthermore, KIs in a quarter of assessed communities that experienced earthquake impacts reported that electricity networks sustained major or severe damage, or were completely destroyed (of communities that had such networks).<sup>RNA</sup>

**Figure 6:** Average hours of electricity access per day in March 2023<sup>HSOS</sup>  
(as reported by KIs in % of assessed communities)



**That being said, KIs were no less likely to report the network as the main source of electricity in March than they were in January 2023.** In fact, KIs were more likely to report longer hours of electricity access in March than they were in January.<sup>HSOS</sup> This is likely due to the heavily reliance on solar power, the most commonly reported source of electricity, which experiences clear seasonal fluctuations.<sup>HSOS</sup> However, as electricity networks are privately owned, there is a clear lack of publicly available information on these. Hence, **further research may be needed to understand how electricity has been impacted by the earthquakes and what scope for rehabilitation exists.**

## ABOUT REACH

REACH Initiative 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).



## Endnotes

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