

DISASTER OVERVIEW

An earthquake of 7.7 magnitude occurred in Turkiye at 04:17 am on 6 February 2023, followed by 312 aftershocks; an additional separate earthquake of 7.65 magnitude occurred at 13:24 PM on the same day. The earthquakes occurred at the peak of the winter season, and is considered the largest earthquake in centuries in the region – the tremors were felt as far away as Israel and Egypt. More than 2.65 million people were living in the 50 kilometers radius of the epicenter [ADAM, WFP]. Up to 70,000 people were exposed to violent shaking, according to USGS [USGS].

As of February 7, according to the Ministry of Interior Disaster and Emergency Management Presidency (AFAD) reports, **4,544** people lost their lives, **26,721** people were injured and **6,217** building have been destroyed, or severely damaged, in ten provinces. Search and rescue efforts are still ongoing in all affected provinces. Damage assessments are currently carried out by AFAD and related official agencies, supported by a large scale international aid mobilization from 45+ countries. The next 48 hours are likely to be focused on search and rescue efforts, followed by lifesaving relief efforts focused on food, shelter, and NFIs for evacuees. According to the Presidency, more than eight thousands survivors have been extracted from rubble with more than three hundred rescue personnel from fourteen countries are working in the most affected areas.

TOTAL AFFECTED POPULATION

16.3 MILLION

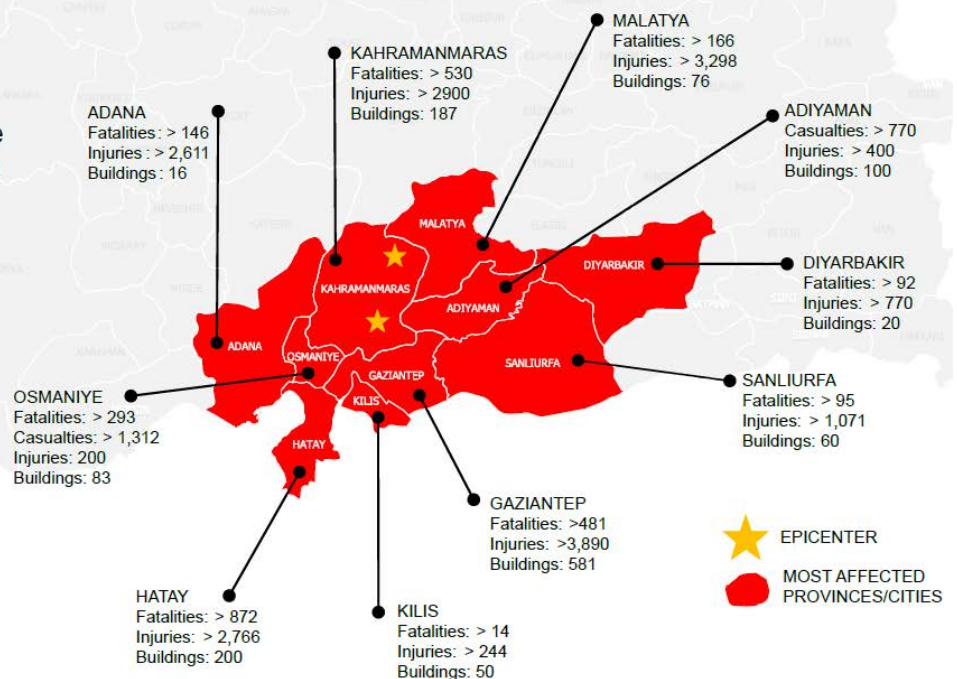
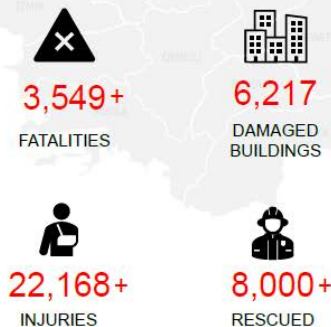
TOTAL AFFECTED REFUGEE POPULATION

1.8 MILLION

EARTHQUAKE IN SOUTHEAST TURKEY KAHRAMANMARAŞ PROVINCE

February 6, 2023

Pazarcik at 04:17AM- 7.7 Magnitude
Elbistan at 13:24 PM- 7.6 Magnitude
Aftershocks: 312



SCOPE AND SCALE

Damage to shelter and housing: The earthquake impact on shelter and housing has been devastating in most of the affected area, with very high levels of damage to dense residential areas, hosting both Turkish citizens as well as Syrian refugees and asylum seekers. Several cities, notably Iskenderun, Antakya, Maras, Gaziantep, Kahramanmaras and Osmaniye, have suffered heavy destruction. Official figures stand at 5,725 buildings collapsed in total [AFAD]. In Hatay 2,000 buildings are destroyed, according to local authorities including most of the public buildings, the municipality building, AFAD building, the fire department as well as three hospitals. In Gaziantep 581 buildings, in Sanliurfa 19 buildings, in Kahramanmaras 310 buildings in Osmaniye 101 buildings have collapsed [AFAD]. At least 600 buildings collapsed in Adiyaman including the city hall building. In addition, in Adana 24 buildings, in Malatya 300 buildings, in Kilis 50 buildings and in Elazig 6 buildings are destroyed as of 22:00 PM 06 February, and the numbers are all expected to increase as help arrives on the second day. Several key UNESCO World heritage sites were damaged, including Gaziantep Castle, Diyarbakir Castle and Hevsel Gardens Cultural Landscape Area.

Impact on Health systems and structures: Hatay province as been the most affected area in terms of damage due to the earthquake: three main hospitals were reportedly destroyed in Hatay province [Al Monitor]. However, as of 07 February, a total of 4,785 health personnel are back on duty. The total number of personnel operational in the affect areas is 24,443 people. In addition, 5 thousand health personnel and nearly a thousand ambulances were transferred to the affected regions as of 07 February to sustain and increase local health system capacity to cope with the disaster. There are no reports of damage to medicine and drugs stock although information is missing about the actual current stock capacity to cope with the likely increase of needs.

Damage to key infrastructure: Most of damage has been sustained by the road network, with limited impact to other key transport infrastructures such as airports and railways. Major airports in the affected area have closed for civilian routes but are operational for aid and relief flights. Malatya, Adana, Diyarbakir, Adiyaman ,Gaziantep and Şanlıurfa Airports are open to aid flights. Only Kahramanmaraş and Hatay airports are still closed to flights due to earthquake damage [AFAD]. Similarly, railway communications are functional: Ulukışla-Adana, Adana-Mersin, Adana-Toprakkale, Yolçatı-Diyarbakir, Yolçatı-Elazig, Elazig-Tatvan railway lines are open with Malatya-Çetinkaya, Malatya-Yolçatı railway lines open for emergencies only. Fevzipaşa-Narlı, Narlı-Gaziantep, Narlı-Malatya lines are instead closed as of 7 February [AFAD]. Road access is constrained between Gölbaşı and Karanlıkdere, and between Gaziantep and Bahçe [General Directorate of Highways]. According to the Presidency, aid is delivered by air as well as by buses and trucks. Adana airport has become the main logistics base for the response. 11,780 volunteers who wanted to participate in search and rescue efforts were transported to the earthquake zone with 80 Turkish Airlines (THY) flights, and other local airlines have announced they will provide free flights for Volunteers. No damage has been reported to power plants or power grids.

Timeline

1 4:17 AM Feb 6 2023 - Initial Quake-

A 7.7 magnitude earthquake struck outside of Pazarcik district of Kahramanmaras province. The quake struck during the middle of the night, when most people were sleeping, leading to large loss of life.

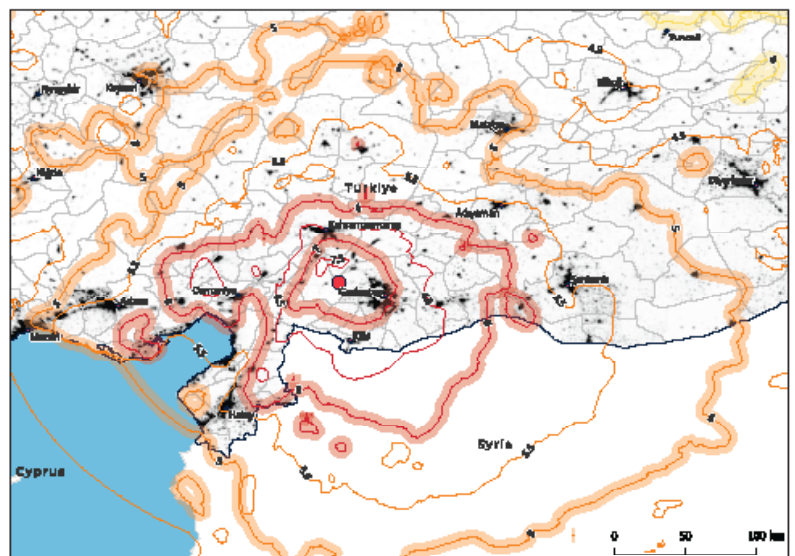
2 Feb 6th-7th 2023 - Aftershocks -

Over the course of the first two days, 312 aftershocks were reported, some as large as 6.8 in magnitude. Over the course of the first day, numerous buildings collapsed. Road and infrastructure damage has been extensive, with explosions at pipelines and closed airports reported in multiple cities.

3 13:24 PM Feb 6th 2023- Second Quake-

In the afternoon of the first day, a second quake of similar magnitude 7.6 struck north of the previous quake, in the town of Elbistan within the same province. This quake was larger than the aftershocks and led to further destabilization of damaged buildings.

Türkiye - Earthquake Estimated Affected Population



Legend	Population density (per 1 km ²)	Magnitude Isoline	Estimated Population Living in Affected Areas
● Mainshock Epicentre	1,000	3.0	MMI 7.5 : none
● City		4.0	MMI 7 : 3,309,982 people
□ Türkiye border		5.0	MMI 6 : 6,001,000
□ Provinces		6.0	MMI 5.5 : 10,851,412
□ Districts		7.0	MMI 5 : 28,491,938

Data source: GADM, HDX, USGS, DIVA-GIS, IFRC. Date produced: 06.02.2023



Humanitarian Conditions

Shelter & NFI: Shelter is a priority need for the response due to large amount of damage to housing, and shelter as well as low temperature due to the winter season. In addition to those who lost their houses, many affected households are unwilling to return to their shelter for the fear of aftershock. More than three thousand earthquake survivors are temporarily accommodated in shelters (wagons) provided in Adana, Mersin, Osmaniye, İskenderun, Diyarbakır, Elazığ and Malatya. According to the Ministry of National Education, more than 380,000 people are temporarily sheltered in schools and education facilities. In addition to the lack of safe and adequate shelters, most of the households with destroyed or severely damaged shelters are also in need winter clothes and household NFIs. Heating support is also required as the Turkish Ministry of Energy confirmed serious damage to the country's energy infrastructure, including gas pipelines near the epicenter, with 30 substations damaged. AKUT, a reliable search and rescue group, stated that there seems to be a major coordination problem: while in some areas there is more than necessary support, in many areas there is no state or non state agencies [AKUT].

Health: High number of casualties will increase the burden on local health system capacities, which are directly affected by the Earthquake especially in the Hatay province. In addition to the 5,544 fatalities, 26,721 people have reportedly been injured across 11 provinces of Kahramanmaraş, Gaziantep, Şanlıurfa, Diyarbakır, Adana, Adıyaman, Malatya, Osmaniye, Hatay, Kilis, Mardin [AFAD]. People in need of health care in the affected provinces may have difficulty in accessing health infrastructures due to road damages while low to medium priority surgical intervention are likely to be postponed indefinitely. People suffering from chronic diseases are likely as well to have their access to quality health care support limited in the coming months. This will particularly affect the most socio-economic vulnerable populations including people living in rural areas far from health infrastructures and vulnerable Syrian refugees and asylum seekers.

Food: Affected population directly impacted by the earthquake have lost assets and livelihoods in addition to the damage and loss of their shelters and household items. In a context of adverse weather conditions, pre-crisis socio-economic duress and high inflation rates, most vulnerable groups will struggle to access sufficient quantity of quality foods in the coming months despite the market system being operational and soon to resume its full functionality. More than 123K households who receive ESSN are in the affected areas of the earthquake. From the previous results from PDMs and IVS, it is evident that ESSN population is less vulnerable compared to the non-recipient refugee population. It is expected that this will still be the case, but the vulnerability of all affected groups will definitely deteriorate. Additional monitoring and assessments will be needed to verify the difference.

Aggravating Factors

Harsh weather conditions due to peak winter season

The initial earthquake struck at night during a multi-day winter weather event, leading to major issues with humanitarian access as roadways and airports were impacted by the quakes were blocked by rain and snow. People trapped in collapsed buildings are unable to escape and are not likely to survive long periods of time due to low temperatures. The most difficult weather conditions were in Malatya, where the temperature dropped to 0 degrees and snowfall was effective. It is reported that the air temperature will drop to -7 and -15 at night in some regions. This weather issue has been combined with poorly built pre-existing infrastructure, with many of the buildings that collapsed representing recently built substandard construction. Despite ongoing warnings of the experts as early as 3 years ago that this area was high risk for earthquakes, Necessary precaution has not been taken.

Economic downturn and high inflation

Official inflation in Türkiye has recently hit an all-time high of 85.5% in October 2022, easing to 64.3% in December 2022, with the Turkish Lira hitting a new record low after the earthquake, slipping to 18.85 per 1 USD (Reuters). Because of these economic issues, cost of living has increased enormously, and food has grown more expensive and less affordable. This already-existing economic instability may grow much worse for those impacted by the earthquake and means communities in these areas may not be very resilient.

Projected Outlook

In the short term, casualties are expected to increase due to the gradual search and rescue efforts of collapsed buildings and the harsh weather conditions. Given the scale of the devastation, this relief effort is likely to be on a large scale and require significant investment and will require time to address the main drivers of the crisis. Shelter, health and food response relies on effective and timely supply pipelines, which requires adequate logistical solutions. Final loss estimations from RISKLayer and from the USGS have placed a 20% possibility of casualties above 10k, with RISKLayer giving a median estimate of total casualties around 34k fatalities and the WHO modeling up to 20,000 [RiskLayer, USGS, WHO]. Economic models are also predicting a total economic impact between 0-2% of the Turkish GDP [USGS].

More significant medium-term issues may arise because the earthquake has also had significant impacts across the border in an area of Syria where active conflict is present. Among the affected areas, many host a significant number of IDPs and potential cross-border movements should be monitored in the coming months. Similarly, these areas have recently experienced cholera outbreaks, which could spread northward into post-quake refugee areas.