



# Türkiye & Syria Earthquake February 2023

Daily Highlights - 06/02/2023



Two of the strongest earthquakes in the region in more than 100 years, of 7.8 and 7.7 magnitude, occurred on Monday 6 February in southeastern Türkiye at about 4:15 am and 1:30 pm local time.

One of the strongest earthquakes in the region in more than 100 years, of 7.8 magnitude, occurred on Monday 6 February in southeastern Türkiye at about 4:15 am local time (1:15 GMT), centered about 70 kilometers from Gaziantep, in Şekeroba (ADAM WFP 06/02/2023). A strong 6.7 aftershock was felt in Türkoğlu, a few kilometers north from the first earthquake, about 10 minutes later (ADAM WFP 06/02/2023). More than 2.65 million people were living in the 50 kilometers radius of the epicenter (ADAM WFP 06/02/2023). Up to 70,000 people were exposed to violent shaking, according to USGS (USGS 06/02/2023).

Another 7.7 earthquake occurred 100 kilometers north of the first one, in Ekinözü, with an aftershock of magnitude 6, at 1:30 pm local time (<u>ADAM WFP</u> 06/02/2023).



Map 1 | Earthquakes epicenters | Source: <u>Al Jazeera</u>, 6 February 2023

The earthquakes have been felt throughout the region, in neighboring countries, especially Syrian border regions with Türkiye and Iraq (<u>Anadolu Agency</u> 06/02/2023). They affected an

area of around 400 kilometers, including the main cities of Gaziantep, Adana, Hatay, Kahramanmaraş, Malatya, Kilis, Osmaniye, Diyarbakir, Adiyaman and Sanliurfa in Türkiye and Aleppo, Idlib, Homs and Hama in Syria.

A series of earthquakes followed the initial tremor, at least 66 before 9 am local time according to Türkiye disaster management agency AFAD (<u>The Guardian</u> 06/02/2023), with at least 18 aftershocks with a magnitude over 4 and seven above 5 recorded (<u>CNN</u> 06/02/2023).

Situated on or near several fault lines, Turkey is one of the world's most active earthquake zones. Düzce was one of the regions hit by the last worst earthquake, a 7.4-magnitude earthquake in 1999, which killed more than 17,000 people (<u>The Guardian</u> 06/02/2023).



### Table 1 | Casualties | Source: The Guardian, 2023

Those numbers are expected to rise significantly, as many buildings collapsed with large numbers of people buried under the rubble.

	Injured		Death	ŕΧ
Türkiye	8,533 (AFAD 4.30	pm CEST)	1,498 (AFAD	4.30pm CEST)
Syria Government- controlled areas	1,284 (SANA - A	Al Jazeera)	430 (Health	ministry - The Guardian)
Northern Syria	811 (OCHA - The	Guardian)	380 (	The Guardian)
Cumulative		10,628		2,308

### 🗍 Türkiye



### Impact - Cross Sector

Several cities, notably Iskenderun, Hatay, Maras, Gaziantep and Malatya, have suffered heavy destruction, with at least 2,830 buildings collapsed.

### Key Figures and Findings

### • Shelter

Several cities, notably Iskenderun, Hatay, Maras, Gaziantep, Pazarcık and Malatya, have suffered heavy destruction. Official figures stand at 2,834 buildings collapsed (AFAD 06/02/2023) but this number could be as high as 4,000 (IBC 06/02/2023). According to the governor of Malatya Province, some 130 buildings had collapsed in the regional capital (Deutsche Welle 06/02/2023). At least 17 buildings collapsed in Diyarbakir, according to a security official. Authorities said 16 structures collapsed in Sanliurfa and 34 in Osmaniye (Reuters 06/02/2023). The majority of the buildings along the coast of Iskenderun collapsed,

according to residents (<u>Al Monitor</u> 06/02/2023). Gaziantep Castle, a UNESCO World Heritage site in Turkey, also withstand severe damages (<u>CNN</u> 06/02/2023).

### • Health

Two hospitals were reportedly destroyed in Hatay province (<u>Al Monitor</u> 06/02/2023). More than 7,600 people have reportedly been injured across Kahramanmaraş, Gaziantep, Şanlıurfa, Diyarbakır, Adana, Adıyaman, Malatya, Osmaniye, Hatay and Kilis, according to AFAD (<u>Al Jazeera</u> 06/02/2023).

### Table 2 | Casualties | Source: AFAD, 06/02/2023, 4pm CEST

	Hatay	Gaziantep	Maraş	Osmaniye	Malatya	Adana	Diyarbakir	Sanliurfa	Adiyaman	Kilis
Deaths	25 0	200	19 1	131	98	43	41	27	20	13

### • WASH

Water cuts have been reported in Gaziantep.

### • Transport

Hatay airport runway has been damaged and flights are suspended from Hatay, Gaziantep and Adana airports (<u>Al Jazeera</u> 06/02/2023). Emergency response teams are however allowed to land in Gaziantep and Kahramanmaraş airports (<u>OCHA</u> 06/02/2023).

### • Telecommunications

Phone lines have been disrupted throughout the southern provinces, but internet appears to be functioning in the main cities, notably Gaziantep.

### • Education

Schools are closed in southern provinces. They will be suspended for two weeks in Kahramanmaraş, Hatay, Adıyaman and Malatya provinces and for one week in Diyarbakır, Gaziantep, Şanlıurfa, Adana, Osmaniye and Kilis (<u>Raillynews</u> 06/02/2023).



### Main oil and gas pipelines in earthquake zone

### • Energy

The Turkish energy minister confirmed serious damage to the country's energy infrastructure, including gas pipelines near the epicentre, with 30 substations damaged. Cuts were reported in Antep, Hatay and Kilis (<u>The Telegraph</u> 06/02/2023). Reports of fires along the gas pipelines have been reported, notably in Hatay (<u>BBC</u> 06/02/2023).

### Response and Capacities

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The Turkish Interior Minister issued a call for international assistance (<u>IBC</u> 06/02/2023). More than 9,000 personnel are carrying out search and rescue activities (<u>President Erdoğan</u> 06/02/2023). Nearly 1,000 search and rescue volunteers have been deployed from Istanbul to the affected earthquake regions in Turkey, according to the Governor of Istanbul (<u>The Guardian</u> 06/02/2023). 10 more governors were assigned to the 10 provinces affected by the earthquake (<u>President Erdoğan</u> 06/02/2023). According to the defense ministry, armed forces have established an air corridor to enable medical and rescue teams to reach the earthquake-hit areas (<u>Reuters</u> 06/02/2023).

The European Union has mobilized search and rescue teams for Türkiye following its request to activate the EU Civil Protection Mechanism ( $\underline{EU}$  06/02/2023).

Across southeast Turkey and Syria, people have fled their homes to take shelter in cars, fearing aftershocks and collapsed buildings (<u>The Guardian</u> 06/02/2023). Some are sheltering in mosques and restaurants. People have been trying to leave the affected regions, fearing further

earthquakes, causing traffic jams, hampering efforts of emergency teams trying to reach the affected areas (<u>The Guardian</u> 06/02/2023).

### Aggravating factors

• Cold weather



Cold temperatures and snow have been occurring since Friday 3 February. Heavy snow in the entire region, including heavy rains, continues to occur and are forecast for the rest (source map: <u>Al Jazeera</u> 06/02/2023).

• Refugees

Türkiye is home to more than 4 million refugees, mostly Syrians, most of which are living in the southeast, including 50,000 Syrian refugees living in camps (<u>UNHCR</u> 18/07/2022).







### • Economic and political situation

Türkiye has been facing a severe economic crisis for the past years, with the Turkish Lira hitting a new record low after the earthquake, slipping to 18.85 per 1 USD (<u>Reuters</u> 06/02/2023). The earthquake also occurred in a tense political period, with less than four months to go before the country's presidential and parliamentary elections.



Major damage has been reported in northern Syria, an area that includes more than 4.1 million people in high need, with an healthcare system reportedly "overwhelmed".

### Key Figures and Findings

The sub-districts of Harim, Atmeh, Sarmada, Atareb, and Kafr Takharim are among the worsthit areas (<u>OCHA</u> 06/02/2023).

• Shelter

At least 325 buildings have been partially damaged and 224 were completely destroyed in 17 sub-districts (OCHA 06/02/2023). In northwest Syria, the White Helmets described the situation in the rebel-held region as "disastrous", with entire buildings collapsed and people trapped under the rubble (The Guardian 06/02/2023). Tens of buildings have collapsed in the city of Salqin, according to a member of the White Helmets rescue organization in a video clip on Twitter (The Guardian 06/02/2023).

• Health

Already strained health facilities have reportedly quickly filled with wounded, according to rescue workers (<u>The Guardian</u> 06/02/2023), with the regional director of the Syrian American Medical Society saying the healthcare system was "overwhelmed" (<u>Al Jazeera</u> 06/02/2023). At least one hospital in northern Syria was being evacuated after its structure was compromised (<u>UOSSM</u> 06/02/2023).

According to an official from the Syrian Ministry of Health, quoted by the official Sana agency, 42 dead and more than 200 injured have been recorded in Aleppo (<u>Le Monde</u> 06/02/2023).

### Response and Capacities

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• Northwest

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• Government-controlled areas

In government-controlled areas, medical professionals have reportedly been sent to affected regions (<u>Syria Health Ministry</u> 06/02/2023). Israel announced it received a Syrian request for assistance with earthquake relief and will send aid (<u>Reuters</u> 06/02/2023).

### Aggravating factors

• Cold weather

Adverse weather conditions, including low temperatures and stormy weather, have compounded the dire situation.

• Previous high needs caseload

4.1 million people were already estimated to be in need in northwest Syria, including 3.3 million people food insecure (OCHA 06/02/2023).



Information Gaps and Limitations

Consolidated figures are changing rapidly and become rapidly outdated. Information on Syria remains scarce and is not always disaggregated.







### **About This Report**

This report is a synthesis of publicly available information, powered by the <u>DEEP</u> - the Data Entry and Exploration Platform - a collaborative analysis platform for effective aid response - and supplemented by assessment data provided by humanitarian partners working in-country. The analysis was conducted independently by Data Friendly Space (DFS) on behalf of the DEEP project, currently funded by USAID Bureau of Humanitarian Assistance (BHA).

### Methodology

DFS Analysts and Information Management Officers collate and structure available information in the DEEP platform daily.

The Data Entry and Exploration Platform (DEEP) is an intelligent web-based platform, offering a suite of collaborative tools tailored for qualitative and secondary data review. DEEP is free, open source, and fully accessible for all humanitarian and development users. Log in here: <u>https://app.thedeep.io/login/</u>

Each piece of information is tagged based on the pillars and sub-pillars of the Analysis Framework, based on the JIAF 1.0 (see below) and developed in line with successful models used across previous projects. The framework is shown below and comprises the humanitarian conditions (by sector) and the operational environment. All the captured information receives additional tags to allow

examination of different categories of interest such as affected group, geographic location, etc.

Data Friendly Space analysts follow key steps for ensuring robust and sound humanitarian analysis, relying on an analysis workflow and spectrum (see below). For this report, the analysts relied on the main three first steps of the analysis spectrum – description, explanation, and interpretation.

Analysis Framework | Source: DFS, 2023

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	Demography	Environment		Risks and Threats		Local Integration		People facing humanitarian constraints	I	inàtien.		Drivers & Aggravating Factors							
						Local		People facing nitarian const		nd Info	6. Impact	Impact on People							
				#				huma		Knowledge and Information	9	Impact on Services and Systems							
	Socio-Cultural		1000	Risks and Threats		Interdions	1 Access	Security / Physical Constraints		8	ų s	Living Standards							
1. Context		Infrastructure			ent	E			cation	iers	7. Humanitarian Conditions	Coping mechanisms							
									mmuni	and bar	1 H	Physical / Mental Well-bei	NK .						
	utty		2 Shock		3. Displacement	Pull factors	Humanitarian Access	ctors to ulation	Information and Communication	Information challenges and barriers	8. At risk	People At Risk / Vulnerabi	e						
	and Sec	Economics					4	Access of relief actors to the affected population		Informa		Priority Needs (pop.)	Priority Needs (pop.)						
	Peace	ÊO		eristics		Push factors		ccess of he affec	vi		9. Priorities	Priority Needs (hum.)							
				Charact		Push				d mean	ei.	Priority Interventions (pop	<b>u</b>						
	iii	olicy		Type and Characteristics				Access of affected population to assistance		Information channels and means	aponse	Government and Local Authorities							
	Politics	Legal and Policy				Type, # and Movement				ation ct	ties / Re	National / Local Actors							
		)e-1				Type		Acc		Inform	10. Capacities / Response	International Actors							



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DFS analysis workflow was inspired by and adapted from the work of Richard Garfield, Stephen Flew, Katherine and Randolph H. Pherson, Patrice Chataigner, Pat Bezeley, Andy Kirk, Ian Dey, Charles Kufs and J. Scott Long



## **DFS's Analysis Spectrum**

Key steps for deeper insights and a more effective response

#### **4. ANTICIPATORY ANALYSIS** (())

Anticipative analysis identifies the probability of future events and outcomes at a specific time, based on current and historical data. It combines predictions (What will happen under current conditions?) and forecasts (What else might happen?). Anticipative analysis goes beyond current conditions and provides an assessment and best estimates on what might happen in the future. In addition to what will happen In the future. This protongs the shelf-life of the analysis by integrating a forward-looking perspective into the analysis of the current situation

#### **KEY ANALYTICAL QUESTIONS**

- What will happen next if nothing changes?
- · What else might happen?

DATA FRIENDLY SPACE

How does this change our main conclusions, priorities and key messages?

#### OUTPUTS

- · Baseline scenario
- · Alternative scenario and drivers
- Current and forecasted priorities

#### TOOLS

- · Analysis Framework
- · Probability and impact scales
- Risk matrix

### **3. INTERPRETIVE ANALYSIS** What does it mean? Conclude and

#### build your case

The focus of the interpretation stage is to bring everything together, build an integrated and cohesive picture of what was found and answer the original research question(s). Interpretive analysis aims at drawing well-supported conclusions through careful argumentation, an evaluation of the strength of the evidence and attention to plausibility in context.

#### **KEY ANALYTICAL QUESTIONS**

- · What is important and why?
- · What are the priorities?
- · How confident are we about our conclusions?

#### OUTPUTS

- · Key findings and messages
- Key priorities
- · Confidence in main conclusions and statements

#### TOOLS

- · Analysis framework
- Interpretation sheet
- · Severity scales and confidence ratings
- · Updated key assumptions checklist to challenge explanations and identify faulty logic, weak evidence or flawed analysis.



Explanatory analysis looks for the reasons behind why the current situation exists. It asks about the drivers of the crises or issues and the factors and underlying vulnerabilities that contributed to the situation. Explanatory analysis attempts to answer these questions by looking for associations correlations and causation and to use these to formulate and refine causes and effects hypothesis and theories. It is based on the careful investigation of relationships, underlying processes and causa

#### **KEY ANALYTICAL QUESTIONS**

- · What factors and causal mechanisms combine and interact to create or aggravate outcomes?
- · What is the strength of the relationships?
- · Are they other alternative hypothesis that could explain what we see?

#### OUTPUTS

- · Theories, best explanations, guesses and conjectures as to what is related or leading to what
- · A list of focal issues the recommendations should later adress · A list of rival or alternative hypotheses
- TOOLS
- · Analysis framework
- A fishbone diagram or problem tree representing causal mechanisms and which ones are contributing the most to humanitarian outcomes
- · Updated key assumptions checklist to challenge explanations and identify faulty logic, weak evidence or flawed analysis



What are the most appropriate and proportionate course of actions? Suggest and advise

Prescriptive analysis translates the previous findings into a feasible plan and provides recommendations and advice about policy, strategy and interventions. It determines the response options available, the objectives to plan for and their alignment with more desired outcomes. It also articulates what choices are net possible and why, detail opportunities and risks and show the implications of decisions or the absence of decisions.

#### KEY ANALYTICAL QUESTIONS

- What are the objectives and targets?
- · What set of actions and sequences will have the greatest impact and benefits?
- · What are the main assumptions, risks and possible synergies across the response?

#### OUTPUTS

- · A list of recommended response options, modalities and their weighted benefits
- A set of assumptions and requirements that underpin the response sucess
- · A list of risks that would impact the viability of the response
- A list of areas for collaboration or synergies that would increase impact and success

#### TOOLS

- · Analysis framework
- Response analysis matrix
- · Response trees or theory of change
- · Logical and strategic framework



### 1. DESCRIPTIVE ANALYSIS

#### Compared to what? Contrast and summarize

Descriptive analysis is about grouping, summarizing and comparing data. To effectively interrogate a large amount of data, analysts break it down into manageable chunks and summarise the information into various dimensions of interest, e.g. a particular affected group, geographical area or time period. Comparing and contrasting these summaries helps to identify and confirm similarities and differences between or within dimensions; further investigation allows the identification of meaningful patterns, trends or anomalies.

#### **KEY ANALYTICAL QUESTIONS**

- · How to group and best summarize the information?
- · What consistent patterns, trends or anomalies emerge from the data?
- · How much evidence we have in support of each result or statement?

#### OUTPUTS

- Summary statistics and statements for each category and unit of reporting (geographical area, affected group, sector, etc.), including absolute numbers/percentages
- · Information about the number and type of evidence available
- Main confirmed patterns, trends, theories, messages and stories · Key assumptions checklist to challenge assertions and identify faulty logic, weak evidence or flawed analysis

#### TOOLS

- · Analysis framework
- Key assumptions checklist to challenge assertions and identify faulty logic, weak evidence or flawed analysis
- · Information gaps matrix









### About this report

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### Get in touch with us

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