Türkiye & Syria Earthquake February 2023

Daily Highlights - 07/02/2023

Crisis Overview

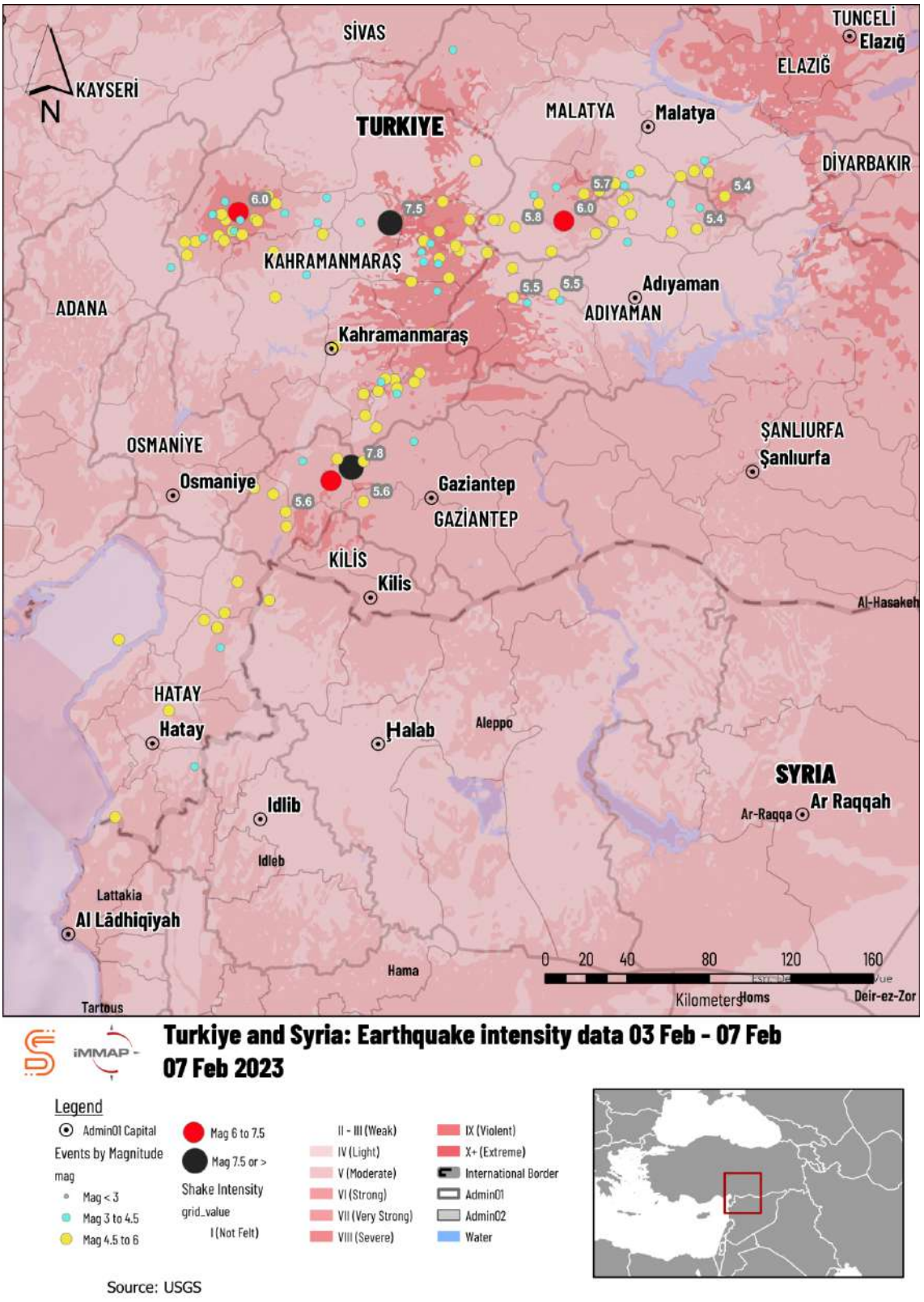
Two of the strongest earthquakes in southeastern Türkiye, of 7.8 and 7.7 magnitude, occurred on Monday 6 February at about 4:15 am and 1:30 pm local time, affecting more than 18.1 million people.

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 UTC), 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 (ADAM WFP 06/02/2023).

A series of earthquakes have been following the initial tremors, with 271 aftershocks recorded with a magnitude greater than 4 as of 5:30 pm local time on 7 February (AFAD 07/02/2023), including four aftershocks with a magnitude above 5 recorded at around 6 am, 10 am and 6.50 pm local time (AFAD 07/02/2023). The continuous shaking is hampering search and rescue activities and contributing to fuel panic, with residents evacuating their shelters in a rush (KI 06/02/2023, The Guardian 07/02/2023).

The earthquakes have been felt throughout the region, in neighboring countries, especially Syrian border regions with Türkiye and Iraq (Anadolu Agency 06/02/2023). They severely affected an area of around 450 kilometers, from Adana in the west to Diyarbakır in the east and 300 kilometers from Malatya in the north to Hatay in the south in Türkiye, including the main cities of Gaziantep, Adana, Hatay, Kahramanmaraş, Malatya, Kilis, Osmaniye, Diyarbakir, Adiyaman and Sanliurfa in Türkiye, where about 13.5 million people are residing. In northwest Syria, Syrian authorities reported deaths as far south as Hama, about 100 kilometers from the epicentre, including the cities of Aleppo, Idlib, Homs and Hama, home to about 4.6 million people. WHO fears that up to 23 million people, including 1.4 million children, could be affected cumulatively (Reuters 07/02/2023).

Map 1 | Earthquakes intensity map | Source: DFS & iMMAP, 7 February 2023



Crisis Impact Overview

18.1M	5,400+	24,550+	4.1 M NW	4 M
People living in Turkish affected areas and northern Syria (Census Türkiye, HNO 2022)	Deaths (AFAD #10, Anadolu, SANA, Reuters 07/02/2023)	Injured (AFAD #10, SANA, Reuters 07/02/2023)	People in need in northwest Syria (HNO 2022)	Refugees in Turkey (UNHCR 18/07/2022)

Table 1 | Casualties

Those numbers are expected to rise significantly, as many buildings collapsed with large numbers of people buried under the rubble. According to WHO, the death toll could rise up to reach 18,000 casualties, a similar caseload during the last worst earthquake in Türkiye in 1999 when 17,000 lost their lives (BBC 07/02/2023).

	Injured	Death
Türkiye	21,103 (AFAD Update #10 07/02/2023)	3,703 (AFAD - Anadolu 07/02/2023)
Syria Government-controlled areas	1,449 (SANA 07/02/2023)	812 (SANA 07/02/2023)
Northwest Syria	2,000 (Al Watan 07/02/2023)	900 (Reuters 07/02/2023)
Cumulative	**24,552**	**5,415**

Türkiye

Impact - Cross Sector

Several cities, notably Iskenderun, Hatay, Maraș, Malatya, Adıyaman and Gaziantep have suffered heavy destruction.

Priority areas

Over 13 million people across 10 cities have been affected. Hatay, Iskenderun, Maraș, Adıyaman and Malatya appear to be the most affected, as well as Gaziantep, Antakya and Adana.

Unconfirmed report of displacement from Hatay city to Adana was mentioned by the BBC on 7 February (BBC 07/02/2023).

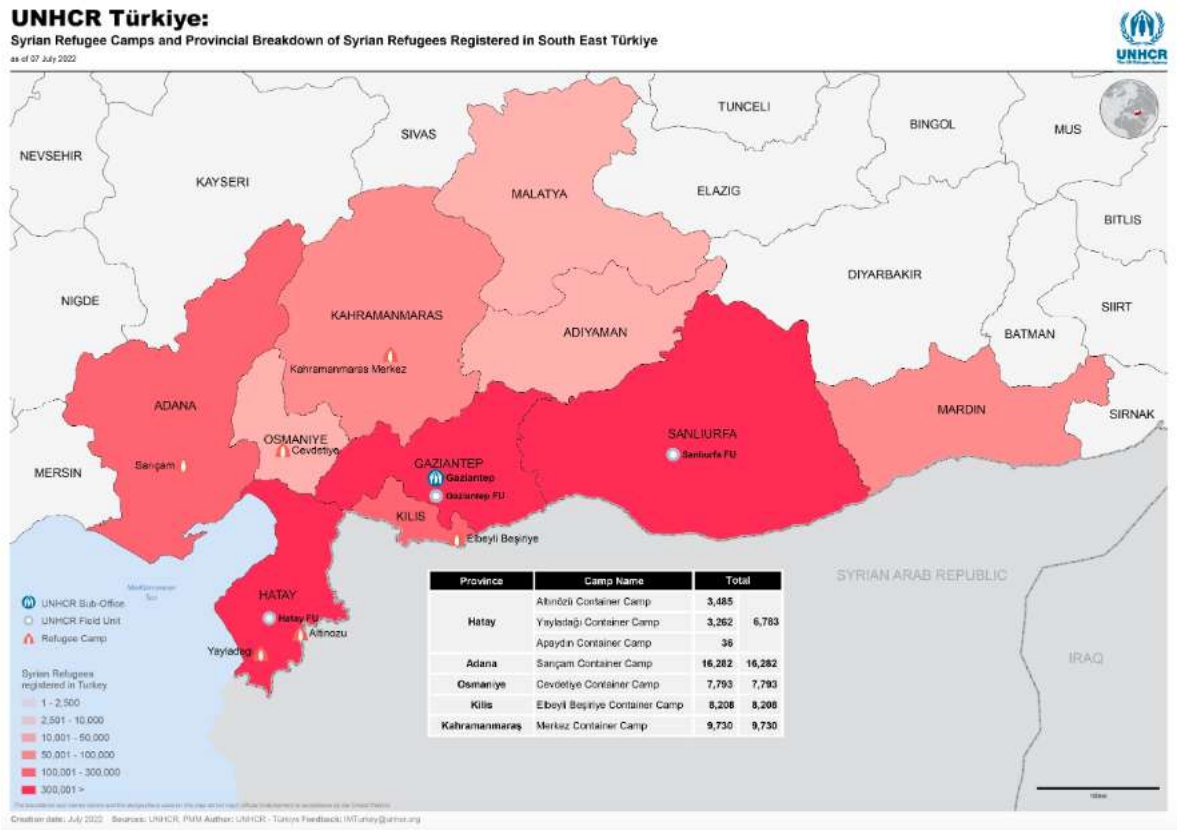
Aggravating factors

- *Cold weather*

Cold temperatures and heavy rains and snow have been occurring since Friday 3 February, worsening conditions for people trapped under rubble or left homeless. Heavy snow in the entire region, including rains, occurred throughout Monday 6 February. Flights from Istanbul and Ankara to eastern Turkey had to be canceled due to wind, rain and snow in Istanbul and heavy snow in Ankara (Al Jazeera 06/02/2023). Drier and sunnier weather is forecasted from Wednesday 8 February onwards, with still chances of rains over the next few days. However colder air and freezing temperatures will remain a concern, with temperatures reaching as low as -15°C in rural areas and -5°C in Gaziantep at night (BBC 07/02/2023).

- *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 (UNHCR 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 (Reuters 06/02/2023).
The earthquake also occurred in a crucial political period, with less than four months to go before the country's presidential and parliamentary elections (BBC 05/02/2023, The Economist 16/01/2023).

Shelter/NFIs

Official figures stand at 5,575 buildings collapsed, but the disaster management agency received reports of more than 11,340 buildings destroyed.

Several cities, notably Iskenderun, Hatay, Maras, Gaziantep, Adıyaman, Pazarcık and Malatya, have suffered heavy destruction. Official figures stand at 5,575 buildings collapsed, but the disaster management agency received reports of more than 11,340 buildings destroyed (AFAD quoted by The Guardian 07/02/2023).

Table 2 | Destroyed buildings | Source: Turkish Red Crescent 06/02/2023

	Hatay	Gaziantep	Maraş	Osmaniye	Malatya	Adana	Diyarbakir	Sanliurfa	Adiyaman	Kilis
Destroyed buildings	1,278	581	310	101	300	24	20	201	600	50

The mayor of Hatay puts the total of collapsed buildings even higher, at more than 2,000 buildings collapsed (The Guardian 07/02/2023). The majority of the buildings along the coast of Iskenderun collapsed, according to residents (Al Monitor 06/02/2023). Gaziantep Castle, a UNESCO World Heritage site in Turkey, also withstand severe damages (CNN 06/02/2023).

Across southeast Turkey and Syria, people have fled their homes to take shelter in cars or outside, fearing aftershocks and buildings collapsing (The Guardian 06/02/2023). 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 (The Guardian 06/02/2023, BBC 07/02/2023). About 380,000 people have taken refuge in government shelters, hotels, shopping malls, stadiums, mosques and community centres, according to authorities (The Guardian 07/02/2023). Turkey's ministry of transport and infrastructure said that overnight 3,400 people took shelter in trains (The Guardian 07/02/2023).

Health

At least two hospitals have been destroyed in Hatay province.

Two hospitals were reportedly destroyed in Hatay province (Al Monitor 06/02/2023). Iskenderun State Hospital has completely collapsed with healthcare workers and patients trapped inside (HOPE 07/02/2023). More than 21,100 people have reportedly been injured across Kahramanmaraş, Gaziantep, Şanlıurfa, Diyarbakır, Adana, Adıyaman, Malatya, Osmaniye, Hatay and Kilis, according to AFAD (AFAD #10 07/02/2023).

Table 3 | Casualties | Source: Turkish Red Crescent 06/02/2023

	Hatay	Gaziantep	Maraş	Osmaniye	Malatya	Adana	Diyarbakir	Sanliurfa	Adiyaman	Kilis
Deaths	520	309	234	205	106	58	46	30	20	13
Injured	70	1,597	1,700	1,003	1,941	750	557	1,071	200	244

WASH

Water cuts have been reported in Gaziantep (KI 07/02/2023).

Logistics

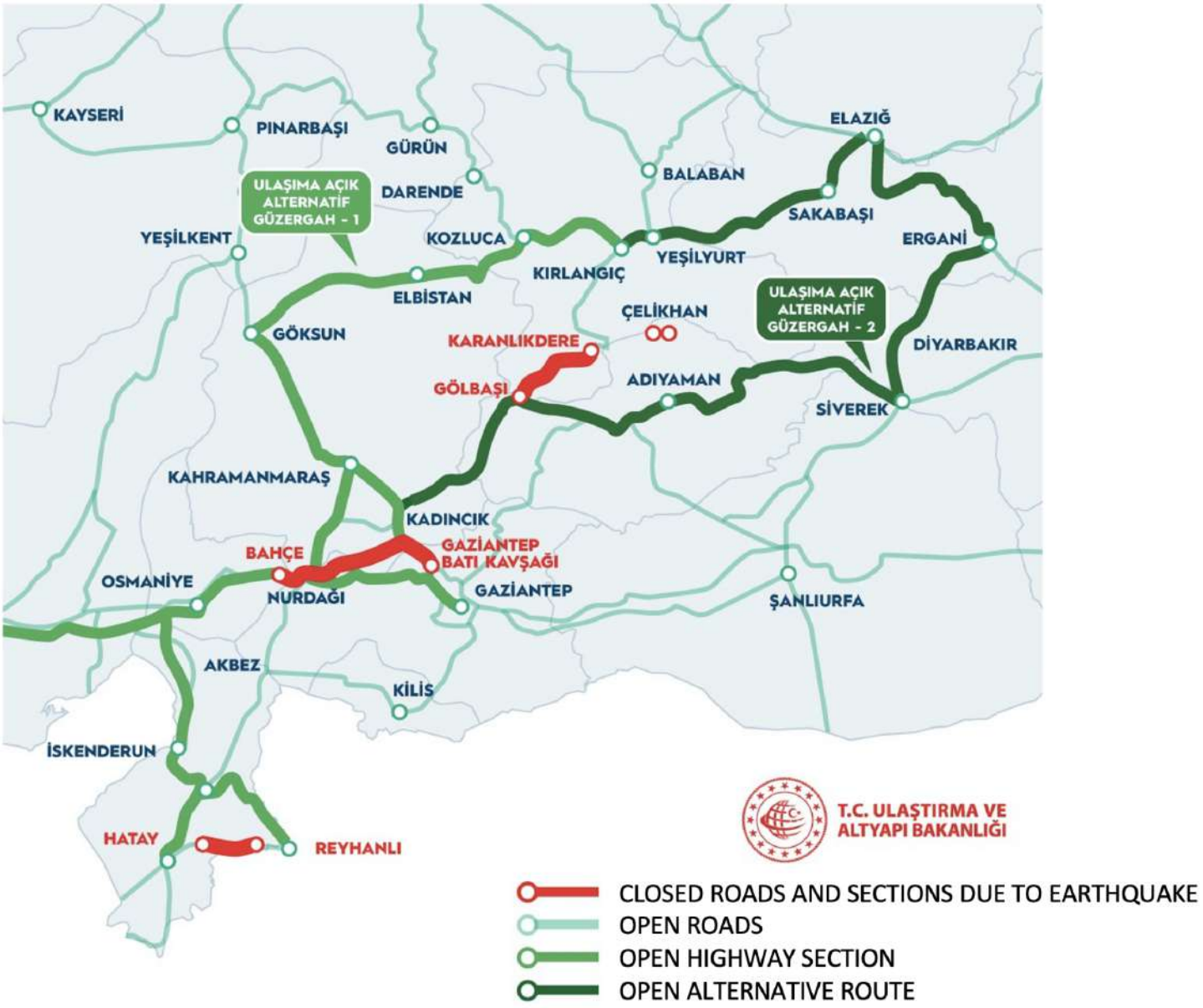
Many roads around Gaziantep have sustained significant damages, hampering the response.

Transportation

Malatya, Adana, Diyarbakır, Adıyaman airports are open to air traffic. Gaziantep and Şanlıurfa airports are however open only to flights carrying aid. Kahramanmaraş and Hatay airports are closed to air traffic due to the damage (AFAD 07/02/2023). Antakya airport also appears to have sustained some damages (BBC 06/02/2023).

Many roads around Gaziantep have sustained significant damages, with Osmaniye-Gaziantep, Gölbaşı-Karanlikdere, Adıyaman-Çelikhan-Sürgü, Hatay-Reyhanlı, Hatay Kırıkhan-Topboğaz and Adıyaman Gölbaşı-Malatya Sürgü routes are closed to traffic (AFAD 07/02/2023). Log Cluster indicates that further roads are closed due to bad weather, with the liaison between Mersin-Adana-Osmaniye-Gaziantep-Sanliurfa not passable (Log Cluster 07/02/2023).

Train lines have been offered to survivors looking to leave the affected areas, with 2 trains from Malatya/Yazıhan to Sivas and one from Sivas to Ankara (Ministry of Transport 07/02/2023).

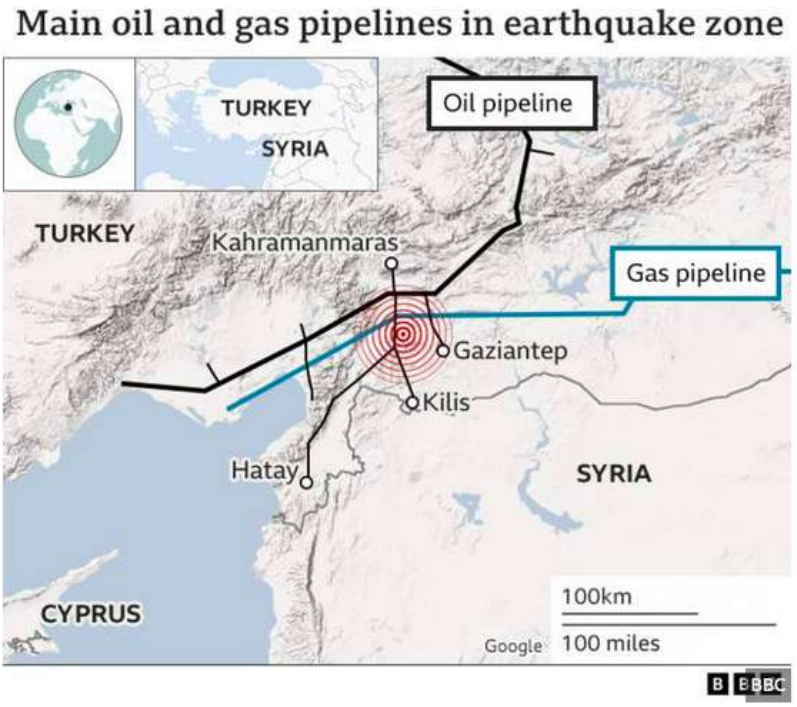


Telecommunications

Phone lines have been disrupted throughout the southern provinces. Widespread internet outages have been reported, notably in Osmaniye, Hatay and Adiyaman (NetBlocks 07/02/2023).

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 (The Telegraph 06/02/2023). Reports of fires along the gas pipelines have been reported, notably in Hatay (BBC 06/02/2023). Nuclear power plants appear to be intact (IAEA 07/02/2023).



Electricity could not be provided to 27 city centers as of early morning on 7 February. Cuts were reported in Osmaniye Bahçe-Düziçi, Kahramanmaraş city center, Malatya, Akçadağ, Doğanşehir and Doğanyol (AFAD 07/02/2023). Electricity across the affected area remains intermittent (IRC 07/02/2023). Public gas supply has also been cut in several areas as a precautionary measure (IRC, KI 07/02/2023).

After suffering severe structural damages, fires at the port of Iskenderun have been reported since yesterday, with all operations halted until further notice (Reuters 06/02/2023, Reuters 07/02/2023).

Education

Schools are closed countrywide for a week and until 20 February in affected areas.

Schools are closed country-wide until 13 February and in southern affected provinces until 20 February (Ministry of Education 07/02/2023)

Response and Capacities - Cross Sector

While assistance is scaling up, with a 3-month state of emergency declared in 10 provinces, it remains largely overstretched, with not enough teams and equipment to attend to all people trapped under rubbles and provide assistance to people left homeless.

The Turkish Interior Minister issued a call for international assistance on 6 February (IBC 06/02/2023). 10 more governors were assigned to the 10 provinces affected by the earthquake (President Erdoğan 06/02/2023). 7 days of mourning country-wide have been declared and President Erdoğan announced a 3-month state of emergency in the 10 affected provinces (President Erdoğan 06/02/2023, President Erdoğan 07/02/2023).

25,693 search and rescue workers and 360 vehicles are deployed in the area (AFAD 07/02/2023). As of 5pm local time, 14,451 rescue workers, most of which are volunteers, left Istanbul to affected areas, notably Hatay, between yesterday and today (Governor Istanbul 07/02/2023). Over 2,100 miners from state-run enterprises and private firms were sent to the affected areas to help in rescue efforts under rubble, according to the Ministry of Energy (Anadolu 07/02/2023).

Armed forces have established an air corridor to enable medical and rescue teams to reach the earthquake-hit areas, with more than 3,000 soldiers assigned to search operations (Reuters 06/02/2023). Survivors are being evacuated by military plane to areas where hospitals have greater capacity (Anadolu 07/02/2023). The European Union has mobilized search and rescue teams for Türkiye, following its request to activate the EU Civil Protection Mechanism (EU 06/02/2023). The US also sent rapid response teams (GoUSA 06/02/2023). More than 70 countries have offered assistance (Middle East Eye 07/02/2023).

Despite these efforts, aid and rescue teams have been slowed to reach the rural areas and even the main towns. Many residents complain about the lack of response, with relief efforts already past their stretching point, with an area to cover spanning over 1,000 kilometers (The Guardian, KI, Middle East Eye 07/02/2023).

Cultural and recreational centers have been opened to host people as official directives called for people to remain outside of buildings. President Erdoğan also announced plans to use hotels in Antalya as emergency shelters for people left homeless by the earthquake (Middle East Eye 07/02/2023).

However, distribution of blankets, food or heating equipment were scarcely reported by affected populations (KI Gaziantep, Middle East Eye 07/02/2023).

Syria

Impact - Cross Sector

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".

Priority areas

In Aleppo, the sub-districts of Shaar, Kalaseh, Salah Eddin, Myassar, Akabeh, Azizieh, Baroun, Ein Al Tal, Nubol, Zahra, Bustan AzZahra, Azamieh, Fardous, Salheen are among the worst-hit areas (OCHA 06/02/2022).

In Lattakia, according to the local authorities, affected areas include Al Oweiniyeh, Al Kazzazin and Al-Raml Janoubi neighborhood in Lattakia City, as well as Demsarkho, Jablah, Al-Qabu and Astamo villages (OCHA 06/02/2022).

The cities of Tartous and Hama, under government control also reported major damage (The Guardian 06/02/2023). In Tartous, Qadmous, Qallue, and Banyas towns are also affected (OCHA 06/02/2022).

Aggravating factors

- *Access*

Due largely to pressure from Moscow, the UN Security Council has reduced humanitarian access to the northwest from Türkiye to only one border crossing, Bab al-Hawa, which itself appears to have suffered heavy earthquake damage (New Humanitarian 06/02/2023). NGOs in the northwest have confirmed that Bab al-Hawa crossing point is currently 100% inactive (MEI 07/02/2023). Asked about the possible opening of new crossing points to allow international response following the earthquake, the Syrian ambassador seemed to reject the idea on Monday (The Guardian 07/02/2023). Reports by opposition groups of overnight shelling in Marea city is further hampering the response (SADC - Al Jazeera 07/02/2023).

- *Cold weather*

Adverse weather conditions, including low temperatures and stormy weather, have compounded the dire situation. Survivors are waiting in open fields, with no heating source, in freezing conditions (The Guardian 07/02/2023).

- *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). 84,607 suspected cases and 101 deaths of cholera

have been reported in Syria since August 2022 (WHO 05/02/2023). The Syria Humanitarian Response Plan is already severely underfunded, with less than 50% of the required USD 4 billion funded. This earthquake will only increase the quantity and severity of needs on the ground (IRC 07/02/2023).

Shelter/NFIs

At least 325 buildings have been partially damaged and 224 were completely destroyed in 17 sub-districts.

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).

At least 40 buildings have collapsed in Aleppo, 53 in Lattakia and three in Hama, as well as in Tartous. 40 buildings in Bayas, Tartous, have suffered structural damages, leaving hundreds of families to move from Banyas to the neighboring villages (OCHA 06/02/2022).

Health

Already strained health facilities are being overwhelmed with the number of casualties.

Already strained health facilities have reportedly quickly filled with wounded, according to rescue workers (The Guardian 06/02/2023), with the regional director of the Syrian American Medical Society (SAMS) saying the healthcare system was "overwhelmed" (Al Jazeera 06/02/2023). Hospitals continue to be flooded with injured people and lacking medical staff and supplies to attend to all (Al Jazeera, The Guardian, Al Monitor, UOSSM 06/02/2023). According to MEI, sources on the ground report that every hospital in the northwest is at over-capacity (MEI 06/02/2023).

More than 550 people were treated in SAMS hospitals yesterday and MSF received 200 people wounded in northern Idlib (The Guardian, MSF 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 (Le Monde 06/02/2023). Casualties figures are likely to be under-estimated with many residents reporting hundreds of bodies stuck under rubble. In Jindires alone, locals say 600-800 could be buried (MEI 06/02/2023). With the number of casualties expected to increase over the coming days, there is a need for further health support.

At least one hospital in northern Syria was being evacuated after its structure was compromised (UOSSM 06/02/2023). Four medical centres run by the SAMS were considerably damaged, according to their spokesperson, and two had to be evacuated (The Guardian 06/02/2023).

WASH

In Lattakia, structural damage to water reservoirs and tanks are reported, the Ghaniri reservoir threatening to burst in a residential area.

In Aleppo, water and electricity supplies appear to be cut according to a resident (The Guardian 06/02/2023).

In Lattakia, structural damage to water reservoirs and tanks are reported, with the 200m3 Ghaniri reservoir reportedly falling apart and the Al Bahloulieh Al Rastan station also showing huge structural damages. As it is located in a residential area, there is a high risk of flooding. Other tanks and reservoirs have also been damaged, with cracks reported on Al Fawar ground tank (Jableh city), Dahr Al-Syriani high reservoir, Cemet high reservoir of Wadi Qandil station and the Dam station reservoir. Al-Zoubar and Karkit stations sustained some structural damages. Due to power outage, no information regarding the extent of the damage in the water networks is available (OCHA 06/02/2023).

In Hama, seven collective high-water tanks reportedly collapsed and five others were damaged (OCHA 06/02/2023).

Logistics

Transportation

Lattakia and Tartous ports are closed due to bad weather (Log Cluster 06/02/2023).

Telecommunications

Internet communication, already weak before the earthquake, hampers coordination and response operations (The Guardian 07/02/2023).

Response and Capacities - Cross Sector

No international rescue effort is ongoing and little machinery is available to carry search and rescue operations. Medical personnel have been deployed in government-controlled areas.

Northwest

The White Helmets declare a state of emergency in northwestern Syria (White Helmets 06/02/2023). Shortages of fuel and other equipment required to carry search and rescue operations are hampering rescue operations (The Guardian 07/02/2023). Aid is severely lacking for rescue operations and assisting survivors (The Guardian 06/02/2023).

Survivors across the Idlib region and Aleppo have been taking refuge in the streets and public squares amid freezing weather conditions (Al Jazeera 06/02/2023).

The road from Antakya to Bab al-Hawa crossing point has been severely damaged, complicating the response (Journalist 06/02/2023). UN aid from Turkey to northwest Syria has temporarily halted due to damage to roads and other logistical issues (Reuters 07/02/2023). Additionally, as humanitarian hubs for northwest Syria -Antakya, Gaziantep- have also been impacted by the earthquake, response is likely to be slowed down.

Government-controlled areas

In government-controlled areas, an emergency action plan was developed at the national level. According to the Assistant Minister of Health, four trucks carrying medicines, surgical and emergency supplies were sent to Aleppo, Lattakia, and Hama. Medical convoys from the Health Directorates of Damascus, Rif Dimashq, Quneitra, Homs, and Tartous were also dispatched to the governorates of Aleppo and Lattakia, as well as 28 ambulances. And 7 mobile clinics went to support Aleppo and Lattakia (Al Watan 07/02/2023).

39 shelters were opened in the governorates affected by the earthquake (Al Watan 07/02/2023). Temporary shelters for affected families have been opened in Aleppo, including 150 apartments in Masaken Hanano, 25 apartments in the rehabilitation and training centre in Sheikh Taha, and 17 formal education schools. In Lattakia city, four temporary shelters have been designated. In Hama, Ibraheem Mahmoud School in Al Arba'een neighbourhood and the disability center have been designated by the authorities as temporary collective shelters (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 DEEP - 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

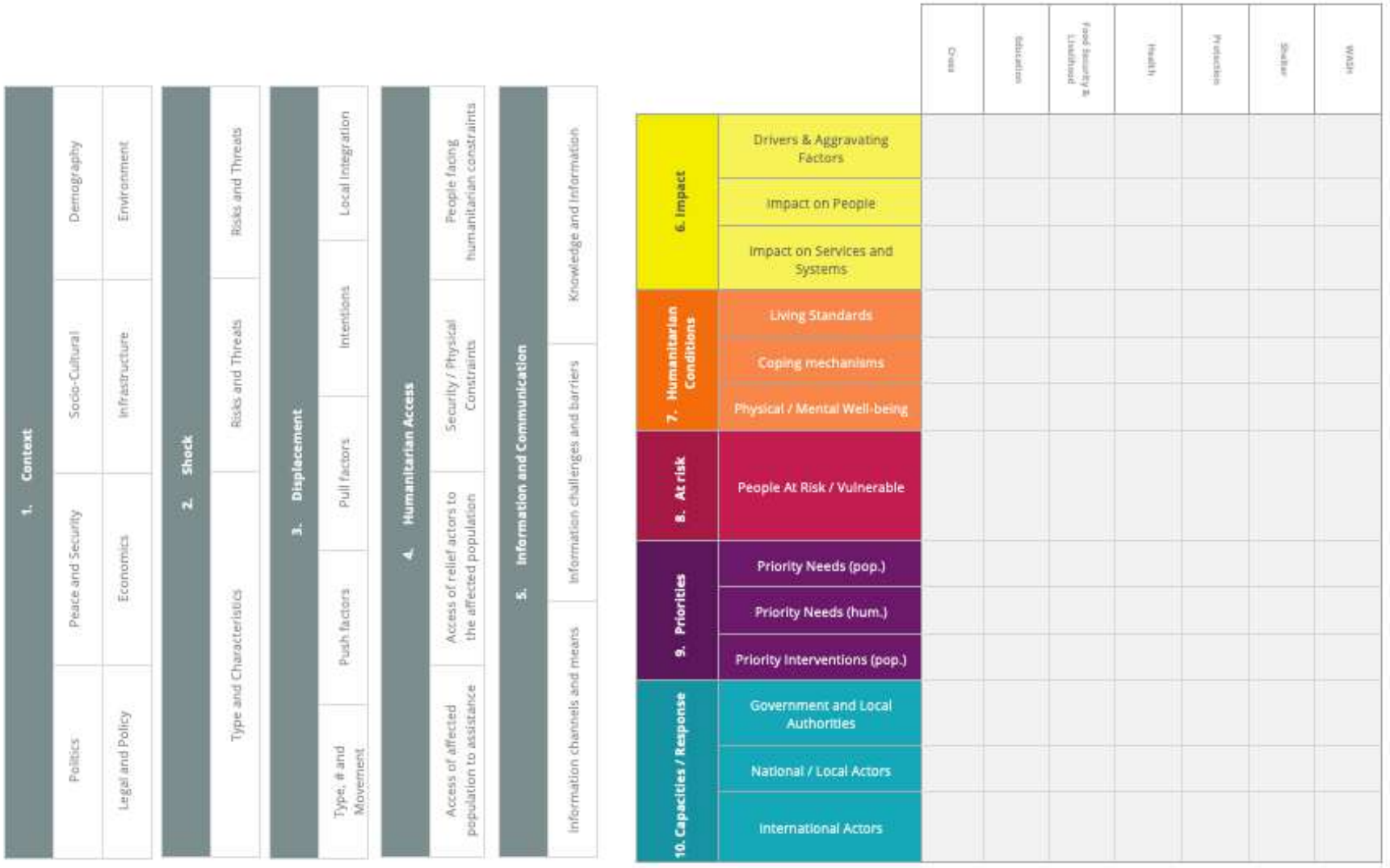
DFS Analysts and Information Management Officers collate and structure available information in the DEEP platform daily.

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: https://app.thedeep.io/login/

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



DATA FRIENDLY SPACE

The Analysis Workflow - Key steps for robust and sound research in humanitarian settings

1. Starting the right way

Design and planning for quality/credible analysis

The design and planning phase precedes analytical processes and is about selecting the best strategies for capturing relevant and sufficient data and ensuring quality and credible analysis. It involves careful consideration of who will be taking the decisions, the key questions that need to be answered , the data to collect and sets out how analytical standards will be ensured and respected throughout the process

KEY ANALYTICAL QUESTIONS

1. What is known, in question or still unknown?
2. Who is the main audience? What inputs do they need and when do they need them?
3. What are the key questions and the depth/levels of analysis to cover (descriptive, explicative, interpretive, anticipative and prescriptive)?
4. What is the broader context of the analysis?
5. What will be measured and how will it be analysed to answer the key questions?
6. What data are required to answer the key questions and which sources and methods will be used to obtain them?
7. With whom, when and how to collaborate?
8. What types of end product(s) will work best?
9. What approaches and techniques will ensure analytical standards are respected?
10. What activities, resources and contingencies should be planned for?

OUTPUT

- A clear identification and understanding of the end-users, the specific decisions that will be informed by the analysis and the timeline for delivering conclusions
- An agreement about the key analysis questions to answer and the depth of analysis to go into (descriptive, explicative, interpretive, anticipative, prescriptive)
- An understanding of the expectations and implications of the analysis and the precision that must be achieved in the presented results
- An analysis framework that will guide data collection and analysis
- An adapted analysis and data collection plan including the list of indicators to obtain, the data required and their source, how the data will be analyzed and presented
- An output template (report, ppt, etc) aligned with the key questions and the analysis framework
- The strategies and procedures to mitigate the influence of cognitive biases on results
- A workplan and a list of resources (material, financial, human) required to carry the work

2. Acquiring the data we need

Collecting and collating unbiased data

Sufficient, relevant and trustworthy data must be gathered to provide the evidence that will support conclusions and key messages. The data collection and collation phase involves gaining access to usable and unbiased data (either primary or secondary), managing and safely storing the gathered information so it is ready for further analytical steps.

KEY ANALYTICAL QUESTIONS

11. What information is already available and relevant to the research questions?
12. What is missing, how to get it?
13. How to collect new, sufficient and unbiased information?
14. How to manage and safely store data and documents?
15. How to ensure the data is as clean and tidy as possible?

OUTPUT

- Repository of secondary data with all documents labelled YYMMDD ORG TITLE. Confidential documents are processed separately. Documents are stored in Dropbox.
- Questionnaires tested and translated if relevant
- Clean, reviewed datasets including a change log in case of modifications or corrections (where applicable)
- In the case a situation analysis is required, an updated Assessment Registry will be provided for the areas under assessment

3. Getting ready for analysis

Exploring and preparing data

Exploratory analysis is about getting more familiar with the available data, assessing its sufficiency and usefulness against the research questions, organizing it better and finding potential signals and stories that should be confirmed at later stages. It is an initial foray into the new data sources and a deliberate effort to prepare and transform the data for more targeted analysis to come.

KEY ANALYTICAL QUESTIONS

16. How could the data be better prepared for analysis?
17. How usable and trustworthy is the data?
18. How can we fill information gaps?
19. What interesting signals and stories are hidden in the data?
20. What are the main results so far?

OUTPUT

- Secondary information structured and tagged based on the analysis framework pillars and sub pillars.
- A list of preliminary results, assertions or statements, including main outcomes, issues, gaps or challenges coming out of the data
- A list of possible explanations and if-then statements to further confirm in further analysis steps
- A list of what is not seen/reported and should be there
- Agreed upon categories of analysis to use for further analysis steps, e.g. urban/rural, international/national NGOs, emergency/development, etc.
- A list of and definitions for codes used for refining or categorizing the data.
- A list of all transformations operated on the data
- A list of defensible and feasible units of reporting

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

4. Separating the signals from the noise

Making sense of data and drawing conclusions

Analysis is the process by which important stories and messages hidden in the data are identified and transformed into actionable insights. It is based on an iterative, controlled and structured sense-making process allowing to move from observations to current (and future) implications, formulate evidence-based conclusions, and provide proportionate and appropriate recommendations.

5. Conveying messages effectively

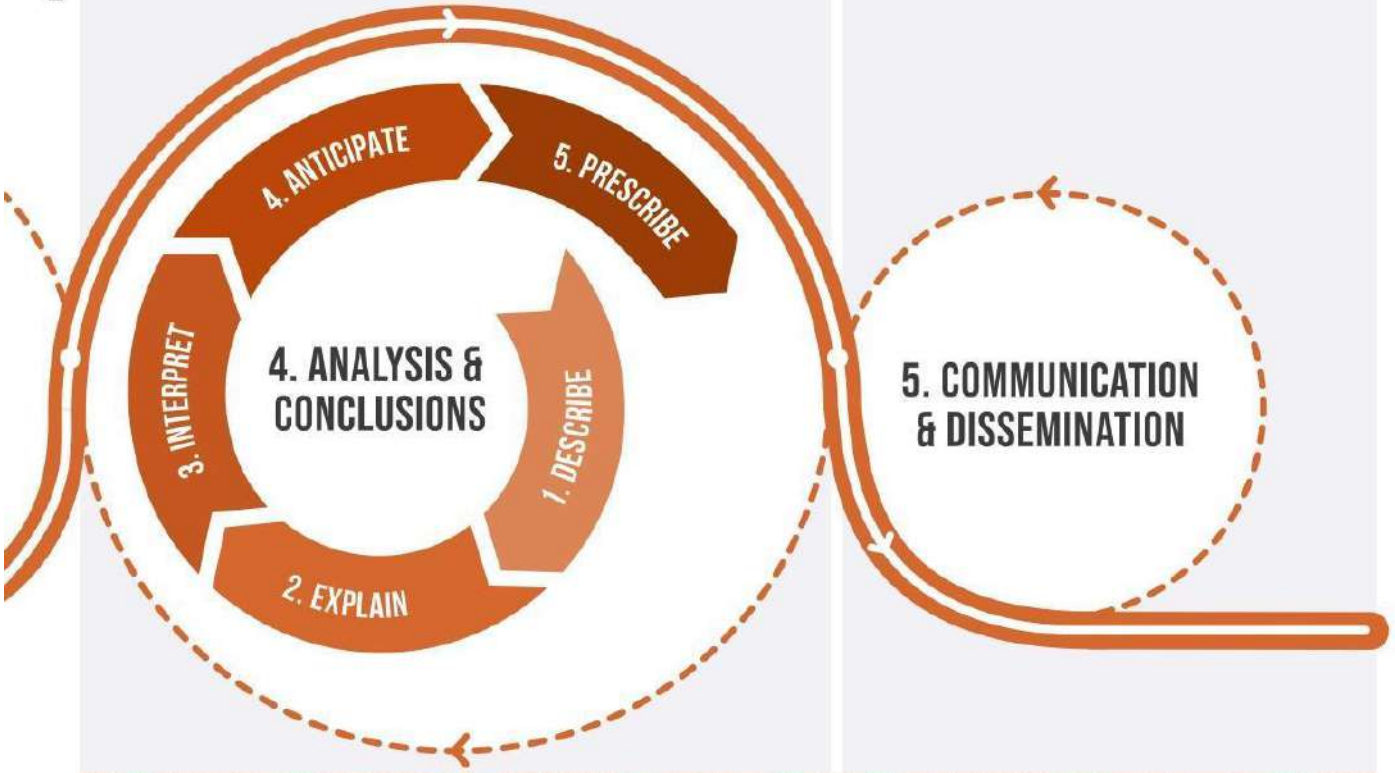
Communicating and sharing findings

Communicating and sharing is about ensuring the final products are relevant to end users, meet their needs, answer the key questions and is transparent on limitations and is clearly and easily linked to decision making.

KEY ANALYTICAL QUESTIONS

21. How to group and best summarize the data?
22. What consistent patterns, trends or anomalies emerge from the date?
23. How much evidence we have in support of each result or statement?
24. What factors and causal mechanisms combine and interact to create or aggravate outcomes?
25. What is the strength of the relationships?
26. Are they other alternative hypothesis that could explain what we see?
27. What is important/urgent and why?
28. What are the priorities?
29. How confident are we about our conclusions?
30. What will happen next if nothing changes?
31. What else might happen?
32. How does this change our main conclusions, priorities and key messages?
33. What are the objectives and targets?
34. What set of actions and sequences will have the greatest impact and benefits?
35. What are the main assumptions, risks and possible synergies across the response?

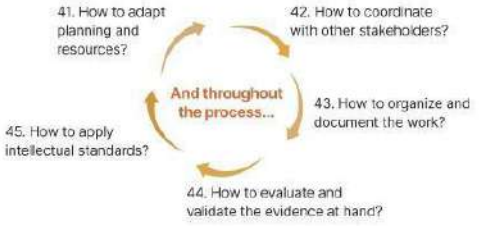
36. How can we present our case in the most effective and compelling way?
37. How can charts and/or maps best support our messages?
38. How and when to communicate uncertainty?
39. How to ensure our product is as good as it gets?
40. How to document data and methods?



OUTPUT

- 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
- Theories, best explanations, guesses and conjectures as to what is related or leading to what
- A fishbone diagram or problem tree representing causal mechanisms and which ones are contributing the most to humanitarian outcomes
- A list of focal issues the recommendations should adress
- A list of rival or alternative hypotheses
- Updated key assumptions checklist to challenge explanations and identify faulty logic, weak evidence or flawed analysis
- Key findings and messages
- Key priorities
- Confidence in main conclusions and statements
- Updated key assumptions checklist to challenge explanations and identify faulty logic, weak evidence or flawed analysis.
- Baseline scenario
- Alternative scenario and drivers
- Current and forecasted priorities
- 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

- Tailored, relevant and readable analysis outputs, providing solid cases and reasoning, reviewed by subject experts;
- Clear and explicitly communicated limit of knowledge and how it impacts confidence in the results;
- Accessible and safely stored products, data, documents and methodology for audience seeking more details or intending to replicate findings.



DATA FRIENDLY SPACE

DFS's Analysis Spectrum

Key steps for deeper insights and a more effective response

4. ANTICIPATORY ANALYSIS

What if, what else, what then? Predict and forecast

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 prolongs 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?
- 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

5. PRESCRIPTIVE 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 not 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

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

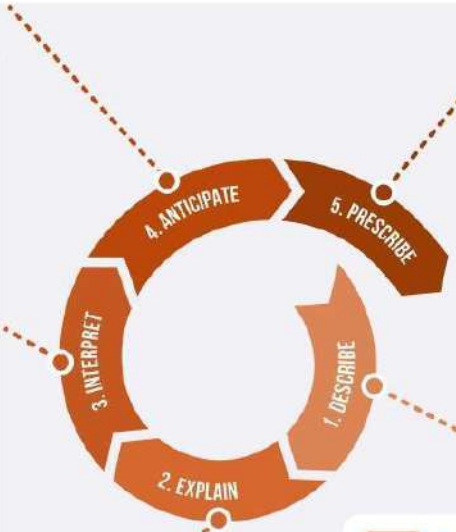
- What is important and why?
- What are the priorities?
- How confident are we about our conclusions?

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.



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

2. EXPLANATORY ANALYSIS

Why is it like this, how come? Connect and relate

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 causal mechanisms.

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

DFS's spectrum 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

About this report

This report is a synthesis of publicly available information, powered by the DEEP, 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 is jointly conducted by Data Friendly Space (DFS) and iMMAP.

This project and report are made possible by the generous support of the American people through the United States Agency for International Development (USAID). The contents are the responsibility of Data Friendly Space and do not necessarily reflect the views of USAID or the United States Government.

Get in touch with us

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