

IRAN – Kermanshah

Earthquake

On the evening of 12 November, a 7.3 magnitude earthquake occurred in Kermanshah province with widespread damage reported across the province. Sar pol-e Zahab and Qasr-e Shirin are reported hardest hit. Early estimates indicate that over 400 lives have been lost and over 6,600 people were injured. Reports indicate that an estimated 70,000 people are in need of emergency shelter.

NEED FOR INTERNATIONAL ASSISTANCE



IMPACT



Population Exposure in Iran

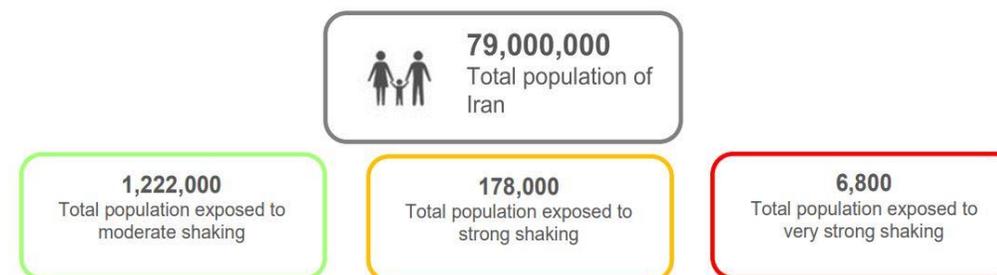


Table 1 - Source: UNOSAT Halabjah Earthquake, M 7.3 - Population exposure analysis

Anticipated scope and scale

The scale of the earthquake is widespread across the Kermanshah province. There are no current damage estimates but the number of structures destroyed or damaged is expected to be high. Those currently in need of emergency shelter will likely require emergency shelter for a prolonged period of time as repairs and reconstruction take place. The mountainous topography will limit access. Road networks were damaged by landslides triggered by the quake and aftershocks will prolong the response and recovery. Shelter, WASH and health needs can be expected to remain significant in the medium term with shelter being the predominant long-term need.

Key priorities



70,000 people
In need of emergency shelter



2 hospitals damaged
1 of which closed



Drinking water cut off
Supplies have been damaged and cut off to affected areas

Humanitarian constraints



The affected area of Kermanshah province is mountainous and the terrain is making response difficult. Landslides have blocked roads and the lack of power and water in some areas has hindered response efforts.

Limitations

There is very little specific information on humanitarian needs as assessments are ongoing and/or not published. The report focuses on the worst affected provinces of Karmanshah. Although impacts outside this region are minimal it should be acknowledged that the impacts extend beyond this province. The earthquake has impacted Iraq as well; the details of these impacts are not covered in this report.

Crisis impact

On the evening of 12 November, a 7.3 magnitude earthquake occurred in Kermanshah province with widespread damages reported across the province (IRNA, 13/11/2017). Sar pol-e Zahab and Qasr-e Shirin are reported hardest hit. Early estimates indicate that over 400 lives have been lost and over 6,600 injured (OCHA, 14/11/2017). An initial assessment identified that over 1.2 million people were exposed to moderate shaking, 178,000 to strong shaking and 6,800 to very strong (see table 1). Moderate building damage is expected in areas that experienced very strong shaking, and light damage is expected in areas exposed to strong shaking. (UNITAR, 13/11/2017). Reports indicate an estimated 70,000 people are in need of emergency shelter (ECHO, 13/11/2017; ERCC, 13/11/2017). 30% of the affected areas remain without power (OCHA, 13/11/2017). Two hospitals have reported damage: Kermanshah's main hospital is damaged and running at a reduced capacity, whereas Sarpol-e Zahab hospital is reported out of order (OCHA, 13/11/2017; BBC, 13/11/2017). Damage from Sarpol-e Zahab indicate that half of the school facilities had collapsed, additionally the remaining schools across the province have been temporarily closed due to the emergency (Relief International, 13/11/2017; IRNA, 13/11/2017). There is currently limited information on sectoral need beyond shelter but reports have indicated a need for NFIs, food and water (RFERL, 14/11/2017).

Shelter and NFIs: Early reports estimate that 70,000 people are in need of emergency shelter in Kermanshah province. However, assessments have not yet reported the full extent of damage (ECHO, 13/11/2017; ERCC, 13/11/2017). Due to the shallow depth of the earthquake, ground shaking will have been stronger and damages to structures can be expected severer across the affected area (Time, 13/11/2017). Therefore, it is possible that damage to shelters is higher than what is currently reported. Reports indicate that many of those affected have been sleeping in the open due to fear of aftershocks that may cause more building damage. Local media interviews with those affected indicate a need for blankets for those sleeping in the open (RFERL, 14/11/2017; NG, 13/11/2017). Reports indicate that in Sarpol-e Zahab city, in particular, there is a significant shortage of emergency shelter (OCHA, 14/11/2017).

There are currently no reported NFIs needs. However, media interviews have indicated that people have lost NFIs due to building collapse and lack of access to damaged buildings (RFERL, 14/11/2017). Power has been lost in the cities of Qasr-e Shirin, Gilane-Garb, Kermanshah, and Sarpol-e-Zahab in Kermanshah. Of those areas affected 30% still remain without power. (IRC, 13/11/2017).

Health: Early estimates indicate that over 400 lives have been lost and over 6,600 people were injured (OCHA, 14/11/2017). There are reports that two hospitals have been damaged in the areas with the highest casualties. Kermanshah's main hospital is damaged and running at a reduced capacity, whereas Sarpol-e Zahab hospital is reported as out of order. In response to the closure, a field hospital has been established (OCHA, 13/11/2017; BBC, 13/11/2017; LA Times, 13/11/2017)

WASH: Reports indicate that piped water supplies have been damaged and cut off to affected areas closest to the epicentre in western Kermanshah province (BBC, 13/11/2017; IRNA, 13/11/2017; Slate, 13/11/2017). In Sarpol-e Zahab city, reports indicate that water supplies have also been contaminated due to damaged infrastructure (LA Times, 13/11/2017). Reports indicate a significant shortage of drinking water in Sarpol-e Zahab city as a result (OCHA, 14/11/2017).

Education: In Sarpol-e Zahab city reports indicate that half of the schools have collapsed and the remaining schools across the province have closed (Relief International, 13/11/2017; IRNA, 13/11/2017). The damage seen in Sarpol-e Zahab city could be an indicator for the damage across the whole province and therefore indicate long term implications for education provision.

Food: Local media reports indicate that food is needed for those affected. (RFERL, 14/11/2017).

Impact on critical infrastructure

Critical water, health, and power infrastructure has been affected across the Kermanshah province. Piped water to areas closest to the epicentre remains off and in Sarpol-e Zahab water sources have been contaminated, while 30% of those areas affected remain without power. In addition, Sarpol-e Zahab hospital is closed due to damages and Kermanshah's main hospital is running at reduced capacity. (BBC, 13/11/2017; IRNA, 13/11/2017; Slate, 13/11/2017; OCHA, 13/11/2017;).

Humanitarian and operational constraints

The affected area of Kermanshah province is mountainous, and the terrain is making response difficult. Rescue services trying to access remote villages are having difficulties as some roads have been cut off by landslides. The Iranian Red Crescent have said that lack of water and electricity, as well as blocked roads in some areas have hindered aid delivery (Weathernetwork 13/11/17). Landslides have been hampering response efforts across Kermanshah province in remote rural areas, as roads are blocked or destroyed. With ongoing aftershocks, the risk of further landslides and access restrictions continues to restrict physical access. (BBC, 13/11/2017; Slate, 13/11/2017; IRNA, 13/11/2017)

Aggravating factors

Weather

Iran is currently experiencing cold temperatures as it is about to enter the winter season. Temperatures in Kermanshah province fell to 4 C (39 F) at night in some of the hardest hit areas. Due to the risk of aftershocks and damaged shelter, thousands have been sleeping in makeshift camps and outdoors. Meteorological forecasts suggest that in the mountains of western Iran temperatures could dip below 0 degrees Celsius between the 13 – 20 November. This would put the thousands of people who are now homeless at risk of cold-related illnesses such as hypothermia. (BBC 14/11/17) (Weathernetwork 13/11/17) (Accu weather 13/11/17)

Disruption of telecommunications

Electricity has been cut off in Sulaymaniye and internet, telephone and mobile services have been irregular. (Aljazeera 14/11/17) At present, electricity has been restored in 70% of quake-affected areas, however, the disruption may still aggravate and complicate response for survivors. (LATimes 13/11/17)

Type of housing/infrastructure

In Iran, construction of buildings varies greatly between cities and the countryside. Over a quarter of the population lives in rural areas. In the countryside, houses are built with mud bricks and stone rather than reinforced concrete and steel. Over 30,000 houses were damaged and at least two villages completely destroyed in the earthquake. Kerosene heaters and lamps are used in many houses and these triggered fires in the aftermath of the earthquake. The poor infrastructure in the rural areas is more at risk of collapse from ground shaking and in turn increases the number of casualties. (Weathernetwork 13/11/17; Vox, 13/11/2017)

Political stability and security

The area affected is prominently Kurdish and there has been a political push from the Kurdish MPs against the national government regarding the impacts of the earthquake. The Kurdish MPs have been criticising the government for the new government housing schemes that have collapsed during the earthquake. As a result, there is currently a high level of noise on social media around the structural damages to such scheme in the region (OCHA, 14/11/2017). As a result, there is the risk of information regarding damaged infrastructure been downplayed or exaggerated.

Key characteristics

Population: total population of Iran is 79 Million (Census 2016). Of which 74.4% live in urban environments while 25.6% live in rural communities. (CIA 2017)

Nutrition: The prevalence of wasting (children under 5) in 2016 was 4.0%, while prevalence of stunting (children under 5) in 2016 was 6.8%. (WFP 2017)

Health: Maternal mortality rate: 25 deaths/100,000 live births (2015 estimate) and infant mortality rate: 15.9 deaths/1,000 live births (2017 estimate). (CIA 2017)

WASH: Access to improved drinking water in urban environments is 97.9%, and is slightly lower in rural ones at 92.1%. Access to sanitation facilities in urban environments is 92.8%, while lower in rural environments at 82.3%. (CIA 2017)

Food Security: Food security generally has been stable during past years. Increase in food prices and rise in unemployment rates due to economic downturn have limited food access. Food security varies across regions, with regions having low agricultural production being more affected by food insecurity. (WFP 2016)

Literacy levels: 86,8% of total population (CIA 2017)

Response capacity

Local and national response capacity

The national government, army and The Iranian Red Crescent (IRC) are responding to the earthquake across the affected province, however at this time search and rescue efforts have been called off. IRC and the Government have sent assessment teams to the impacted areas. IRC has sent 300 search and rescue teams to 15 provinces to provide medical care and to construct emergency shelters, distribute over 100,000 food kits and offer other services. In addition to this the IRC has deployed 40 ambulances, 55 4WD vehicles, 9 rescue vehicles, and 5 helicopters have been dispatched. The government is also tankering water to Sarpol-e Zahab city and establishing field hospitals. (BBC, 13/11/2017; Relief International, 13/11/2017; IRC, 13/11/2017; OCHA, 14/11/2017)

International response capacity

There has been no request for international assistance at this time. However, 20 international teams are monitoring the situation, the UNDAC mechanism has been activated for immediate deployment upon request. The WHO global EMTs network is alerted and also monitoring the situation. UNOSAT has activated the space charter for mapping support. (OCHA, 14/11/2017)

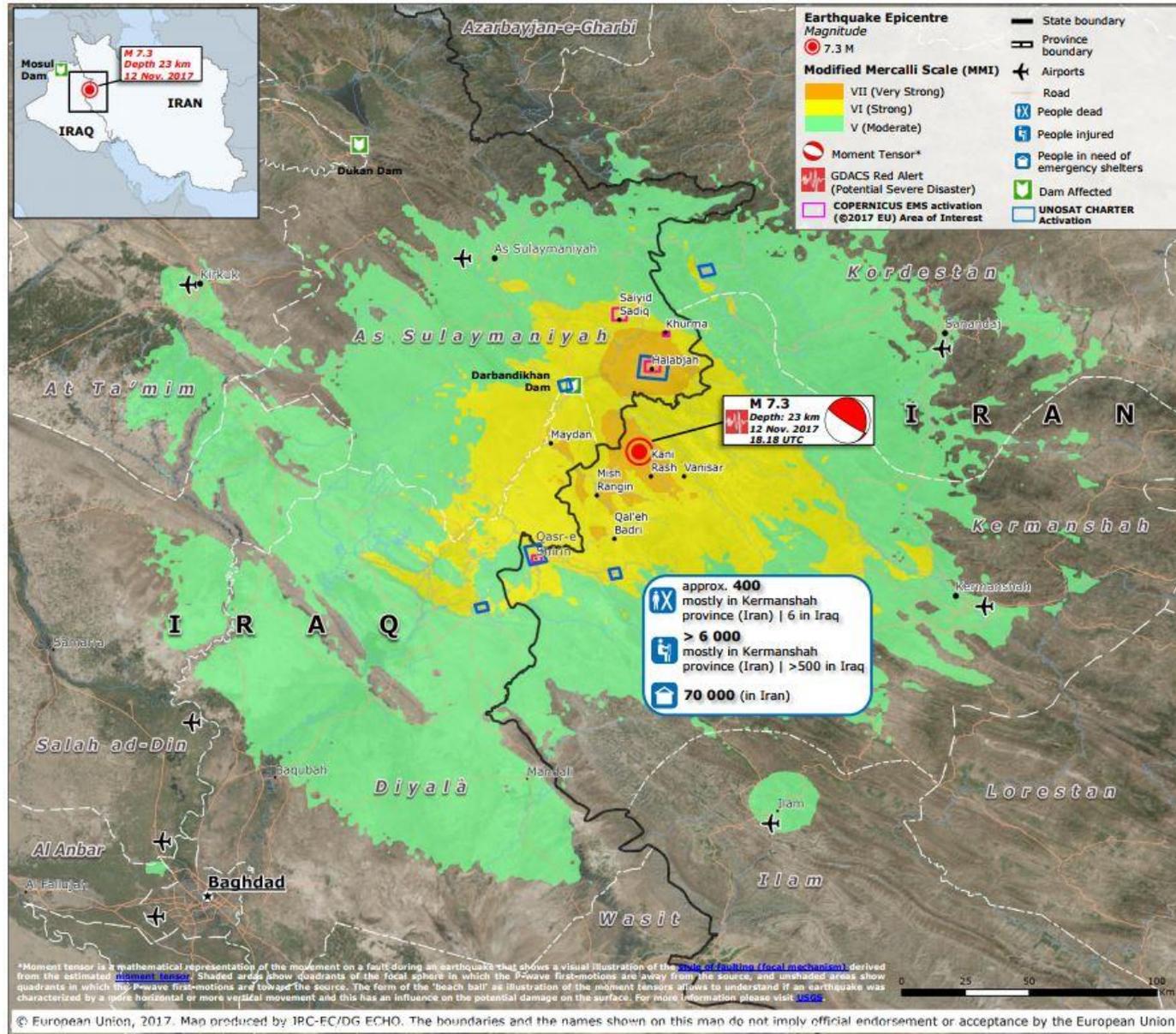
Information gaps and needs

- There is no information on specific sectoral needs particularly regarding the numbers of people with WASH, Health, Food and Shelter needs.
- The full extent of damage is yet to be reported with estimates of those in need of shelter not reflecting the full extent of shelter damages.
- The total number of people affected or in need is unclear.

Lessons learned

- Shelter reconstruction needs to be done in such a way as to improve the seismic performance of buildings. The high death toll from earthquakes in Iran has resulted from collapse of buildings. The utilisation of wood, steel, reinforced concrete ring beams, etc. will impede the collapse of walls and roofs. The 2012 Ahar-Varzeqan earthquake in 2012 and the 2013 Shonbeh-Bushehr earthquake showed that this lesson has not been incorporated despite being repeated over the years. (IJDRS 18/12/2015)
- In 1990, Rudbar earthquake in Iran demonstrated the risk posed by landslides and rock falls when an earthquake occurs in mountainous areas. The current earthquake also took place in mountainous terrain, and further landslides will likely further impede relief efforts to affected areas. (IJDRS 18/12/2015)
- The resilience of survivors was negatively affected following previous earthquakes when rapid burials of the dead were conducted that did not allow for proper identification or customary funerary rituals. In the more recent 2013 Shonbeh-Bushehr earthquake, the proper handling of the dead had a positive impact on the coping capacity of survivors and current response should be cognizant of this. (IJDRS 18/12/2015)
- Special telecommunication equipment should be provided for frontline response. In past situations the disruption of telecommunications led to discoordination among the rescuers (NCBI 13/11/12). This may be important for current response as electricity has been cut off in Sulaymaniye and the internet and telephone connections were interrupted. (TRCS 13/11/17)

Map: Iran, Iraq | 7.3 M Earthquake



Source: Emergency Response Coordination Centre (ERCC) – DG ECHO Daily map | 13/11/2017