

# M 5.6, IRAN-IRAQ BORDER REGION

Origin Time: Fri 2013-11-22 06:51:25 UTC (10:21:25 local)

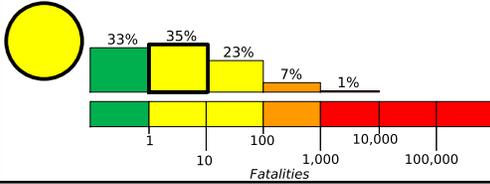
Location: 34.46°N 45.48°E Depth: 6 km

Created: 9 weeks, 6 days after earthquake

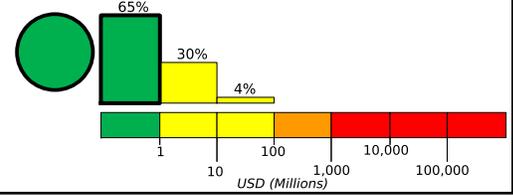
## Estimated Fatalities

Yellow alert level for shaking-related fatalities. Some casualties are possible and the impact should be relatively localized. Past events with this alert level have required a local or regional level response.

Green alert level for economic losses. There is a low likelihood of damage.



## Estimated Economic Losses

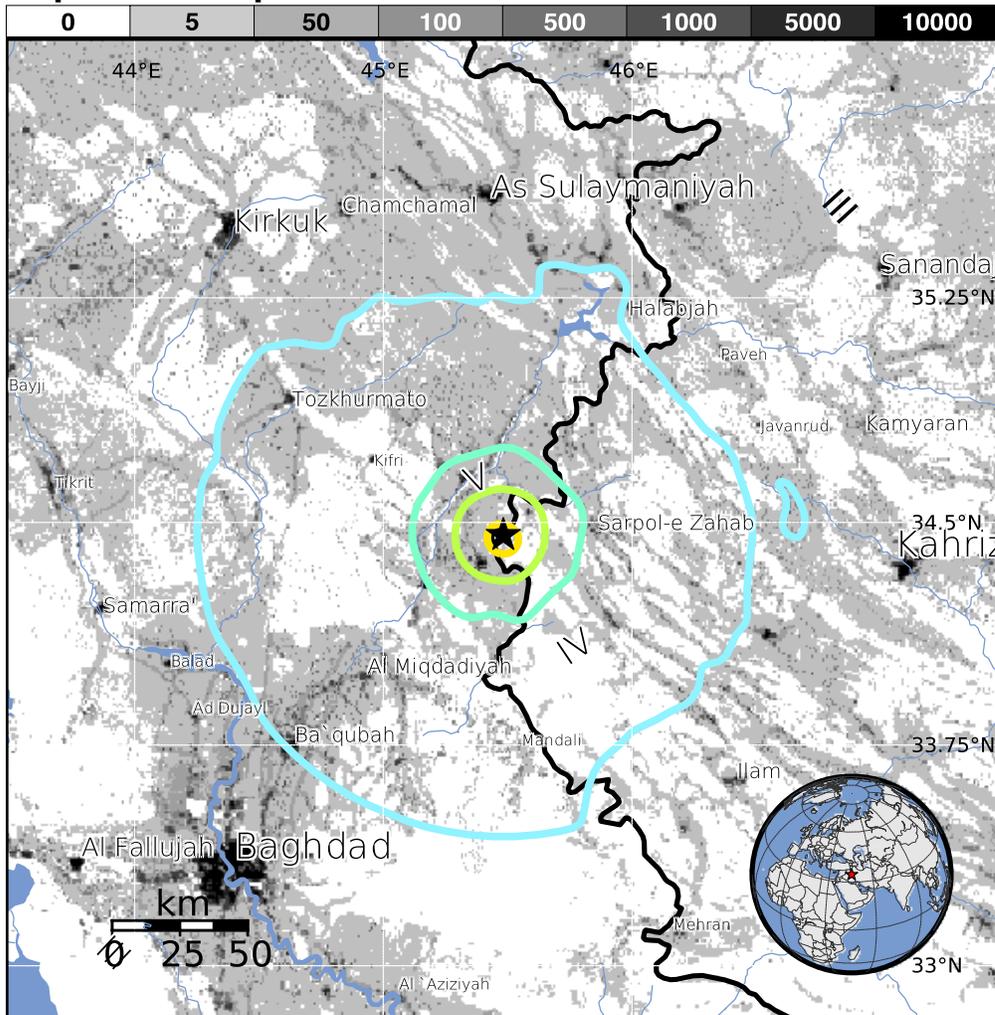


## Estimated Population Exposed to Earthquake Shaking

| ESTIMATED POPULATION EXPOSURE (k = x1000) | - -*                  | 15,606k* | 1,703k | 193k     | 149k     | 3k          | 0              | 0              | 0        |
|---|-----------------------|----------|--------|----------|----------|-------------|----------------|----------------|----------|
| ESTIMATED MODIFIED MERCALLI INTENSITY     | I                     | II-III   | IV     | V        | VI       | VII         | VIII           | IX             | X+       |
| PERCEIVED SHAKING                         | Not felt              | Weak     | Light  | Moderate | Strong   | Very Strong | Severe         | Violent        | Extreme  |
| POTENTIAL DAMAGE                          | Resistant Structures  | none     | none   | none     | V. Light | Light       | Moderate       | Moderate/Heavy | Heavy    |
|   | Vulnerable Structures | none     | none   | none     | Light    | Moderate    | Moderate/Heavy | Heavy          | V. Heavy |

\*Estimated exposure only includes population within the map area.

## Population Exposure



### Structures:

Overall, the population in this region resides in structures that are highly vulnerable to earthquake shaking, though some resistant structures exist. The predominant vulnerable building types are adobe block and unreinforced brick with concrete floor construction.

### Historical Earthquakes (with MMI levels):

| Date (UTC) | Dist. (km) | Mag. | Max MMI(#) | Shaking Deaths |
|------------|------------|------|------------|----------------|
| 1983-05-28 | 353        | 5.5  | VII(2k)    | 0              |
| 2006-03-31 | 319        | 6.1  | IX(10k)    | 70             |
| 2002-06-22 | 345        | 6.5  | VIII(4k)   | 227            |

Recent earthquakes in this area have caused secondary hazards such as landslides that might have contributed to losses.

## Selected City Exposure

from GeoNames.org

| MMI | City            | Population |
|-----|-----------------|------------|
| IV  | Sarpol-e Zahab  | 52k        |
| IV  | Kifri           | 30k        |
| IV  | Al Miqdadiyah   | 51k        |
| IV  | Mandali         | 30k        |
| IV  | Tozkhurmato     | 60k        |
| IV  | Ba`qubah        | 153k       |
| III | Kirkuk          | 601k       |
| III | As Sulaymaniyah | 723k       |
| III | Kermanshah      | 621k       |
| III | Baghdad         | 5,673k     |
| III | Sanandaj        | 349k       |

bold cities appear on map

(k = x1000)

PAGER content is automatically generated, and only considers losses due to structural damage. Limitations of input data, shaking estimates, and loss models may add uncertainty.

<http://earthquake.usgs.gov/pager>

Event ID: usb000143r