

M 5.4, IRAN-IRAQ BORDER REGION

Origin Time: Sun 2013-11-24 18:05:41 UTC (21:35:41 local)

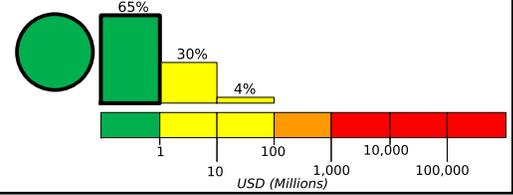
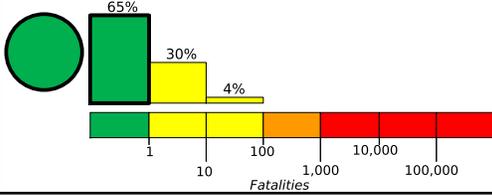
Location: 34.18°N 45.62°E Depth: 14 km

Created: 9 weeks, 5 days after earthquake

Estimated Fatalities

Green alert for shaking-related fatalities and economic losses. There is a low likelihood of casualties and damage.

Estimated Economic Losses



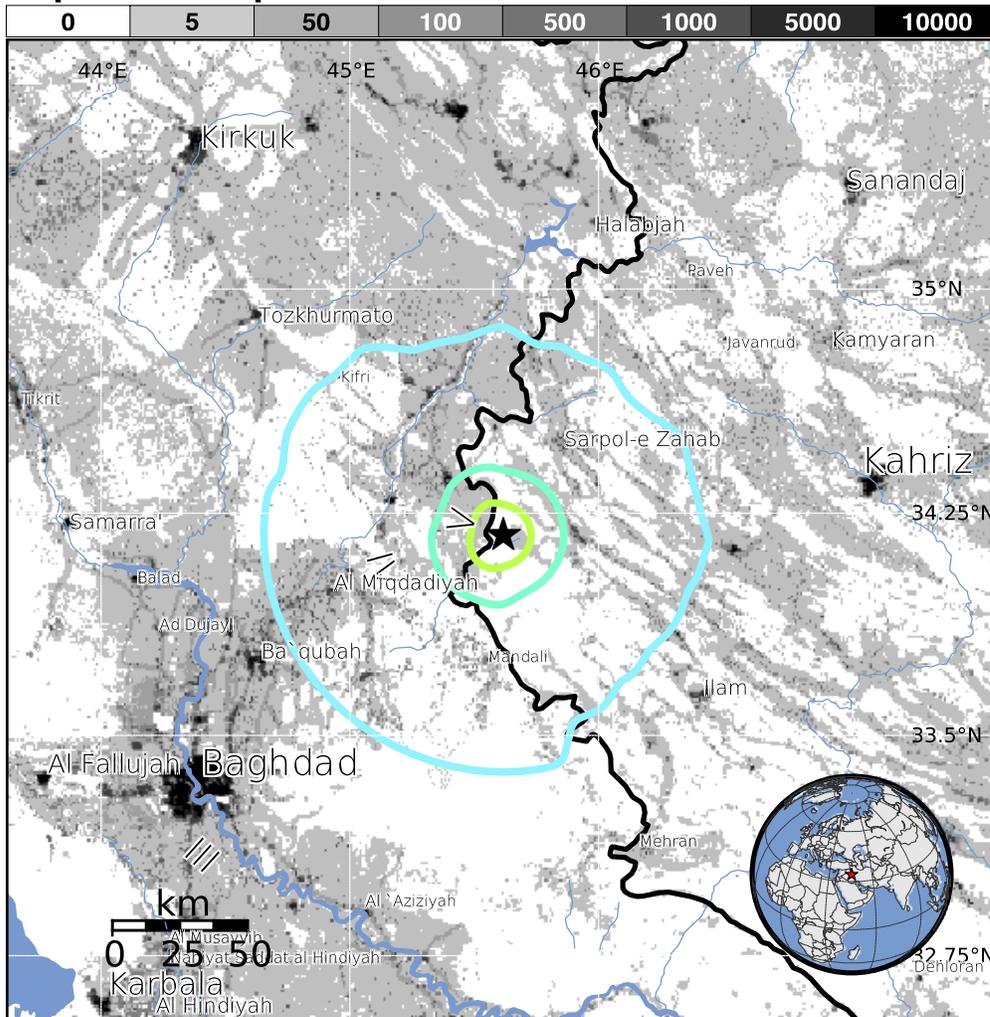
Estimated Population Exposed to Earthquake Shaking

ESTIMATED POPULATION EXPOSURE (k = x1000)	--*	17,412k	1,068k	36k	5k	0	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	V. Heavy
	Vulnerable Structures	none	none	none	Light	Moderate	Moderate/Heavy	Heavy	V. Heavy	V. Heavy

*Estimated exposure only includes population within the map area.

Population Exposure

population per ~1 sq. km from Landsat



Structures:

Overall, the population in this region resides in structures that are highly vulnerable to earthquake shaking, though some resistant structures exist.

Historical Earthquakes (with MMI levels):

Date (UTC)	Dist. (km)	Mag.	Max MMI(#)	Shaking Deaths
1994-07-31	313	5.5	VII(1k)	0
2002-04-24	172	5.4	VII(28k)	2
2002-06-22	348	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	Mandali	30k
IV	Al Miqdadiyah	51k
IV	Kifri	30k
III	Ba`qubah	153k
III	Baghdad	5,673k
III	Kermanshah	621k
III	Kirkuk	601k
III	As Sulaymaniyah	723k
III	Sanandaj	349k
III	Karbala	434k

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: usb00015tj