M 6.8, Al Haouz, Morocco

Origin Time: 2023-09-08 22:11:01 UTC (Fri 23:11:01 local)
Location: 31.0580° N 8.3847° W Depth: 19.0 km

PAGER Version 21

Created: 8 weeks, 2 days after earthquake

Estimated Fatalities

11% 29% 34% 19% 5%
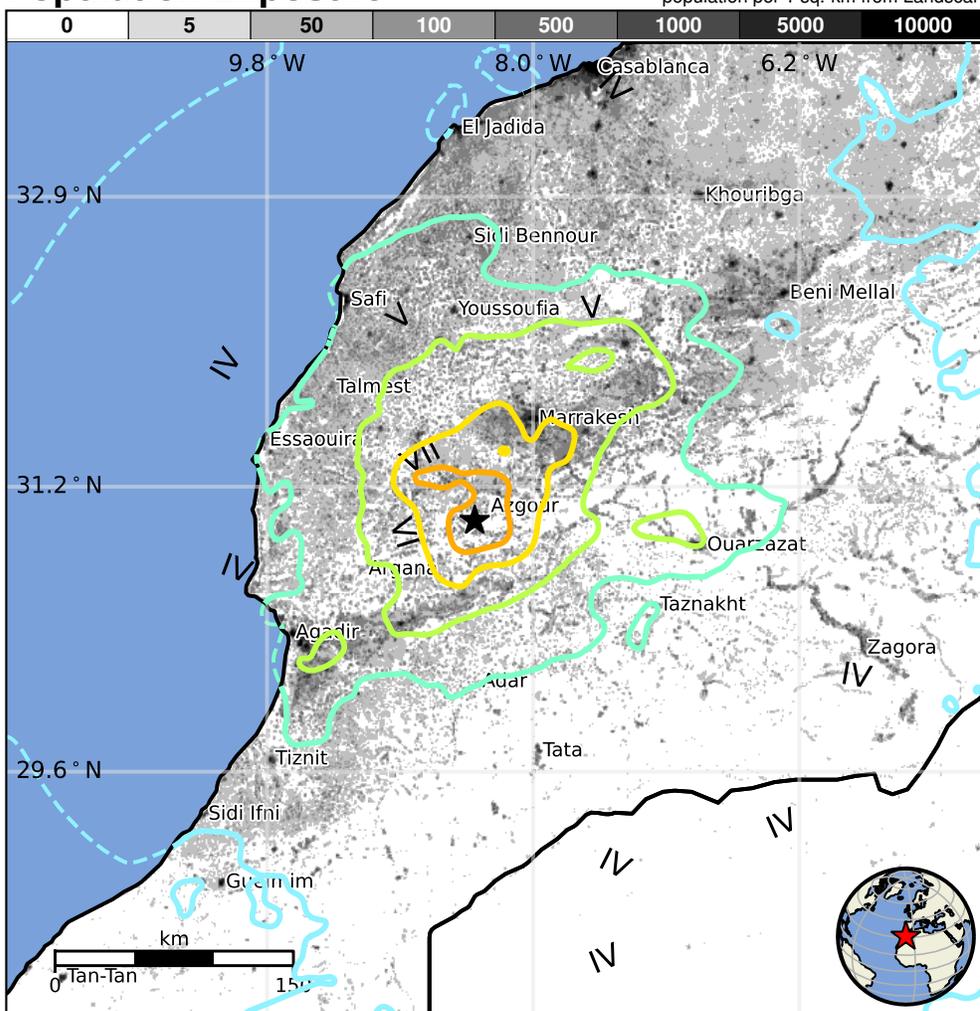
1 10 100 1,000 10,000 100,000
Fatalities

Red alert for shaking-related fatalities and economic losses. High casualties and extensive damage are probable and the disaster is likely widespread. Past red alerts have required a national or international response.

Estimated economic losses are 0-7% GDP of Morocco.

Estimated Economic Losses

8% 26% 37% 22% 6%

1 10 100 1,000 10,000 100,000
USD (Millions)

Estimated Population Exposed to Earthquake Shaking

ESTIMATED POPULATION EXPOSURE (k=x1000)		–*	739k*	10,708k*	4,580k	3,229k	816k	131k	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	Mod./Heavy	Heavy	V. Heavy
	Vulnerable Structures	None	None	None	Light	Moderate	Mod./Heavy	Heavy	V. Heavy	V. Heavy

*Estimated exposure only includes population within the map area.

Population Exposure

population per 1 sq. km from Landscan

| 0 | 5 | 50 | 100 | 500 | 1000 | 5000 | 10000 |

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 mud construction.

Historical Earthquakes

Date (UTC)	Dist. (km)	Mag.	Max MMI(#)	Shaking Deaths
1992-10-23	390	5.5	V(72k)	2
1992-10-30	386	5.6	V(71k)	–
1960-02-29	147	5.8	IX(244k)	13k

Selected City Exposure

from GeoNames.org

MMI	City	Population
VIII	Amizmiz	<1k
VIII	**Azgour**	**<1k**
VIII	Adassil	<1k
VIII	Tizguine	<1k
VII	Sidi Abdallah Ghiat	<1k
VII	Moulay Brahim	<1k
VI	**Marrakesh**	**839k**
V	**Agadir**	**698k**
V	**Beni Mellal**	**166k**
IV	**Casablanca**	**3,145k**
III	**Guelmim**	**98k**

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.
https://earthquake.usgs.gov/earthquakes/eventpage/us7000kufc#pager

Event ID: us7000kufc