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Earthquake Shaking **Orange Alert**

GSN ANSS USAID FROM THE AMERICAN PEOPLE

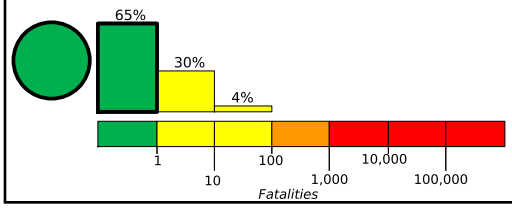
M 5.9, GANSU, CHINA

Origin Time: Sun 2013-07-21 23:45:56 UTC (07:45:56 local)
Location: 34.50°N 104.24°E Depth: 9 km

PAGER Version 4

Created: 1 hour, 55 minutes after earthquake

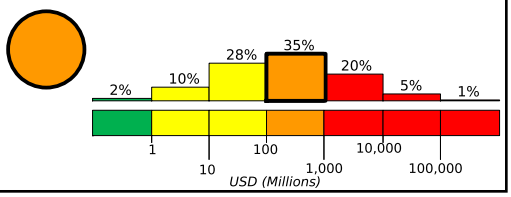
Estimated Fatalities



Orange alert level for economic losses. Significant damage is likely and the disaster is potentially widespread. Estimated economic losses are less than 1% of GDP of China. Past events with this alert level have required a regional or national level response.

Green alert level for shaking-related fatalities. There is a low likelihood of casualties.

Estimated Economic Losses



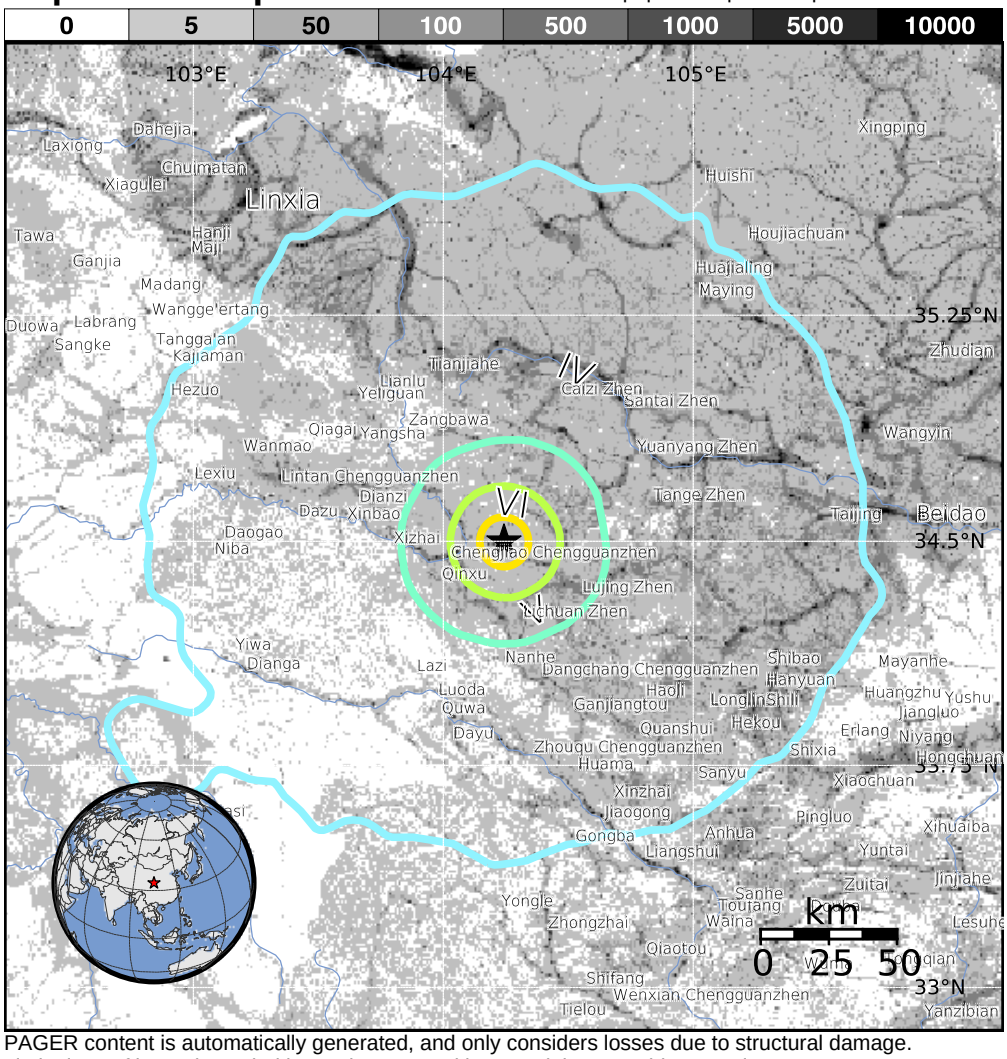
Estimated Population Exposed to Earthquake Shaking

ESTIMATED POPULATION EXPOSURE (k = x1000)		- -*	9,799k*	6,438k	390k	121k	18k	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 Landscan



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 unreinforced brick masonry and adobe block construction.

Historical Earthquakes (with MMI levels):

Date (UTC)	Dist. (km)	Mag.	Max MMI(#)	Shaking Deaths
2000-06-06	291	5.5	VII(3k)	0
1995-07-21	239	5.6	VIII(232)	14
1976-08-23	222	6.4	IX(2k)	41

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
VI	Chabu	< 1k
VI	Sigou	< 1k
VI	Chengjiao Zhen	< 1k
V	Xiaozhai	< 1k
V	Xijiang	< 1k
V	Minshan	< 1k
V	**Qinxu**	**< 1k**
IV	**Linxia**	**202k**
III	Lanzhou	3,200k
III	**Beidao**	**75k**

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: usb000ije3