

The Richter scale is a logarithmic scale used to measure the destructive power of an earthquake. It was devised by Charles F. Richter in 1935 for measurement of the strength of local earthquakes in southern California. It is a measure of the amplitude of the seismic waves produced by an earthquake. An increase of one unit on the Richter scale, say from magnitude 2.4 to 3.4, corresponds to a 10-fold increase in the amplitude of the seismic waves that shake the ground. The Richter magnitude is also related to the energy radiated from the earthquake source as seismic waves. An increase of one unit corresponds to approximately a 30-fold increase in the total energy released.

Some of the effects we may observe are tabulated below.

Magnitude	Effects
2.0	Felt only nearby, if at all
less than 3.5	Usually not felt
4.0	Often felt up to 10's of kilometers away from the source
3.5-5.4	Often felt, but rarely causes damage
under 6.0	At most slight damage to well-designed buildings. Can cause major damage to poorly constructed buildings over small regions.
6.1-6.9	Can be destructive in areas up to about 100 kilometers across where people live.
7.0-7.9	Major earthquake. Can cause serious damage over larger areas.
8 or greater	Great earthquake. Can cause serious damage in areas several hundred kilometers across
9.0	1952 Kamchatka
9.1	1957 Andreanof Islands, Alaska
9.2	1964 Prince William Sound, Alaska
9.5	1960 Chile - Largest Recorded Earthquake

The Richter scale is defined using the logarithm base 10 as:

$$R = \frac{2}{3} \log \frac{E}{E_0}$$

Where,  $E_0 = 10^{4.8}$  Joules is the energy released by a small reference earthquake. The energy,  $E$  can be obtained directly from the Gutenberg-Richter magnitude-energy relation, here expressed in units of Joules:

$$\log E = 1.5 \times R + 4.8 \quad \text{or equivalently:}$$

$$E = 10^{1.5 \times R + 4.8}$$

Since detonation of 1 ton of TNT releases  $4.184 \times 10^9$  Joules; we can convert these units to equivalent tons of TNT.

# List of earthquakes

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From Wikipedia, the free encyclopedia  
(Redirected from [List of earthquakes](#))

The following is a list of [earthquake](#) lists, and of top earthquakes by [magnitude](#) and [fatalities](#).

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Strongest earthquakes by magnitude [\[edit\]](#)

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This list is biased towards recent years due to development and widespread deployment of [seismometers](#). Also, records that were detailed enough to make magnitude estimates (est.) were not generally available before 1900.<sup>[2]</sup>

Rank	Date	Location	Event	Magnitude
1	May 22, 1960	<a href="#">Valdivia</a> , Chile	<a href="#">1960 Valdivia earthquake</a>	9.5 <sup>[3]</sup>
2	March 27, 1964	<a href="#">Prince William Sound</a> , <a href="#">Alaska</a> , United States	<a href="#">1964 Alaska earthquake</a>	9.2 <sup>[3]</sup>
3	December 26, 2004	Indian Ocean, <a href="#">Sumatra</a> , Indonesia	<a href="#">2004 Indian Ocean earthquake</a>	9.1 <sup>[3]</sup>
4	March 11, 2011	Pacific Ocean, <a href="#">Tōhoku region</a> , Japan	<a href="#">2011 Tōhoku earthquake</a>	9.0 <sup>[4][5][6]</sup>
5	November 4, 1952	<a href="#">Kamchatka</a> , <a href="#">Russian SFSR</a> , <a href="#">Soviet Union</a>	<a href="#">1952 Kamchatka earthquakes</a>	9.0 <sup>[7]</sup>
6	August 13, 1868	<a href="#">Arica</a> , Chile (then Peru)	<a href="#">1868 Arica earthquake</a>	9.0 (est.) <sup>[8]</sup>
7	January 26, 1700	Pacific Ocean, USA and Canada (then part of the <a href="#">British Empire</a> )	<a href="#">1700 Cascadia earthquake</a>	8.7–9.2 (est.) <sup>[9]</sup>
8	July 9, 869	Pacific Ocean, <a href="#">Tōhoku region</a> , Japan	<a href="#">869 Sanriku earthquake</a>	8.9 (est.)
9	December 2, 1611	Pacific Ocean, <a href="#">Hokkaido</a> , Japan	<a href="#">1611 Sanriku earthquake</a>	8.9 (est.)
10	April 2, 1762	<a href="#">Chittagong</a> , <a href="#">Bangladesh</a> (then <a href="#">Kingdom of Mrauk U</a> )	<a href="#">1762 Arakan earthquake</a>	8.8 (est.)
11	November 25, 1833	<a href="#">Sumatra</a> , Indonesia (then part of the <a href="#">Dutch East Indies</a> )	<a href="#">1833 Sumatra earthquake</a>	8.8 (est.)
12	January 31, 1906	Ecuador – Colombia	<a href="#">1906 Ecuador–Colombia earthquake</a>	8.8 <sup>[3]</sup>

Rank	Date	Location	Event	Magnitude
13	February 27, 2010	Offshore Maule, Chile	<a href="#">2010 Chile earthquake</a>	8.8 <sup>[9]</sup>
14	August 15, 1950	<a href="#">Assam</a> , India – <a href="#">Tibet</a> , China	<a href="#">1950 Assam–Tibet earthquake</a>	8.7
15	October 28, 1707	Pacific Ocean, <a href="#">Shikoku region</a> , Japan	<a href="#">1707 Hōei earthquake</a>	8.7 (est.)
16	July 8, 1730	<a href="#">Valparaiso</a> , Chile (then part of the <a href="#">Spanish Empire</a> )	<a href="#">1730 Valparaiso earthquake</a>	8.7 (est.) <sup>[10]</sup>
17	November 1, 1755	Atlantic Ocean, Lisbon, Portugal	<a href="#">1755 Lisbon earthquake</a>	8.5–9.0 <sup>[11]</sup>
18	February 4, 1965	<a href="#">Rat Islands</a> , <a href="#">Alaska</a> , United States	<a href="#">1965 Rat Islands earthquake</a>	8.7 <sup>[9]</sup>
19	October 28, 1746	<a href="#">Lima</a> , <a href="#">Peru</a> (then part of the Spanish Empire)	<a href="#">1746 Lima–Callao earthquake</a>	8.6 (est.)
20	March 28, 1787	<a href="#">Oaxaca</a> , <a href="#">Mexico</a> (then part of the Spanish Empire)	<a href="#">1787 Mexico earthquake</a>	8.6 (est.)
21	March 9, 1957	<a href="#">Andreanof Islands</a> , <a href="#">Alaska</a> , United States	<a href="#">1957 Andreanof Islands earthquake</a>	8.6 <sup>[9]</sup>
22	March 28, 2005	<a href="#">Sumatra</a> , Indonesia	<a href="#">2005 Sumatra earthquake</a>	8.6 <sup>[9]</sup>
23	April 11, 2012	Indian Ocean, <a href="#">Sumatra</a> , Indonesia	<a href="#">2012 Aceh earthquake</a>	8.6
24	December 16, 1575	<a href="#">Valdivia</a> , Chile (then part of the Spanish Empire)	<a href="#">1575 Valdivia earthquake</a>	8.5 (est.)












Rank	Date	Location	Event	Magnitude
25	November 24, 1604	Arica, Chile (then part of the Spanish Empire)	1604 Arica earthquake	8.5 (est.)
26	May 13, 1647	Santiago, Chile (then part of the Spanish Empire)	<a href="#">1647 Santiago earthquake</a>	8.5 (est.)
27	May 24, 1751	<a href="#">Concepción</a> , Chile (then part of the <a href="#">Spanish Empire</a> )	<a href="#">1751 Concepción earthquake</a>	8.5 (est.)
28	November 19, 1822	Valparaíso, Chile	1822 Valparaíso earthquake	8.5 (est.)
29	February 20, 1835	Concepción, Chile	<a href="#">1835 Concepción earthquake</a>	8.5 (est.)
30	February 16, 1861	Sumatra, Indonesia	<a href="#">1861 Sumatra earthquake</a>	8.5
31	May 9, 1877	Iquique, Chile (then Peru)	<a href="#">1877 Iquique earthquake</a>	8.5 (est.)
32	November 10, 1922	<a href="#">Atacama Region</a> , Chile	<a href="#">1922 Vallenar earthquake</a>	8.5 <sup>[2]</sup>
33	February 1, 1938	<a href="#">Banda Sea</a> , Indonesia (then part of the <a href="#">Dutch East Indies</a> )	<a href="#">1938 Banda Sea earthquake</a>	8.5 <sup>[1]</sup>
34	October 13, 1963	<a href="#">Kuril Islands</a> , Russia ( <a href="#">USSR</a> )	<a href="#">1963 Kuril Islands earthquake</a>	8.5 <sup>[2]</sup>
35	September 12, 2007	<a href="#">Sumatra</a> , Indonesia	<a href="#">2007 Sumatra earthquakes</a>	8.5 <sup>[2]</sup>
36	October 20, 1687	<a href="#">Lima</a> , Peru (then part of the <a href="#">Spanish Empire</a> )	<a href="#">1687 Peru earthquake</a>	8.5 (est.)

Rank	Date	Location	Event	Magnitude
37	October 17, 1737	Kamchatka, Russia	<a href="#">1737 Kamchatka earthquakes</a>	8.5 (est.)
38	August 3, 1361	Pacific Ocean, Shikoku region, Japan	1361 Shōhei earthquake	8.5 (est.)
39	June 15, 1896	Pacific Ocean, Tōhoku region, Japan	<a href="#">1896 Sanriku earthquake</a>	8.5 (est.)















## Strongest earthquakes by country [\[edit\]](#)

- This list is a work in progress. Information is likely to be changed.
- Please note, multiple countries could have the same earthquake listed, such as the [1906 Ecuador–Colombia earthquake](#) being listed for both [Ecuador](#) and [Colombia](#).
- Unless otherwise noted, magnitudes are reported on the [Moment magnitude scale](#) ( $M_w$ ).








Country	Magnitude	Date	More information
 Afghanistan	7.5 $M_w$	26 October 2015	<a href="#">2015 Hindu Kush earthquake</a>
 Algeria	7.7 $M_s$	10 October 1980	<a href="#">1980 El Asnam earthquake</a>
 Armenia	6.8 $M_s$	7 December 1988	<a href="#">1988 Armenian earthquake</a>
 Argentina	8.0 $M_s$	27 October 1894	<a href="#">1894 San Juan earthquake</a>
 Australia	7.2	29 April 1941	<a href="#">List of earthquakes in Australia</a>
 Azerbaijan	6.9	25 November 1667	<a href="#">1667 Shamakhi earthquake</a>
 Bangladesh	8.8	2 April 1762	<a href="#">1762 Arakan earthquake</a>

Country	Magnitude	Date	More information
 Belgium	6.3	18 September 1692	Epicentre: Verviers
 Bolivia	8.5 $M_s$	9 May 1877	<a href="#">1877 Iquique earthquake</a>
 Brazil	7.1	20 June 2003	<sup>[13]</sup>
 Bulgaria	7.8	4 April 1904	Epicentre: Struma River
 Canada	8.7–9.2 <sup>[9]</sup>	26 January 1700	<a href="#">1700 Cascadia earthquake</a>
 Chile	9.5	22 May 1960	<a href="#">1960 Valdivia earthquake</a>
 China	8.6	15 August 1950	<a href="#">1950 Assam–Tibet earthquake</a>
 Colombia	8.8	31 January 1906	<a href="#">1906 Ecuador–Colombia earthquake</a>
 Costa Rica	7.7	22 April 1991	<a href="#">1991 Limon earthquake</a>
 Cuba	6.8 $M_s$	11 June 1766	<sup>[14]</sup>
 Cyprus	7.0	11 May 1222	<a href="#">1222 Cyprus earthquake</a>
 Denmark	4.2–4.3 $M_w$ <sup>[15]</sup>	16 December 2008	
 Dominican Republic	8.1 $M_s$	4 August 1946	<a href="#">1946 Dominican Republic earthquake</a>

Country	Magnitude	Date	More information
 Ecuador	8.8	31 January 1906	<a href="#">1906 Ecuador–Colombia earthquake</a>
 Egypt	7.3	22 November 1995	<a href="#">1995 Gulf of Aqaba earthquake</a>
 Estonia	4.5	25 October 1976	
 Finland	3.5	21 February 1989	
 France	6.2	11 June 1909	<a href="#">1909 Provence earthquake</a>
 Germany	6.1	18 February 1756	
 Greece	8.5+	21 July 365	<a href="#">365 Crete earthquake</a>
 Guatemala	7.7 (7.9 $M_s$ )	6 August 1942	<a href="#">1942 Guatemala earthquake</a>
 Haiti	8.1 $M_s$	7 May 1842	<a href="#">1842 Cap-Haïtien earthquake</a>
 Hungary	6.3 $M_L$	28 June 1763	<a href="#">1763 Komárom earthquake</a>
 Iceland	6.6 $M_L$	17 June 2000	<a href="#">2000 Iceland earthquakes</a>
 India	8.6	15 August 1950	<a href="#">1950 Assam–Tibet earthquake</a>
 Indonesia	9.2	26 December 2004	<a href="#">2004 Boxing Day earthquake</a>

Country	Magnitude	Date	More information
 Iran	7.9 <a href="#">M<sub>s</sub></a>	22 December 856	<a href="#">856 Damghan earthquake</a>
 Italy	7.4	11 January 1693	<a href="#">1693 Sicily earthquake</a>
 Japan	9.0	11 March 2011	<a href="#">2011 Tōhoku earthquake</a>
 Lebanon	7.5	9 July 551	<a href="#">551 Beirut earthquake</a>
 Malaysia	6.0	5 June 2015	<a href="#">2015 Sabah earthquake</a>
 Mexico	8.6	28 March 1787	<a href="#">1787 Mexico earthquake</a>
 Mongolia	8.4	23 July 1905	<a href="#">1905 Bolnai earthquake</a>
 Montenegro	7.0	15 April 1979	<a href="#">1979 Montenegro earthquake</a>
 Morocco	6.3	24 February 2004	<a href="#">2004 Al Hoceima earthquake</a>
 Nepal	8.2	6 June 1505	<a href="#">1505 Lo Mustang earthquake</a>
 Netherlands	5.3 (5.8 <a href="#">M<sub>L</sub></a> )	13 April 1992	<a href="#">1992 Roermond earthquake</a>
 New Zealand	8.3	23 January 1855	<a href="#">1855 Wairarapa earthquake</a>
 Nicaragua	7.7	2 September 1992	<a href="#">1992 Nicaragua earthquake</a>
 North Korea	6.5 <a href="#">M<sub>s</sub></a> <sup>1161</sup>	19 March 1952	

Country	Magnitude	Date	More information
 Norway	6.2	19 February 2004	2004 Svalbard earthquake
 Pakistan	8.1	28 November 1945	<a href="#">1945 Balochistan earthquake</a>
 Peru	8.6	28 October 1746	<a href="#">1746 Lima–Callao earthquake</a>
 Philippines	8.3 $M_s$ and $M_w$	15 August 1918	<a href="#">1918 Celebes Sea earthquake</a>
 Poland	5.4	31 December 1999	
 Portugal	8.5–9.0	1 November 1755	<a href="#">1755 Lisbon earthquake</a>
 Romania	7.9	26 October 1802	<a href="#">1802 Vrancea earthquake</a>
 Russia	9.0	4 November 1952	<a href="#">1952 Kamchatka earthquake</a>
 Samoa	8.5	26 June 1917	<a href="#">1917 Samoa earthquake</a>
 South Africa	6.3	29 September 1969	
 Spain	7.1 $M_b$ <sup>[17]</sup>	29 March 1954	
 Sweden	5.4 <sup>[18]</sup>	23 October 1904	Oslofjord earthquake (Norway was Swedish at that time)
 Switzerland	6.5	18 October 1356	<a href="#">1356 Basel earthquake</a>

Country	Magnitude	Date	More information
 Taiwan	7.6 (7.3 <a href="#">M<sub>s</sub></a> )	21 September 1999	<a href="#">921 earthquake</a>
 Thailand	6.3	5 May 2014	<a href="#">2014 Mae Lao earthquake</a>
 Turkey	7.8 <a href="#">M<sub>s</sub></a>	27 December 1939	<a href="#">1939 Erzincan earthquake</a>
 United Kingdom	6.1 <a href="#">M<sub>L</sub></a>	7 June 1931	<a href="#">1931 Dogger Bank earthquake</a>
 United States	9.2	27 March 1964	<a href="#">1964 Alaska earthquake</a>
 Venezuela	7.5 <a href="#">M<sub>s</sub></a>	26 March 1812	<a href="#">1967 Caracas earthquake</a>
 Vietnam	6.8	24 June 1983	Tuan Giao earthquake

## Costliest earthquakes<sup>[[edit](#)]</sup>

This is a list of major earthquakes by the dollar value of property (public and private) losses directly attributable to the earthquake. Wherever possible, indirect and socioeconomic losses are excluded. Please note that damage estimates for particular earthquakes may vary through time as more data becomes available.

Rank	Property Damages (Inflation-Adjusted) <sup>[19]</sup>	Event	Location	Magnitude	Property Damages (Non-Adjusted)
1	\$312 billion	1995 <a href="#">Great Hanshin earthquake</a>	<a href="#">Japan</a>	6.9	\$200 billion <sup>[20]</sup>
2	\$249 billion	<a href="#">2011 Japan Earthquake and Tsunami</a>	Japan	9.0 <sup>[6]</sup>	\$235 billion <sup>[21][22]</sup>
3	\$95 billion	<a href="#">2008 Sichuan earthquake</a>	<a href="#">Sichuan, China</a>	8.0	\$86 billion <sup>[23]</sup>

Rank	Property Damages (Inflation-Adjusted) <sup>[19]</sup>	Event	Location	Magnitude	Property Damages (Non-Adjusted)
4	\$67 billion	<a href="#">1994 Northridge earthquake</a>	<a href="#">Los Angeles, United States</a>	6.7	\$42 billion <sup>[24]</sup>
5	\$43 billion	<a href="#">1980 Irpinia earthquake</a>	<a href="#">Italy</a>	6.9 <sup>[25]</sup>	\$15 billion <sup>[25]</sup>
6	\$42 billion	<a href="#">1976 Tangshan earthquake</a>	<a href="#">Hebei, China</a>	7.8	\$10 billion <sup>[26]</sup>
7	\$16–42 billion	<a href="#">2011 Christchurch earthquake</a>	<a href="#">South Island, New Zealand</a>	6.3 <sup>[27]</sup>	\$15–40 billion <sup>[28][29]</sup>
8	\$35 billion	<a href="#">2004 Chūetsu earthquake</a>	Japan	6.8	\$28 billion <sup>[25][30]</sup>
9	\$29 billion	<a href="#">1999 İzmit earthquake</a>	<a href="#">Turkey</a>	7.6 <sup>[25]</sup>	\$20 billion <sup>[25]</sup>
10	\$21 billion	<a href="#">1989 Loma Prieta earthquake</a>	<a href="#">California, United States</a>	~7.0; 6.9 to 7.1 reported <sup>[31]</sup>	\$11 billion
11	\$16–33 billion	<a href="#">2010 Chile earthquake</a>	<a href="#">Chile</a>	8.8 <sup>[32]</sup>	\$15–30 billion <sup>[32]</sup>
12	\$16 billion	<a href="#">2012 Emilia earthquakes</a>	Italy	6.1 <sup>[33]</sup>	\$15.8 billion <sup>[34]</sup>
13	\$14 billion	1999 <a href="#">921 earthquake</a>	<a href="#">Taiwan</a>	7.6	\$10 billion
14	\$10 billion	<a href="#">April 2015 Nepal earthquake</a>	<a href="#">Nepal</a>	7.8	\$10 billion to rebuild. <sup>[35]</sup>
15	\$9.5 billion	<a href="#">1906 San Francisco earthquake</a>	<a href="#">San Francisco, United States</a>	7.7 to 7.9 (est.) <sup>[33]</sup>	\$400 million <sup>[33]</sup>

Rank	Property Damages (Inflation-Adjusted) <sup>[19]</sup>	Event	Location	Magnitude	Property Damages (Non-Adjusted)
16	\$8.2 billion	<a href="#">1923 Great Kantō earthquake</a>	<a href="#">Tokyo, Japan</a>	7.9	\$600 million <sup>[25]</sup>

## Deadliest earthquakes on record<sup>[edit]</sup>

### [Deadliest earthquakes](#)<sup>[36]</sup>

Rank	Event	Date	Location	Fatalities	Magnitude	Notes
1	<a href="#">1556 Shaanxi earthquake</a>	January 23, 1556	<a href="#">Shaanxi</a> , China	820,000–830,000 (est.) <sup>[37]</sup>	8.0 (est.)	Estimated death toll in Shaanxi, China.
2	<a href="#">1976 Tangshan earthquake</a>	July 28, 1976	<a href="#">Hebei</a> , China	242,769–655,000 <sup>[38][39]</sup>	7.8	
3	<a href="#">1920 Haiyuan earthquake</a>	December 16, 1920	<a href="#">Ningxia–Gansu</a> , China	273,400 <sup>[38][40]</sup>	7.8	Major fractures, landslides.
4	<a href="#">526 Antioch earthquake</a>	May 21, 526	<a href="#">Antioch</a> , Turkey (then <a href="#">Byzantine Empire</a> )	240,000 <sup>[41]</sup>	7.0 (est.) <sup>[42]</sup>	<a href="#">Procopius</a> (II.14.6), sources based on <a href="#">John of Ephesus</a> .
5	<a href="#">2004 Indian Ocean earthquake</a>	December 26, 2004	Indian Ocean, <a href="#">Sumatra</a> , Indonesia	230,210+ <sup>[43][44]</sup>	9.1–9.3	Deaths from earthquake and resulting tsunami.
6	<a href="#">1138 Aleppo earthquake</a>	October 11, 1138	<a href="#">Aleppo</a> , Syria	230,000	Unknown	The figure of 230,000 dead is based on a historical conflation of this earthquake with earthquakes in November 1137 on the <a href="#">Jazira plain</a> and on September 30, 1139 in the Azerbaijani city of <a href="#">Ganja</a> . The first mention of a 230,000 death toll

[Deadliest earthquakes](#)<sup>[26]</sup>

Rank	Event	Date	Location	Fatalities	Magnitude	Notes
						was by <a href="#">Ibn Taghribirdi</a> in the fifteenth century. <sup>[45]</sup>
7	<a href="#">2010 Haiti earthquake</a>	January 12, 2010	Haiti	100,000–316,000	7.0	Estimates vary from 316,000 (Haitian government) to 222,570 ( <a href="#">UN OCHA</a> estimate) <sup>[46]</sup> to 158,000 ( <i>Medicine, Conflict and Survival</i> ) to between 85,000 and 46,000 (report commissioned by <a href="#">USAID</a> ). <sup>[47][48]</sup>
8	<a href="#">1303 Hongdong earthquake</a>	September 25, 1303	<a href="#">Shanxi, China</a>	200,000 (est.) <sup>[49]</sup>	8.0 (est.)	<a href="#">Taiyuan</a> and Pingyang were leveled.
9	<a href="#">856 Damghan earthquake</a>	December 22, 856	<a href="#">Damghan, Iran</a>	200,000 (est.)	7.9 <u>M</u> , (est.)	
10	<a href="#">893 Ardabil earthquake</a>	March 22, 893	<a href="#">Ardabil, Iran</a>	150,000 (est.)	Unknown	Reports probably relate to the <a href="#">893 Dvin earthquake</a> , due to misreading of the Arabic word for <a href="#">Dvin</a> , 'Dabil' as 'Ardabil'. <sup>[50]</sup> This is regarded as a 'fake earthquake'. <sup>[51]</sup>
11	533 Aleppo Earthquake	November 29, 533	Syria	130,000 <sup>[52]</sup>	Unknown	
12	<a href="#">1908 Messina earthquake</a>	December 28, 1908	<a href="#">Messina, Italy</a>	123,000 <sup>[53]</sup>	7.1	The ground shook for 30 to 40 seconds around 5:20 am, and destruction occurred within a 300 km radius. 93% of structures in Messina were destroyed and ~70,000 residents died. Rescuers searched for weeks, and whole families were pulled out alive days later. A 40-foot (12 m) tsunami struck nearby coasts. Reggio Calabria on the Italian mainland also suffered heavy damage.

[Deadliest earthquakes](#)<sup>[26]</sup>

Rank	Event	Date	Location	Fatalities	Magnitude	Notes
13	<a href="#">1948 Ashgabat earthquake</a>	October 6, 1948	<a href="#">Ashgabat, Turkmen SSR (modern-day Turkmenistan)</a>	110,000 <sup>[54]</sup>	7.3	
14	<a href="#">1923 Great Kantō earthquake</a>	September 1, 1923	<a href="#">Kantō region, Japan</a>	105,385 <sup>[55]</sup>	7.9	This earthquake with an epicenter beneath <a href="#">Izu Ōshima Island</a> in <a href="#">Sagami Bay</a> , shook the <a href="#">Kantō plain</a> on the Japanese island of <a href="#">Honshū</a> at 11:58 am. Shaking duration reported between 4 and 10 minutes, devastating Tokyo, <a href="#">Yokohama</a> , <a href="#">Chiba</a> , <a href="#">Kanagawa</a> , and <a href="#">Shizuoka</a> . <sup>[56]</sup> Shaking slid the 93-ton <a href="#">Great Buddha</a> statue at <a href="#">Kamakura</a> almost two feet forward. <sup>[57]</sup> Casualty estimates range from 100,000 to 142,800, the latter figure including ~40,000 missing later presumed dead.
15	<a href="#">1290 Chihli earthquake</a>	September 27, 1290	<a href="#">Ningcheng, China</a>	100,000 <sup>[58]</sup>	6.8 <a href="#">M</a>	
16	<a href="#">2005 Kashmir earthquake</a>	October 8, 2005	<a href="#">Muzaffarabad, Pakistan</a>	86,000–87,351 <sup>[59][60][61][62]</sup>	7.6	Affecting an area (mostly rugged terrain) of about 30,000 km² [11,600 sq mi], this earthquake damaged about 6,440 km [4,000 mi] of roads, and 50-70% of services, including power, water and sanitation. Approximately 400,153 houses, 6,298 schools and 796 health facilities were damaged or destroyed (UN 2006). Death toll estimates range from 86,000-87,351, with approximately 138,000 seriously injured and 3.5 million people displaced.

See also [\[edit\]](#)