Schweizerischer Erdbebendienst
Service Sismologique Suisse
Servizio Sismico Svizzero
Swiss Seismological Service

ETH zürich

Earthquake scenario

Earthquake in the vicinity of Bern (BE)

Overview

Magnitude 6.0 [Mw]

In this scenario, an earthquake has occurred in the canton of Bern (BE), with the epicentre located approximately 10 km southwest of Bern (BE). This earthquake would be felt across Switzerland. An earthquake of this magnitude would be expected to cause moderate to heavy damage within a wide radius of the epicentre. On statistical average, an earthquake with a magnitude of 6 is to be expected within a 50 km radius of this epicentre every 890 years.

Danger level

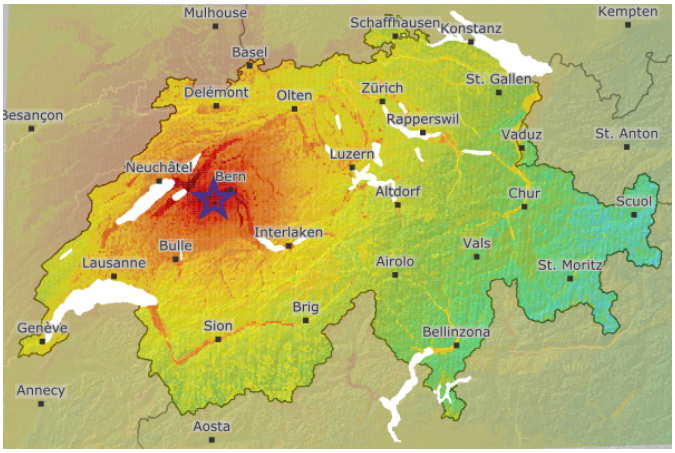
5

Local time	-
Date	-
Hypocentral depth [km]	8
Magnitude [Mw]	6.0
Assessment	automatic
Swiss coordinates	2'591'367 / 1'195'995
Additional data	Link

National

Estimated effects

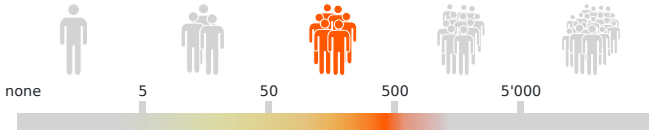
The estimated impacts are described in intensities. The intensity describes the strength of an earthquake based on the extent of the impact and the subjective perception of a person.



Intensity	II	III	IV	V	VI	VII	VIII	IX
Impact	scarcely felt	weak	largely observed	strong	slightly damaging	damaging	heavily damaging	destructive

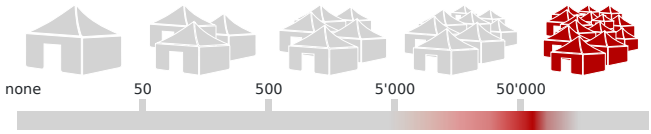
Number of fatalities in Switzerland

The number of fatalities is very likely to fall within the coloured range.



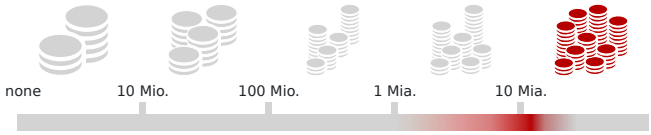
Number of people seeking protection in Switzerland

The number of people seeking protection is very likely to fall within the coloured range.



Cost of damage to buildings in Switzerland

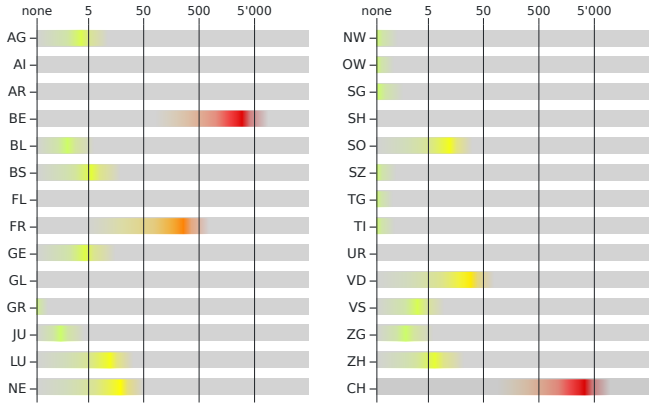
The cost of damage to buildings is very likely to fall within the coloured range.



Cantonal

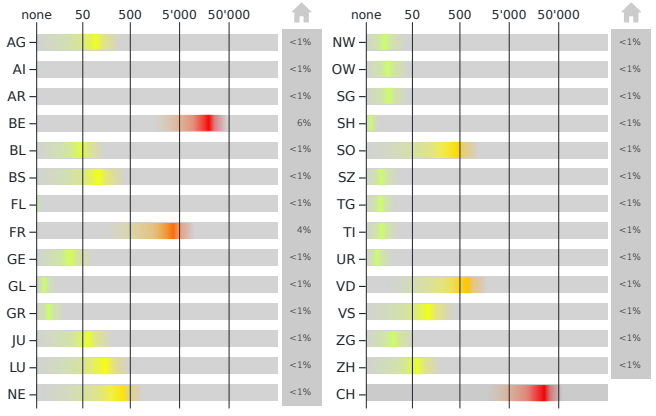
Number of injured people

The number of injured people per canton and in the Principality of Liechtenstein is very likely to fall within the coloured range.



Extent of building damage

The extent of moderate to very heavy damage to buildings per canton and in the Principality of Liechtenstein is very likely to fall within the coloured range. The percentage corresponds to the average proportion of damaged buildings per canton.



All information is provided without warranty and is subject to change.

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Schweizerische Eidgenossenschaft
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What should you do after an earthquake? See www.seismo.ethz.ch/de/earthquakes/what-to-do/
More information is available at www.seismo.ethz.ch and https://lage.naz.ch/eld2/login

Explanations

The values given here regarding the earthquake scenario are automatically generated based on assumptions derived from the earthquake risk model of Switzerland (ERM-CH23). The actual values may vary considerably under certain circumstances; therefore, all information is provided without warranty and is subject to change.

ERM-CH23 was developed by the Swiss Seismological Service (SED) at ETH Zurich in collaboration with the Federal Office for the Environment (FOEN) and the Federal Office for Civil Protection (FOCP).

Overview

'MLhc' and 'Mw' are measures of magnitude and describe the energy released during an earthquake and its strength respectively.

Danger levels 1 to 5 were jointly defined by the federal agencies with responsibility for natural hazards.

- Danger level 1: no or minor danger
- Danger level 2: moderate danger
- Danger level 3: considerable danger
- Danger level 4: severe danger
- Danger level 5: extreme danger

More information about danger levels is available here: www.naturgefahren.ch/home/umgang-mit-naturgefahren/erdbeben/gefahrenstufen.html

The overview is a summary of key information about an earthquake and comprises standardised text elements that have been combined automatically.

This table summarises the most important earthquake parameters. Clicking on the link in the last row will take you to a page with more information about the earthquake in question on the website of the Swiss Seismological Service at ETH Zurich.

National

The map shows the expected effects of an earthquake described in intensities. The intensity describes the strength of an earthquake based on the extent of the impact and the subjective perception of a person.

The estimated number of fatalities is derived from the following values:

- Estimated number of heavily damaged or destroyed buildings
- Estimated occupancy of these buildings (regardless of the time of day or year)
- Estimated proportion of people who die in heavily damaged or destroyed buildings

The estimated number of fatalities does not take into account the following values:

- Estimated number of fatalities due to damage to infrastructure (e.g. bridges, roads)
- Estimated number of fatalities due to the secondary effects of an earthquake (e.g. landslides, rockslides, fire)

The expected number of people seeking protection in the short and longer term is derived from the following values:

- Estimated number of moderately to heavily damaged or destroyed buildings
- Estimated occupancy of these buildings (regardless of the time of day or year).
- Estimated proportion of buildings that are no longer habitable due to damage

The estimated cost of damage to buildings encompasses both structural and non-structural damage and is derived from the following values:

- Estimated number of slightly, moderately and heavily damaged or destroyed buildings
- The value of these buildings
- Estimated proportional loss of building value due to the damage caused

The estimated cost of damage to buildings does not take into account the following values:

- Movable building contents (chattels)
- Losses due to the secondary effects of the earthquake (e.g. landslides, rockslides, fire)
- Losses due to delays, e.g. to repairs or reconstruction work
- Losses due to interruptions to business continuity
- Loss of infrastructure (bridges, roads, power lines)

Cantonal

The estimated number of persons suffering minor to severe injuries is derived from the following values:

- Estimated number of moderately to heavily damaged or destroyed buildings
- Estimated occupancy of these buildings (regardless of the time of day or year)
- Estimated ratio of people injured in moderately to heavily damaged or destroyed buildings

The estimated number of injured persons does not take into account the following values:

- Injuries resulting from damage to infrastructure (e.g. bridges, roads)
- Injuries resulting from the secondary effects of the earthquake (e.g. landslides, rockslides, fire)

Damage to buildings falls within one of five levels:

- Damage level 1: Negligible to slight damage
- Damage level 2: Moderate damage
- Damage level 3: Substantial to heavy damage
- Damage level 4: Very heavy damage
- Damage level 5: Destruction

The estimated damage to buildings takes into account all buildings at damage level 2 or above. The damage to a building depends heavily on its construction and the nature of the local subsoil.