



WHAT IS AN EARTHQUAKE?

1. Earthquakes are caused by geological movements in the earth which release energy and can cause severe damage due to ground vibration, surface faulting, tectonic uplifts or ground ruptures. They can also trigger *tsunamis* (large sea- waves), landslides, flooding, dam failures and other disasters up to several hundred kilometres from the epicentre.
2. They happen suddenly and usually without warning. Major earthquakes can last minutes, but as a rule they last only a few seconds. There are usually two or more "waves" of increasing magnitude, generally 2 to 5 minutes apart. All types of earthquakes are followed by aftershocks, which may continue for several hours or days, or even years. It is not uncommon for a building to survive the main tremor, only to be demolished later by an aftershock.
3. The actual movement of the ground during an earthquake seldom directly causes death or injury. Most casualties result from falling objects and debris or the collapse of buildings. The best protection for buildings is solid construction and a structural design intended to withstand an earthquake.
4. An initial shock of an earthquake is generally accompanied by a loud rumbling noise and it is not uncommon that people rush outside of the building to see what is happening, only to be caught unprepared by the subsequent and potentially more dangerous shocks and falling debris.

EARTHQUAKES AND THEIR EFFECTS

Degree	Force	Effects on		
		Persons	Buildings	Nature
I	Unnoticed	Not noticeable		
II	Very light	Noticed here and there		
III	Light	Mainly noticed by persons in relaxing phase		
IV	Medium	Noticed in houses; waking up	Windows are vibrating	
V	Medium to strong	Noticed everywhere in the open.	Plaster of the houses is falling down, suspended pictures are wiewling.	
VI	Strong	Fright	Chimneys + plaster of houses are damaged.	Clefts are opening in humid terrain.
VII	Very strong	Many persons are fleeing into the open.	Important damages mainly on buildings in bad shape; chimneys are falling down.	Some landslides on steep slopes.
VIII	Destructive	Fright and panic	Many old houses and sewage systems are damaged.	Deviations of water sources, mudslides on embankments.
IX	Devastating	Panic	Large damages on lightly-built houses and subterranean sewage systems.	Clefts in the ground, collapse of buildings, many landslides
X	Destructive	Total panic	Brick stone buildings are destroyed.	Rails are damaged, big movements of light soil on mountain slopes, formation of new lakes.
XI	Catastrophic		Few building are surviving, sewer systems are destroyed.	Changes in the topography, tsunamis.
XII	Big catastrophe		Above and below ground, all constructions are totally destroyed	Total knocking over of the topography, tsunamis.

EARTHQUAKE CONCEPT – INFORMATION FOR THE SWISS COMMUNITY IN KAZAKHSTAN

Preventive measures

- Check every part of the house for fire prevention and know the locations of the fire-fighting equipment.
- Secure heavy furniture and shelving to prevent tipping and eliminate chandeliers.
- Fix mirrors, paintings and other hanging objects securely, so that they won't fall off hooks.
- Keep heavy items on lower shelves.
- Closed curtains will help stop broken window glass from falling on beds.
- Safe storage of inflammable material such as petrol, kerosene, gas bottles in a place where they won't fall during a tremor.
- Do not store heavy and bulky equipment or material on top of one other.
- Locate beds and chairs away from chimneys and windows. Don't hang heavy pictures and other items over beds.
- Decide with your family how to contact each other if you should become separated, where to meet and other important matters.
- Stock up at least 3 days of food and water supply
- Prepare an escape bag with radio, flash lights, spare batteries, solid fuel for a cooker, candles, toilet articles, a set of underwear, money and ID documents.

Tips on what to do before an earthquake

- Identify and know the safest places to be – and where not to be – in the residence, the office or in the hotel room during an earthquake.
- Safe places are in doorframes located along weight-bearing walls, in corners of rooms and under heavy tables or desks that could take the force of falling objects
- Dangerous places are near windows or mirrors, under or near any heavy objects that can fall
- Identify from which location you can turn off electricity, gas, and water (clearly label the on-off position). Have a pipe wrench next to it (to turn off gas and water if handle is broken).

Preparation before Earthquake



If indoors:

- Stay inside the building, do not rush outside.
- Find shelter under a table or some other strong object or take cover in those places, which have been identified.
- Cover your head
- Do not move from your position until the shaking stops.
- Move away from glass windows and watch out for falling objects.
- Never use an elevator during or immediately after an earthquake
- Open all doors as soon as possible in order to have a free escape route

If outdoors:

- Move to an open area away from buildings and high walls (falling debris), windows (glass splinters), overhead electricity wires.
- On a SIDEWALK NEAR BUILDINGS, duck into a doorway to protect yourself from falling bricks, glass, plaster and other debris.
- If you notice a fire, check the wind direction, then walk in the opposite direction

If in a moving vehicle:

- Stop the vehicle at the safest place, away from slopes, buildings or high walls, bridges whether on them or under them, tall trees and electricity or telephone poles.
- Stay inside the vehicle until shaking stops.

In a crowded public place:

- Do not rush for exits.
- Try to take cover where you won't get trampled.
- In shopping centres, try to take cover under strong doorframes or archways, in corners of rooms or under heavy tables or desks. Move away from display shelves with objects that could fall.

During the event



EARTHQUAKE CONCEPT – INFORMATION FOR THE SWISS COMMUNITY IN KAZAKHSTAN

- Check yourself and others nearby for injuries – administer first aid.
- Check for fire hazard and gas leaks. Do not use lighters or open fire or turn on light switches until you are sure there are no gas leaks or flammable liquids spilled.
- Use a flashlight to check utilities and do not shut them off unless damaged. Leaking gas will smell.
- Be aware of electrical wiring.
- Check building for structural damage. If you suspect the building is unsafe, evacuate immediately and do not re-enter. Proceed to the previously designated safe area.
- Before leaving the building, if necessary and possible, turn off all utilities from the mains: electricity, gas, and water.
- Do not flush toilets if you suspect sewer lines are broken.
- Do not use an elevator

Immediate after the event



Gathering first information (remain where you are)

- Do not use your vehicle except in extreme emergency or unless forced to do so. Keep roads clear for rescue and emergency vehicles.
- Do not attempt to get out of your car if downed power lines are across it. Wait to be rescued. Stay at least 10 metres away from downed power lines.
- Do not go “sight-seeing”.
- Rely on emergency authorities for guidance.
- Listen to radio or television broadcasts for instruction from emergency authorities after the earthquake.
- If you need to report an emergency, use your available and working phone system (landline, mobile). Do only call in case of emergency avoid breakdown of telephone system by overload

Gathering Information, establish contacts

The role of the Swiss Embassy

- The Kazakh Government will be responsible for assistance immediately after a major earthquake.
- The Embassy will quickly want to ascertain the welfare and whereabouts of Swiss citizens.
- Swiss citizens should cooperate with Kazakh authorities at evacuations sites and clearly identify themselves as Swiss.
- The Swiss Embassy will be in touch with the Kazakh Government and other organisations to attempt to identify as many Swiss citizens as possible and determine their well-being.
- If the Embassy can not reach you – you are required to contact the Embassy.
- It is important for the Embassy to pass as much information as possible about the situation as well as the status of the Swiss citizens to the Federal Department of Foreign Affairs, who will contact relatives in Switzerland and answer their inquiries.

How to get in touch with the Embassy of Switzerland

Swiss Embassy in Astana

Telephone: +7 717 297 98 92 / 93

Mobile phone: +7 701 728 06 50

If the telephone service is overloaded, try to send a SMS to the indicated mobile phone.