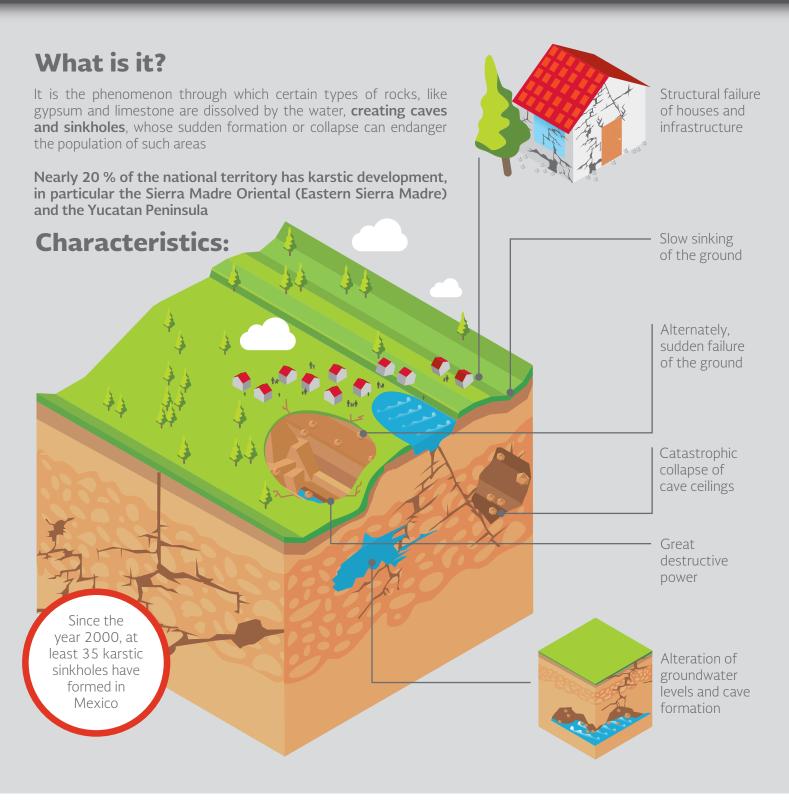
## KARST: Sudden sinkhole collapse



### **Preventive measures:**



Avoid discharging effluents into sinkholes or cracked ground



If you detect deformation in houses structures, appearance of cracks, new accumulations of water, etc., get in contact with the Civil Protection authorities in your



In case of a slow sinking, evacuate the affected area and define a security perimeter



Before building respect the land use and perform adequate studies to verify the suitability of the locale



Avoid water flow towards the affected area

#### **Learn more**

**National Center for Disasters Prevention** www.gob.mx/cenapred

Source: National Center for Disasters Prevention













# Karst

### Collapses of caves, sinkholes and gorges which can be sudden

#### How do caves and sinkholes form?

The limestone rocks that form the Sierra Madre Oriental, part of the Sierra Madre del Sur, the Sierras de Chiapas and the Yucatan Peninsula, were formed more than 65 million years ago through the accumulation of shells of microscopic sea animals at the bottom of the sea

The weight of the overlying layers compacted and recrystallized the sediments, turning them into rocks, which afterwards were deformed and fractured into the present mountains or, in the case of the Yucatan Peninsula, as a plateau

Rainwater mixes with carbon dioxide (CO2) from the atmosphere and soils

This mixture is slightly acidic and slowly dissolves the rocks

Water infiltrates through cracks in the rocks

As the water dissolves the rock it widens the passage, allowing more water through, which enhances the dissolution

Eventually, large caves and cenotes will be formed

### **Caves of Mexico**

The longest cave is in the state of Quintana Roo, it has

311

km of tunnels and is considered the second longest in the world There are more than

30

caves with over 10 km in length, and more than 200 over 1.5 km

The deepest cave in Mexico reaches

1,545

meters below its entrance. It is in the state of Oaxaca and is the eight deepest in the world

There are more than

320

caves over 200 m deep

