

VOLCANIC HAZARDS

Events related to volcanic activity

The most important are:

Falling tephra

Volcanic material fragments with size ranging between 2 mm (ashes) and 64 mm (lapilli). It is made up of ashes and pumice, and is expelled as fumaroles during and explosion. May cover extensive fallout area

Ballistic projectiles (volcanic bombs)

Fragments of material with a size over 64 mm. They may have several meters diameter. Crater explosions cause them

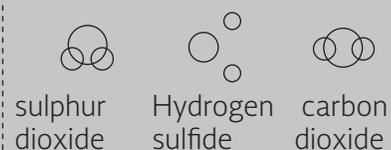
Lava flows

Molten rock flowing downhill as a viscous fluid. Capable of burning forest areas, crops, and buildings

Volcanic gases

Volatile compounds of magma, expelled in fumaroles or through craters

Some of the most dangerous are:



Pyroclastic flows and waves

They are turbulent mixtures of high temperature rock fragments (700 °C), ashes, pumice, and gas, expelled at a speed up to 200 kilometers/hour

Avalanches

They are the result of gas pressure inside the volcano, earthquakes, and instability caused by the overload. The volcano's structure is destabilized and causes the high-speed collapse of a section of the volcanic construction

Lahar or mudflow

They are produced when materials expelled during eruptions are mixed with water and create flows moving downhill

50%
of the Mexican population
lives near, or on the side hills of volcanoes

Don't go near volcanic products. They may be extremely hot, even months after they were expelled

What are they?

Most volcanic hazards are related to eruptions; nevertheless, some of them may occur even when there is no volcanic activity, such as lahars and rubble avalanches

Eruption types:

Vulcanian



Popocatépetl (20-nov-2011)

Plinian



Chichón (1982)

Strombolian



Popocatépetl (may-jul of 2013)

There are 48 active volcanos in Mexico, among which you find:

- **Popocatepetl** at the border of the states of Morelos, Puebla, and the State of Mexico
- **Fuego de Colima**, in Colima and Jalisco
- **Ceboruco** in Nayarit
- **Pico de Orizaba** in Veracruz
- **Chichón** in Chiapas

Be informed

Centro Nacional de Prevención de Desastres
www.gob.mx/cenapred

Source: Centro Nacional de Prevención de Desastres
Translation: Guadalupe Meléndez de Escalante



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Volcanic activity in Mexico

Recent significant events

Trans-Mexican Volcanic Belt

Most active volcanoes in Mexico are located at the central part of the territory, in the so-called Trans-Mexican Volcanic Belt (CVTM - *Cinturón Volcánico Transmexicano*)

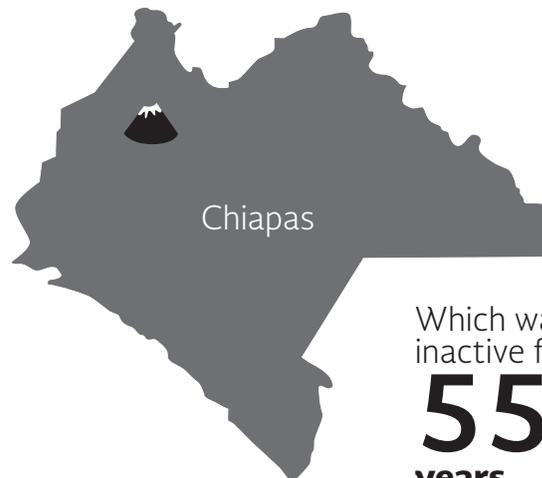
Runs across the states of



- Querétaro
- Hidalgo
- Morelos
- Tlaxcala
- Puebla
- Veracruz
- Distrito Federal
- Nayarit
- Jalisco
- Colima
- Michoacán
- Guanajuato
- Estado de México

The last volcanic disaster in Mexico was:

The Chichon volcano



Which was inactive for **550** years

In April 1982 the eruption destroyed almost

400 square kilometers of jungle

9 towns

And estimations consider

2,000 casualties



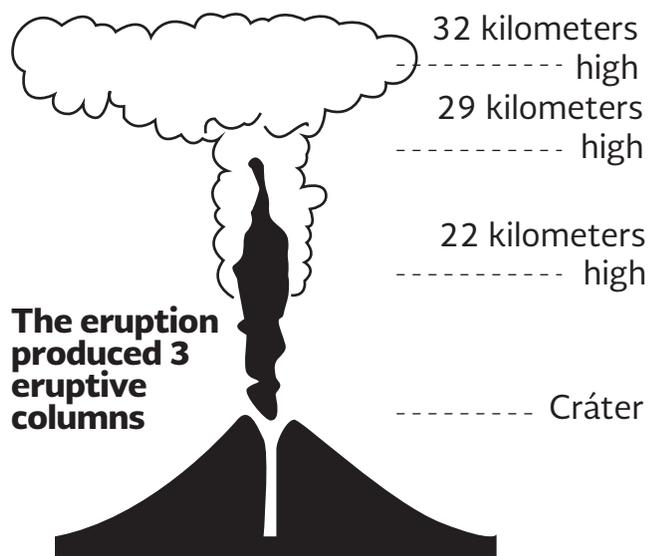
The CVTM contains over

2,000 inactive volcanoes



That is where these volcanoes were born:

Jorullo in 1759 and Paricutin in 1943



The eruption produced **3** eruptive columns



World temperature decreased

0.5°C

due to gases suspended in the atmosphere during 1982