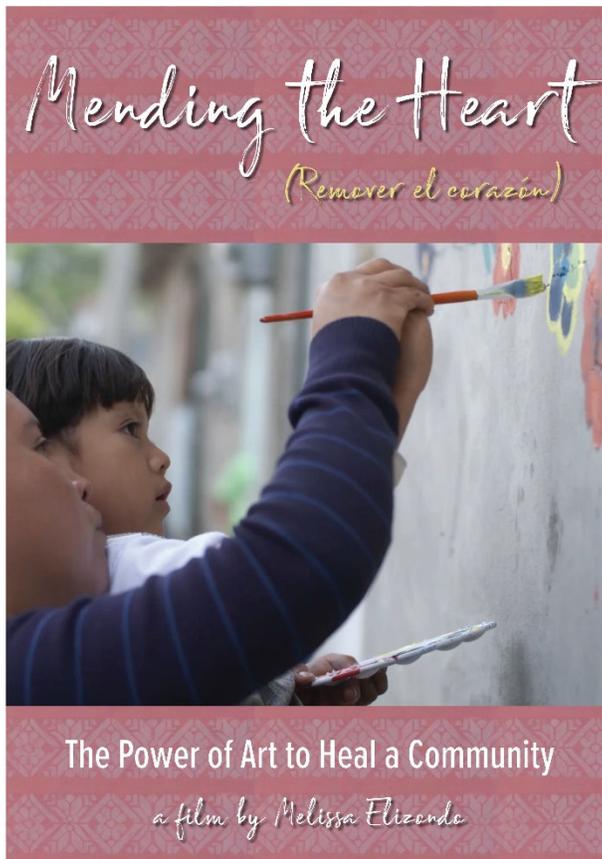




## MENDING THE HEART (REMOVER EL CORAZÓN)



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## **Mending the Heart (Remover el corazón)**

On September 19, 2017, a powerful 7.1 earthquake shook Mexico for about 20 seconds causing extensive damage in the Mexican states of Puebla, Morelos and Mexico City. The town of San Gregorio Atlapulco was one of the most devastated communities in Mexico. Children in the area were very vulnerable to post-traumatic stress. Community workers use art and poetry to help children cope with the trauma of the earthquake. Using art, the community is able to rebuild and transform spaces so that children are heard.

## **San Gregorio Atlapulco**

San Gregorio Atlapulco is a neighborhood in the borough of Xochimilco, in the southern part of Mexico City. Its population is estimated to be between 25,000 to 30,000.<sup>1</sup> Mexico City is in the south-central part of Mexico. It is the country's capital, its largest city, and one of the most populous metropolitan areas in the world, with a population of close to 9 million people. Mexico City is built on top of the remains of Tenochtitlan, the center of the former Aztec empire, which was destroyed by the Spanish in 1521.

## **Chinampas and Axolotls**

Hundreds of years ago, the area that is now Mexico City was mainly water instead of land. The Aztec city of Tenochtitlan—which stood where Mexico City is now—was actually built on an island in the middle of Lake Texcoco. Over time, more and more of the area was drained, and Mexico City expanded. However, the borough of Xochimilco in Mexico City still contains a lake named Lake Xochimilco, and a system of canals. A number of chinampas, or floating gardens, have been built on the canals for agricultural purposes. Chinampas are small, artificial islands that are used to grow flowers, fruit, and vegetables. They are created by layering dirt, mud, and vegetation. Over time, they become rooted to the bottom of the canal. They have been used in the area for hundreds of years. The Xochimilco canals and chinampas are a popular weekend tourist destination in Mexico City.<sup>2</sup>

Lake Xochimilco and the canals around it also contain a unique creature called the axolotl. The axolotl is a type of salamander that grows to between about 6 and 18 inches in length, and has feathery gills around its head and a face that looks like it has a permanent grin. Because of its cute appearance, it is a popular pet in many places around the world. It is also popular. The axolotl is also popular with researchers because it has a unique genetic profile; for example, the it can regenerate numerous parts of its body. However, the axolotl is almost extinct in the wild, and is believed to only live in Lake Xochimilco. Due to pollution and human encroachment on its habitat, it is believed to be decreasing in numbers, and in 2006 it was listed as critically endangered, meaning that it has an extremely high risk of becoming extinct in the wild.

## **Earthquakes in Mexico**

Earthquakes are relatively common in Mexico. The surface of the earth is covered in numerous tectonic plates, which are constantly moving. The friction that happens at the edges of these plates as they move can result in earthquakes. Mexico is located on a part of the earth's crust where a number of tectonic

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<sup>1</sup> <https://www.commonwealmagazine.org/san-gregorio-will-protect-us>

<sup>2</sup> <https://www.britannica.com/place/Xochimilco>

plates collide with one another and as a result, the country often has large earthquakes. In addition, the area of Mexico City often experiences a lot of damage when an earthquake occurs because it is a lakebed and contains soft soil. When there is a large earthquake, the waves are amplified by that soil, which can make the damage more intense. Some researchers have likened it to standing on a bowl of Jell-O.<sup>3</sup>

Earthquake magnitude is commonly measured by using the Richter scale, which was developed in 1938. Each whole number increase on the Richter scale means that approximately 31 times more energy is released, compared with the previous number.<sup>4</sup> For example, an 8.0 earthquake releases 31 times more energy than a 7.0 earthquake.

The September 19, 2017 earthquake struck San Gregorio Atlapulco at 1:14 pm local time. It was centered approximately 75 miles south of Mexico City,<sup>5</sup> and registered 7.1 in magnitude.<sup>6</sup> Less than two weeks earlier, an even bigger earthquake—an 8.1 quake—hit another part of Mexico; the Chiapas area in southern Mexico.

The September 19 earthquake occurred on the anniversary of yet another large earthquake; an 8.1 earthquake that had devastated the area 32 years earlier. That earthquake left an estimated 100,000 people homeless and killed more than 9,000.<sup>7</sup> The September 19, 2017 earthquake was much less deadly, but still damaging. It is estimated to have killed 369 people, and destroyed or damaged more than 200,000 homes. The earthquake also toppled schools, government offices, and other public buildings.<sup>8</sup>

### **Rebuilding After the Earthquake**

Many people were critical of the government response to the September 19, 2017 earthquake. According to numerous news reports, initial government aid to the victims was limited because so many resources had already been devoted to the massive 8.1 earthquake that had occurred less than two weeks earlier. However, in San Gregorio Atlapulco, some residents felt that they were ignored because of the fact that they lived in a poor area on the outskirts of the city. They complained that rescue efforts were focused Mexico City's downtown, and more affluent, areas. According to news reports, residents of San Gregorio Atlapulco were so angry with the situation that they ran off the president of their borough, accusing him of minimizing the damage that their neighborhood had received. A year later, some residents reported that government help still hadn't arrived, and that they had given up waiting. Instead, they said that they had been forced to take action on their own to obtain the necessary permits and other documents required to rebuild their homes.<sup>9</sup>

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<sup>3</sup> <https://www.nationalgeographic.com/science/2020/06/why-oaxaca-earthquake-made-buildings-sway-hundreds-miles-away/#close>

<sup>4</sup> <https://earthquake.usgs.gov/learn/glossary/?term=Richter%20scale>

<sup>5</sup> <https://www.nationalgeographic.com/photography/proof/2017/09/mexico-city-earthquake-destruction/>

<sup>6</sup> <https://www.usgs.gov/news/magnitude-71-earthquake-mexico>

<sup>7</sup> <https://eos.org/features/lessons-from-mexicos-earthquake-early-warning-system>

<sup>8</sup> <https://icfdn.org/disaster-update-mexico-earthquake/>

<sup>9</sup> <https://www.efe.com/efe/english/life/much-remains-to-be-done-in-mexico-city-neighborhood-a-year-after-quake/50000263-3754915>

## Major Earthquakes in Mexico

**1787:** An earthquake that is believed to have been an 8.6 causes a massive tsunami that travels miles inland in Mexico.

**June 3, 1932:** An 8.1 earthquake hits the western part of Mexico.

**September 19, 1985:** Centered off the coast of the state of Michoacán, an 8.1 earthquake kills thousands of people in Mexico.

**October 9, 1995:** The central pacific coast of Mexico experiences an 8.0 earthquake.

**September 7, 2017:** An 8.1 earthquake occurs off the southern coast of Mexico, killing at least a hundred people.

**September 19, 2017:** There is a 7.1 earthquake south of Mexico City.

**June 23, 2020:** A 7.4 earthquake hits the southern coastline of Mexico, in the state of Oaxaca.

## Additional Resources

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