

EERI VERT Chiapas Earthquake

Dams and Other Geotechnical Damage

By Yolanda Alberto, Manny Hakhamaneshi, Keshab Sharma

Overview of topic and how it affected various regions

Extent of damage

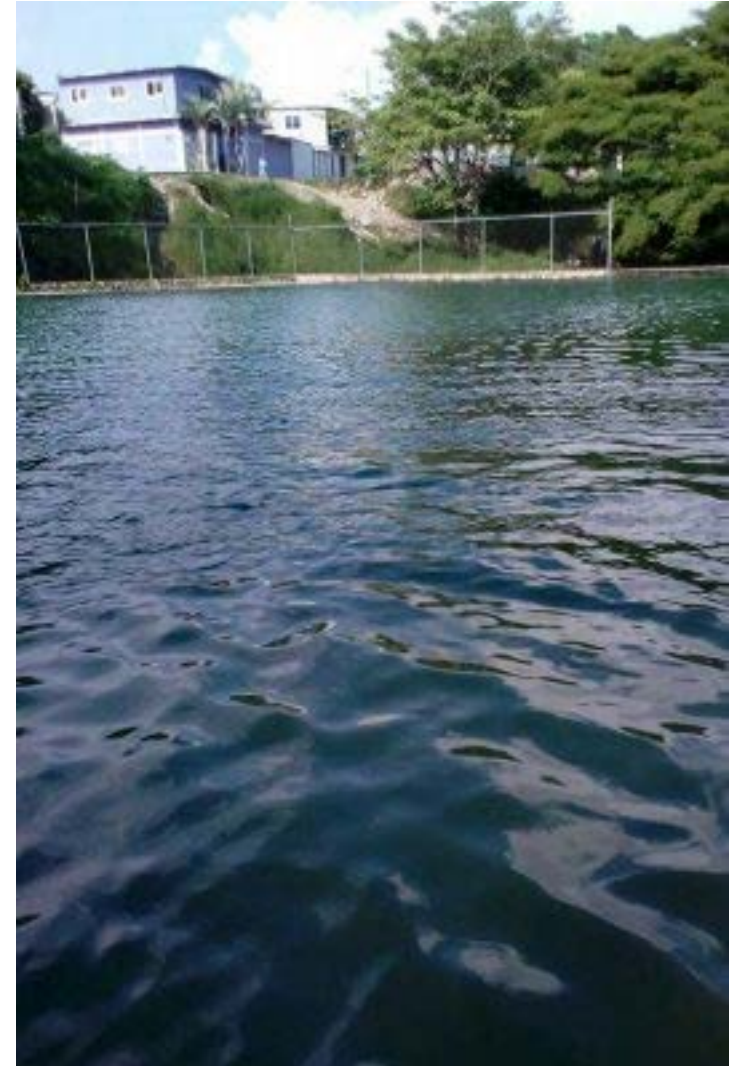
- The earthquake caused a crack in La Angostura Dam, however the damage is not structural, according to the National Commission of Water (CONAGUA)
- There was risk of overflow in Jaltipan Dam (PIT 5) and people evacuated. Later, the alert was deactivated.
- People claimed that the Alto Grijalva Dam had cracks after the earthquake, but CONAGUA and the municipal government have insisted on several reports and interviews that the dam is in good state
<http://www.tabascohoy.com/nota/408095/desmienten-que-presas-de-alto-grijalva-tengan-fisuras>
- In Veracruz there was lateral displacement in Jaltipan
- In Simojovel, Chiapas, a landslide covered 11 houses

Overview of topic and how it affected various regions

Extent of damage

- The people from Berriozaba, Chiapas are demanding an evaluation of the dam in the community because it had cracks even before the earthquake. They evacuated the area fearing an overflow.

<https://www.elheraldodechiapas.com.mx/municipios/piden-evaluar-danos-en-represa/>



Overview of topic and how it affected various regions

Extent of damage

- The Federal Electric Commission and the National Commission of Water (CFE and CONAGUA, respectively) send a Technical Committee to evaluate the state of the dams in Chiapas and their report stated that there were no failures in the dams Peñitas, Chicoasen and Angostura.
- This image shows the location of the dams in Chiapas



Overview of topic and how it affected various regions

Key areas affected

- Jaltipan, Veracruz
- Juchitan, Oaxaca
- Tuxtla Gutierrez, Chiapas
- San Cristobal, Chiapas
- Ocosingo, Chiapas
- Simojovel, Chiapas

Overview of topic and how it affected various regions

Lateral spreading in Jaltipan, Veracruz



Jaltipan Dam



Landslide in simojovel that covered 11 houses

Questions that a reconnaissance team could look into

- Many of the earth dams are not considered as essential as the hydroelectric projects and therefore, CFE and CONAGUA are not prioritizing their damage reports. A field reconnaissance team could look into the state of these structures and the damaged caused by the earthquake. The recent rainfalls have contributed to the failure risk of these dams, so that should also be taken into account.

Links to media articles discussing the topic

<https://www.elheraldodechiapas.com.mx/local/dano-en-presa-la-angostura-no-es-estructural/>

<https://lasillarota.com/estados/tras-temblor-se-abre-mega-grieta-en-jaltipan-veracruz/175313>

<http://www.diarioeyipantla.com/terremoto-destruye-juchitan-y-causa-danos-en-algunas-ciudades-de-veracruz/>

<http://strangesounds.org/2017/09/giant-earth-cracks-split-in-half-jaltipan-mexico-after-m8-1-earthquake-and-tropical-storm-katia-hit-veracruz.html>

<https://meganoticias.mx/tuxtla-gutierrez/ultimo-minuto-tuxtla-gutierrez/46434-deslave-sepulta-casas-en-simojovel.html>