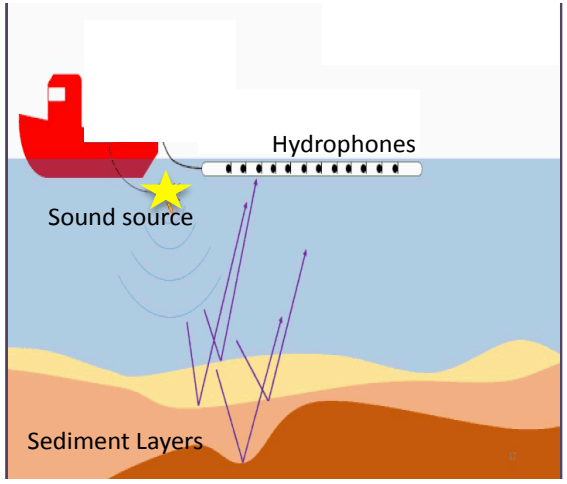


Methods

Seismic Reflection

Sound waves are emitted from the boat. They echo back from the lake floor and the sediment layers beneath it to be captured by sensors pulled behind the boat. The time for the sound to travel from the boat to the lake floor and back is used to determine the thickness and shape of the sediment layers.

Coring

Tubes are forced several meters into the lake floor to obtain samples that are analyzed and dated.

An International Collaboration

An international team of universities and governmental agencies:

Unité de Recherche en Géoscience
Université d'Etat d'Haïti

Unité Technique de Sismologie
Bureau des Mines et de l'Énergie, Haïti

Laboratoire National du Bâtiment et des Travaux Publiques, Haïti

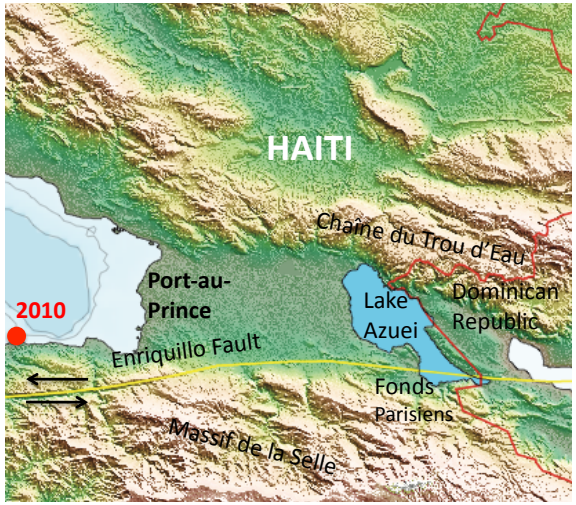
Graduate School of Oceanography
University of Rhode Island, USA

Lehman College
City University of New York, USA

Large Lake Observatory Research Laboratory
University of Minnesota-Duluth, USA

Lac|Core
National Lacustrine Core Facility
University of Minnesota-Minneapolis, USA

Project Lake Azuei

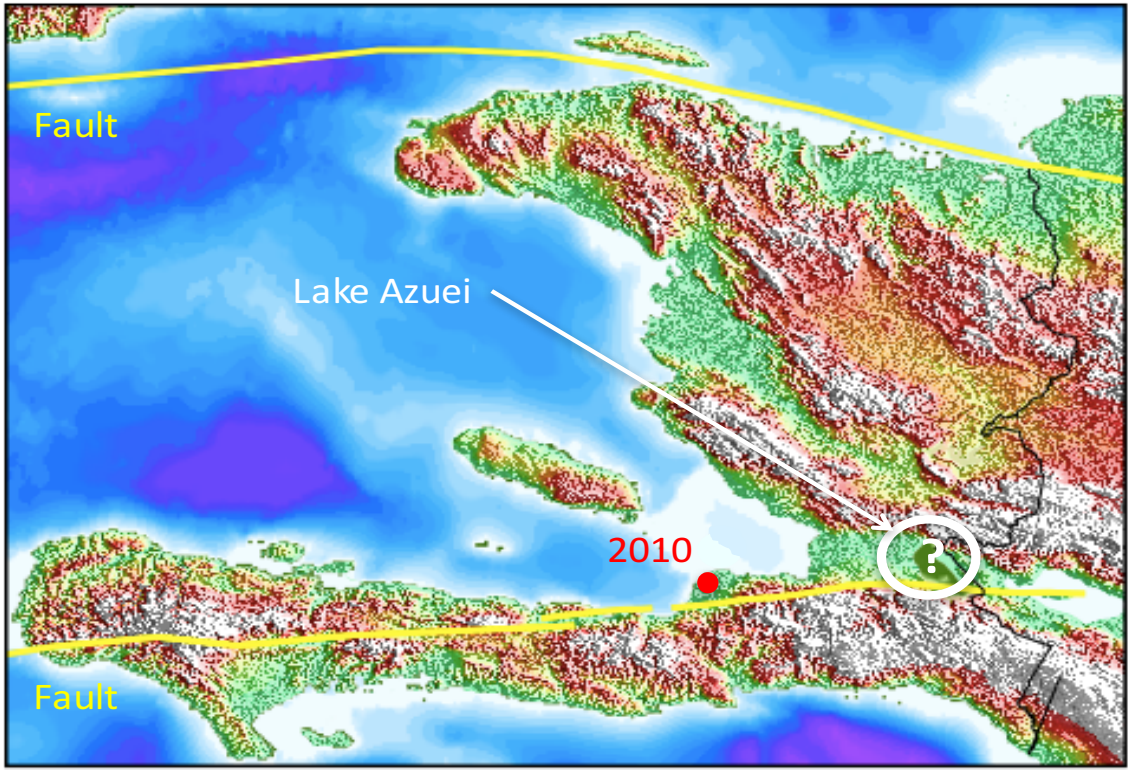


Project Lake Azuei Objective:

To develop a better understanding of the large earthquakes that occur in the region by studying the lake bottom.

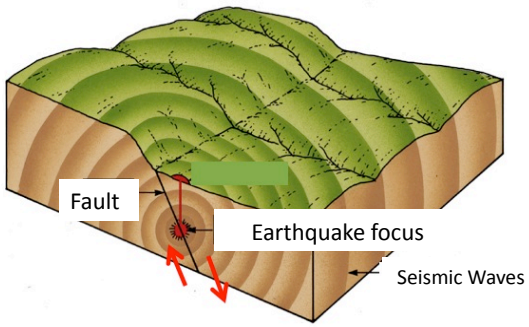
What causes earthquakes?

A fault is a fracture that extends deep into the rock. A sudden movement of several meters on the fault causes an earthquake.



"Seismic Risk"

In an instant, the massive devastation caused by earthquakes can kill, injure, and maim many people; cause uncontrollable fires; destroy building, bridges, roads and ports; cut telecommunication and electric lines and more.



How can this project reduce seismic risk?

No one can predict precisely when an earthquake will occur, but the scientific community can identify regions with the greatest risk. This information is communicated to local and national governments so that they can educate the public and prepare the emergency services to respond to an earthquake disaster.

Why is the seismic hazard so great for Haiti?

Two large active faults run directly through Haiti. Very large earthquakes have occurred on these faults in the past and will occur again in the future.

How can studying Lake Azuei help us better understand earthquakes?

Earthquakes disrupt the sediment layers beneath the lake floor. The resulting deformation records the succession of seismic events. This project will image the deformation within the lake floor sediments that was caused by past earthquakes.