

Kyoto University On-site Laboratory: International Research Laboratory for Earthquake and Tsunami Risk Cognition and Reduction (iLETs)



General Information

- ◆ Approved in FY 2024
- ◆ Established in November 2024
- ◆ Established by the Disaster Prevention Research Institute (DPRI)
- ◆ Partner Institution: National Autonomous University of Mexico (UNAM), Mexico
- ◆ Location: (Cross-bound type)
National Autonomous University of Mexico (UNAM), Mexico City, Mexico (outbound)
Disaster Prevention Research Institute (DPRI), Kyoto University, Uji, Kyoto, Japan (inbound)
- ◆ Purpose: An interdisciplinary research center on the disaster mitigation of earthquake and tsunami in subduction zones
- ◆ Activities: Enhance understanding of earthquake/tsunami disasters and risks through natural science, engineering, and social sciences

Positive Ripple effects to the university's activities

- Establishment of the new academic field, "Comparative Earthquake and Tsunami Disaster Science."
- Publicize Kyoto University's leading role in earthquake and tsunami disaster prevention research.
- Serve as a hub laboratory with the Latin American research community.
- Recruit excellent master's and doctoral students.

Activity Overview

Kyoto University
Disaster Prevention
Research Institute (DPRI)



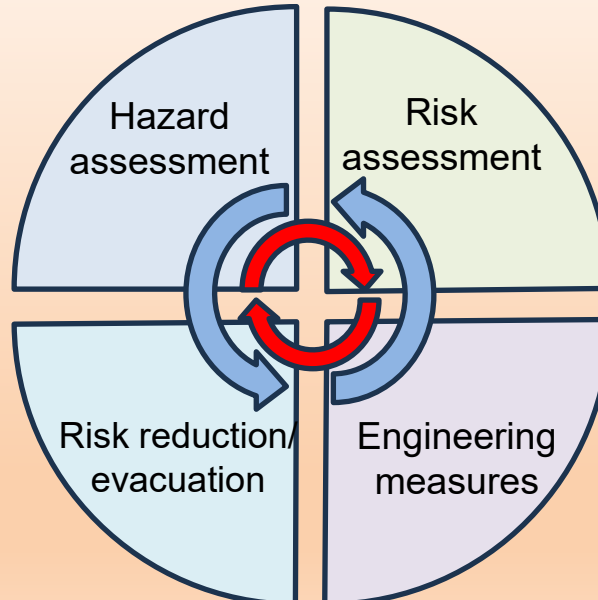
Cooperation with national
government/local
governments/communities

UNAM
OSL iLETs

International Research Laboratory for Earthquake and Tsunami Risk Cognition and Reduction (iLETs)

A research base for comparative studies on earthquake and tsunami disasters in subduction zones worldwide

"Risk communication" to promote disaster prevention in society



Effective evidence-based risk mitigation strategies

Proposal of engineering measures and evacuation strategies

National Autonomous University of Mexico (UNAM)
School of Engineering/
Institute of Geophysics



Cooperation with national
government/local
governments/communities

Kyoto University
OSL iLETs

iLETs Satellite
(Universidad de El Salvador)

Main activities in FY 2025

① Summer school and booth exhibition at the Mexican Geophysical Union meeting 2025

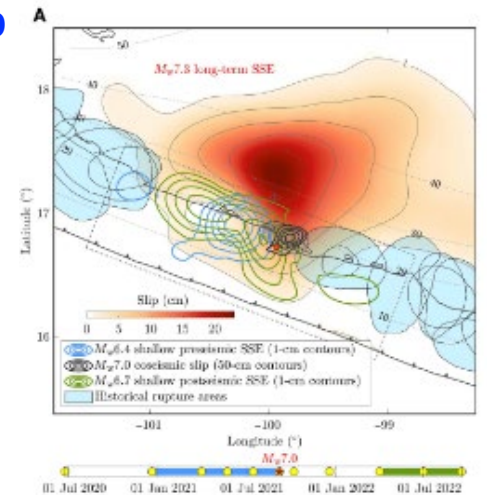
- At the Mexican Geophysical Union 2025 Annual Meeting in Puerto Vallarta, Mexico (October 26–31), iLETs hosted a summer school on earthquake and tsunami risk reduction. Six speakers, including Mexican collaborators and Professor Yoshihiro Ito, delivered lectures to about 15 participants on iLETs' contributions, seafloor seismic observation, tsunami modeling, ground-motion analysis, and disaster preparedness.
- iLETs also showcased its activities at a booth, which attracted many Mexican researchers and students. Many students expressed interest in studying at Kyoto University and exchanged information with the staff on site.



The booth exhibition in the Conference room

② Detection of Shallow slow slip events in Guerrero Seismic Gap

- Using high-precision ocean-bottom tiltmeters, hydrostatic pressure, GNSS, and satellite InSAR, we measured overriding-plate deformation offshore Guerrero, Mexico, and jointly inverted the geodetic records with seismicity, including repeating earthquakes. We thereby detected Mexico's first shallow slow slip event (SSE), migrating from the trench toward the hypocenter before the 2021 Acapulco moment magnitude (M_w) 7.0 earthquake, and detected long-term postseismic slow slip event after the mainshock.
- These results appeared in Science Advances on 10 September 2025 (Cruz-Atienza et al., 2025; DOI: 10.1126/sciadv.adu8259).



Detected Slow slip events in the GGAP