



## BUILDING RESILIENCE: MANUEL ALFREDO LOPEZ MENJIVAR'S TAKEAWAYS FROM FORCE PROJECT WORKSHOPS

From the University of El Salvador, Manuel Alfredo Lopez Menjivar is committed to earthquake risk reduction in his home country. This Q&A explores his takeaways from the FORCE project workshops, revealing how their learnings are shaping future generations of engineers and empowering El Salvador to face seismic challenges head-on.

### What were some of the most important things you learned from the FORCE project workshops?

The FORCE project workshops were specifically designed for my country, and the discussions about "exposure" were particularly valuable. These discussions highlighted the importance of producing more specific and accurate predictions of potential outcomes following a seismic event in my national context.

The workshops also provided me with access to a network of individuals who can share information about physical exposure in my country. This connection was invaluable.

The constant updates and improvements being made to the national earthquake hazard assessment, along with the knowledge of the tools used for this process, has enhanced my understanding of this crucial aspect of seismic risk analysis.

### How do you plan to apply what you learned to your work in earthquake risk reduction?

The techniques and input provided during the workshops will enable me to effectively introduce to my Master's Degree in Structural Engineering students the components of seismic risk assessment using data and information from El Salvador. This will provide a more real and tangible approach for engineering students, allowing them to visualize the potential impact of earthquakes on their professional and personal surroundings.

### What are some of the key messages you would like to share with others about earthquake risk in El Salvador?

My country, El Salvador, despite its relatively small territory, is subjected to a wide range of seismic sources, encompassing subduction earthquakes, local

faults, seismic swarms, and events triggered by major faults in neighbouring countries.

Seismicity knows no geographic borders. Even moderate- to small-magnitude earthquakes can produce significant consequences if they directly impact populated areas.

In countries where exposure information is not readily available in a systematic and organized manner, it is crucial to identify key stakeholders in various sectors (health, education, transportation, etc.) and strive to establish agreements for sharing relevant data.

For countries with limited vulnerability curves (fragility and vulnerability), curves derived for structural typologies similar to those of the country under study should be employed.

These workshops, developed by GEM, have addressed these and other critical aspects, resulting in insights well-suited to El Salvador's national context.



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