RESILIENT COMMUNITIES

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SELA
LATIN AMERICAN AND CARIBBEAN ECONOMIC SYSTEM

EARTHQUAKES

KNOWLEDGE FOR SAFER COMMUNITIES

Practical recommendations to reduce risks, protect lives, strengthen resilience, and promote safe recovery in Latin America and the Caribbean.



PREVENTION | PREPAREDNESS | PROTECTION AND RESPONSE | RECOVERY | REGIONAL COOPERATION

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01

UNDERSTANDING RISK

WHAT IS AN EARTHQUAKE?



An earthquake is a sudden movement of the Earth's crust caused by the abrupt release of energy accumulated within the Earth.

WHY DOES IT HAPPEN?

The interaction and movement of tectonic plates generate stress that accumulates along fault zones. When this stress exceeds the strength of the rocks, energy is suddenly released, producing seismic waves that travel through the ground.

EARTHQUAKE AND SEISMIC EVENT: ARE THEY THE SAME?

A **seismic event** is the movement of the Earth's crust. The term **earthquake** is commonly used to refer to a seismic event of greater magnitude or one that causes significant damage.

WHAT CAN AN EARTHQUAKE CAUSE?

In addition to ground shaking, an earthquake can cause:



Damage to or collapse of vulnerable buildings.



Ground subsidence.



Landslides and rockfalls.



Fires and hazardous-material leaks.



Disruptions to water, electricity, and communications.



In coastal areas, tsunamis, depending on the earthquake's origin and characteristics.

ITS EFFECTS VARY BY REGION.

Understanding the phenomenon is the first step toward reducing its risks and protecting people, communities, and their surroundings.

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02

ALERTS AND MONITORING

HOW ARE EARTHQUAKES DETECTED?

Seismic networks record ground vibrations and provide information on an earthquake's characteristics, such as its location, depth, and magnitude.



WHAT ABOUT EARTHQUAKE EARLY WARNING?

When an earthquake early warning system is in place, signals detected by sensors can generate an alert before the most damaging waves reach certain locations.

EARTHQUAKE EARLY WARNING DOES NOT PREDICT EARTHQUAKES.

It detects an earthquake that has already begun and may provide a few seconds of warning in areas where the system is available.

HOW IS SEISMIC INFORMATION USED?

DETECT
Record ground motion.

ANALYZE
Determine the earthquake's characteristics (location, magnitude, and depth).

ALERT
Issue warnings when conditions and available systems allow.

SEISMIC INFORMATION HELPS ENABLE FASTER DECISION-MAKING AND STRENGTHEN PREPAREDNESS.

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03

PREVENCION

HOW DO WE PREPARE BEFORE AN EARTHQUAKE?

Prevention reduces risks and saves lives. Preparing in advance helps us better face an earthquake and protect our families and communities.



WHAT CAN WE DO?

Taking simple measures at home, at school, and at work helps reduce risks and improve our preparedness.

IDENTIFY

Safe areas at home, at school, and in the workplace.

MAKE A PLAN

Create a family emergency plan and practice it.

PREPARE

An emergency kit with basic supplies for at least 72 hours.

STRENGTHEN

Communication with family, neighbors, and the community.

PREVENTION IS A SHARED RESPONSIBILITY.

The better prepared we are, the lower the impact of an earthquake will be on our lives and communities.

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04

PROTECTIÓN AND RESPONSE

WHAT SHOULD WE DO DURING AND AFTER AN EARTHQUAKE?

Staying calm, acting with caution, and following recommendations can save lives. After an earthquake, it is important to check for hazards, help others, and stay informed through official sources.



DURING THE EARTHQUAKE

- Stay calm.
- Move away from windows, objects that may fall, and exterior walls.
- Protect yourself: drop, cover, and hold on.

EVACUATE WHEN APPROPRIATE

- Follow the authorities' instructions.
- Use designated safe evacuation routes.
- Do not use elevators.

AFTER THE EARTHQUAKE

- Check for hazards around you (cracks, gas leaks, loose cables).
- Stay away from damaged buildings.
- Stay informed through official sources.

HELP THOSE IN NEED

- Offer assistance to people in vulnerable situations.
- Avoid exposing yourself to risks.

RELIABLE INFORMATION

- Consult official media.
- Avoid rumors.
- Follow civil protection recommendations.

YOUR SAFETY MATTERS TOO

- Assess your physical and emotional well-being.
- Ask for help if you need it.
- Act with solidarity and responsibility.

A TIMELY AND SAFE RESPONSE REDUCES RISKS, PROTECTS LIVES, AND STRENGTHENS THE RESILIENCE OF OUR COMMUNITIES.

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RECOVERY

HOW DO WE RECOVER AFTER AN EARTHQUAKE?

Recovery is an opportunity to become stronger. Assessing the damage, rebuilding safely, and supporting people and communities helps reduce future risks and move towards a more resilient development.



ASSESS THE DAMAGE

- Check the condition of your home and infrastructure before returning or using them.
- If there are cracks, sinkholes, or structural damage, do not enter.
- Request an assessment by qualified technical personnel.

REBUILD SAFELY

- Carry out repairs with technical assistance and following earthquake-resistant building standards.
- Avoid temporary solutions that may increase the risk.
- Incorporate measures to reduce vulnerability to future earthquakes.

SUPPORT THE COMMUNITY

- Help the most vulnerable people.
- Restore basic services (water, sanitation, health, education).
- Reactivate livelihoods and community spaces.
- Participate in solidarity actions and local support initiatives.

LEARN AND STRENGTHEN

- Document the lessons learned.
- Identify what worked and what can be improved.
- Strengthen preparedness and response plans.
- Build more resilient communities.

Recovery is not only about returning to what was,
but about building a safer, more inclusive, and more resilient future.

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REGIONAL COOPERATION

HOW CAN WE STRENGTHEN REGIONAL COOPERATION?

Cooperation among countries, institutions and communities is key to reducing risks, sharing information, strengthening capacities, and building more resilient societies.



INFORMATION SHARING

- Share early warnings, data and good practices.
- Access reliable and timely information.
- Strengthen monitoring and communication systems.

CAPACITY DEVELOPMENT

- Training and technical assistance among countries.
- Strengthen skills in risk management and response.
- Promote training for communities and local leaders.

RESOURCE MOBILIZATION

- Coordinate technical, financial, and humanitarian support.
- Facilitate South-South and triangular cooperation.
- Promote partnerships with international organizations and the private sector.

IMPLEMENTING REGIONAL INITIATIVES

- Develop joint prevention and resilience projects.
- Promote coordinated public policies.
- Move towards a more inclusive, safe and sustainable region.

STRATEGIC PARTNERSHIPS

- Work with international, regional organizations and development banks to strengthen capacities, mobilize resources, and promote resilient solutions (UN, ECLAC, IOM, UNICEF, UNESCO, CAF, among others).
- Engage civil society, academia, and the private sector.
- Expand strategic partnerships to strengthen regional initiatives.

A SHARED FUTURE

- Resilience to risks and disasters.
- Sustainable and inclusive development.
- More opportunities for all people.

Regional cooperation strengthens our capacities to face challenges and build more resilient communities.

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LEARNING TO BE BETTER PREPARED

Preventing, preparing, and acting together helps us protect lives and build **more resilient communities.**



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More and Better Integration