



United Nations
Educational, Scientific and
Cultural Organization

UNESCO International Platform on Earthquake Early Warning Systems (IP-EEWS)

Earth Sciences and Geo-Hazards Risk Reduction, UNESCO, Paris, France

Contact us: [Jair Torres \(j.torres@unesco.org\)](mailto:j.torres@unesco.org) and [Margherita Fanchiotti \(m.fanchiotti@unesco.org\)](mailto:m.fanchiotti@unesco.org)



1. INTRODUCTION

Many countries around the world are threatened by natural hazards, such as tsunamis, floods, volcanic eruptions and earthquakes (1). In recent decades, considerable progress has been made in the development of early warning systems (EWSs), to prevent loss of life and economic damages by disseminating timely information about potentially catastrophic hazards to the public and emergency managers. However, significant challenges remain in advancing the development of EWSs for specific hazards, particularly for sudden-onset hazards such as earthquakes (2). **Earthquake early warning systems (EEWSs)** can detect an ongoing earthquake and provide enough time to take emergency measures, as well as inform about the expected severity of damages for a given area in real time (3,4). Since EEWSs have been developed only in selected countries so far (see map below), there is a need for cross-border collaboration and a knowledge exchange platform under international coordination, in order to support countries located in seismically active regions and vulnerable to earthquake hazards (2,5).

2. IP-EEWS

In an effort to address these gaps, in December 2015 UNESCO launched the International Platform on Earthquake Early Warning Systems (IP-EEWS).

10 Countries committed to UNESCO IP-EEWS



Objectives

To provide an international platform for knowledge sharing.

To strengthen cooperation.

To assess current capacities and gaps.

To build scientific and technical capacities.

To support the development of new EEWSs worldwide, notably in developing countries.

To promote and strengthen the development of EEWSs.

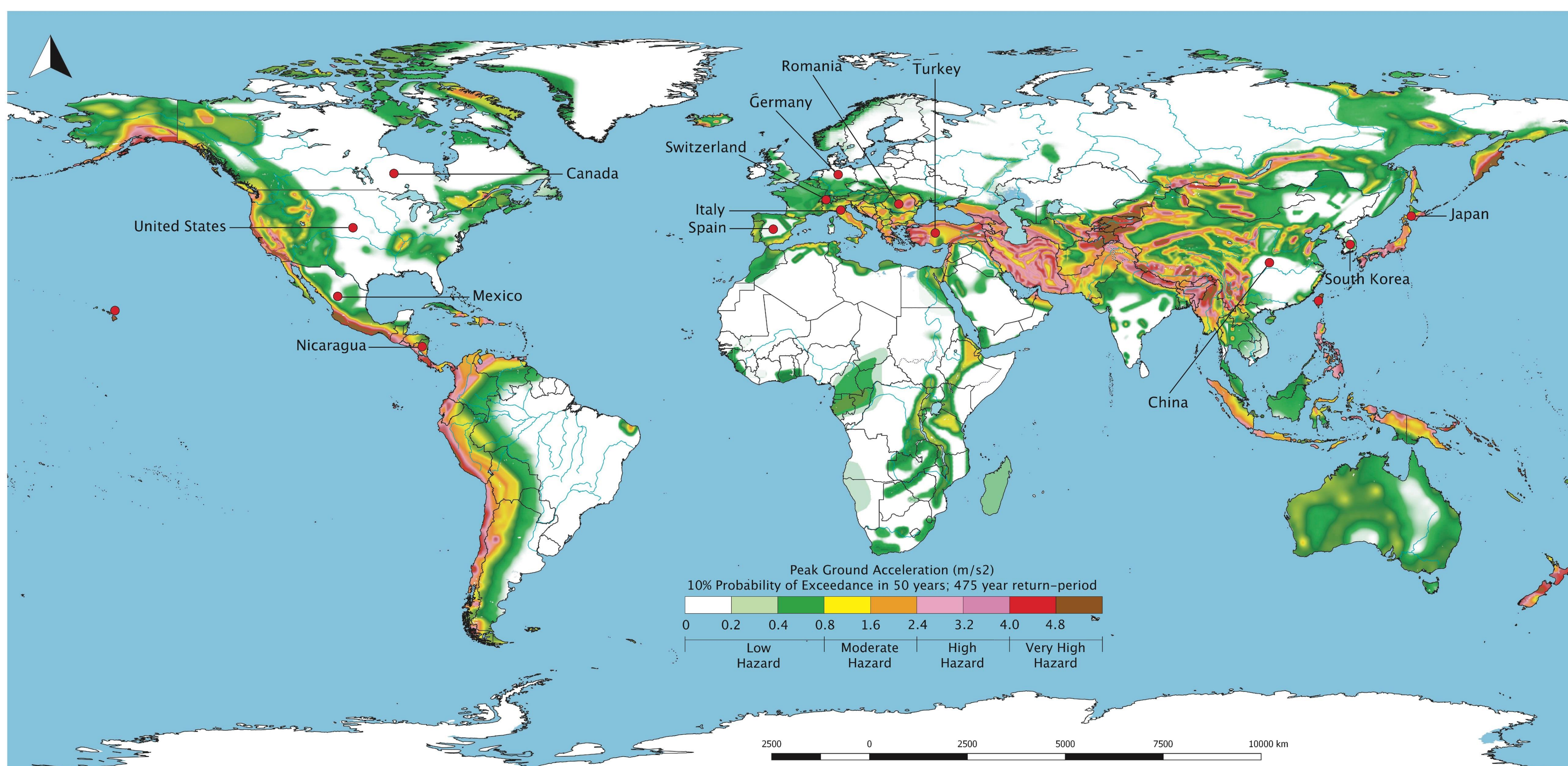
To find synergies between EEWSs and multi-hazard early warning systems.

To develop a framework for coordinating observation systems and sharing seismic data.

To inform policy makers through guidelines and recommendations.

To build bridges between science, practice and policy.

To promote public awareness activities.



(Adapted from Giardini, D., Grünthal, G., Shedlock, K. M. and Zhang, P. 1999. The GSHAP Global Seismic Hazard Map. *Annali di Geofisica* 42 (6), pp. 1225-1228.)

UNESCO's International Conference on Earthquake Early Warning Systems: From Science to Policy

11-13 October 2017 at UNESCO's headquarters in Paris, France

3. ACTIVITIES

- Map EEWS state of the art in science and policy.
- Promote regular scientific and policy exchanges through conferences, meetings, workshops, etc.
- Engage new countries in the development and implementation of EEWSs.
- Collect and disseminate best practices.
- Identify existing gaps in capacities (technical and human) and regulations.

5. CONCLUSIONS

Natural hazards cause many fatalities and significant economic losses every year worldwide. Exposure and vulnerability to these hazards is increasing due to climate change, overpopulation and rising urbanisation (1). In light of this, disaster risk reduction has emerged as a global challenge, and the need to "substantially increase the availability of, and access to, multi-hazard early warning systems and disaster risk information and assessments to the people by 2030" has become a global target (target "g"), as highlighted in the Sendai Framework for Disaster Risk Reduction 2015-2030 (6). As the only United Nations agency with a mandate in Earth Sciences, UNESCO has been very active in promoting international cooperation, scientific knowledge exchange and capacity building for the development and operationalisation of geo-hazard EWSs, including EEWSs, worldwide. IP-EEWS member countries and UNESCO strongly believe in the development and implementation of EEWSs and the benefits from IP-EEWS, which builds on the extensive network and scientific reputation that UNESCO has gained in helping nations foster earthquake resilience.

4. EXPECTED RESULTS

- A roadmap for advancing EEWSs, from science to policy, worldwide.
- Recommendations resulting from regular meetings among IP-EEWS member countries.
- A compendium of existing best practices, opportunities and challenges related to EEWSs and contributing to reaching global target "g" of the Sendai Framework for Disaster Risk Reduction 2015-2030 (6).
- Engagement of new countries in IP-EEWS.

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