

対象国防災分野における開発ニーズ(課題)

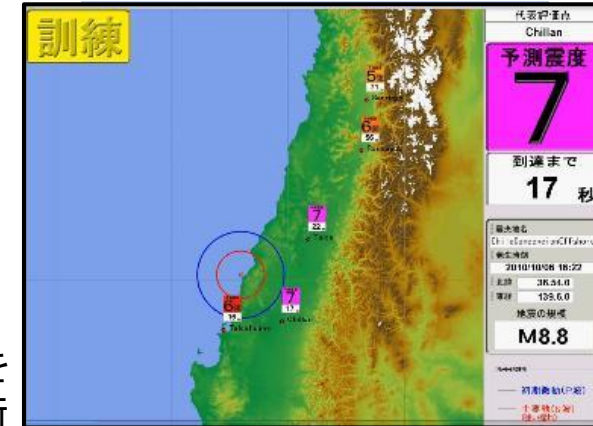
- 地震発生を早期に検知する観測設備と、観測設備から取得した情報を素早く正確に解析するシステムが未整備
- 緊急・初動対応が必要な地方自治体や警察、消防へ情報を伝達するシステムが未確立
- 地震や津波警報を短時間で住民に伝達する防災情報伝達システムが不十分

提案製品・技術

- 地震発生後に平均7秒で、震源位置の特定、マグニチュード・震度等を解析
- 得られた解析情報をリアルタイムで表示・配信し、緊急地震速報を受信後、即時に予測震度、予測到達時刻を提供
- 早期警戒早期通報システム(SISMATE)との連携により、住民にメール等で地震警報を提供

本事業の内容

- 契約期間: 2022年9月~25年7月
- 対象国・地域: ペルー国アレキパ県
- カウンターパート機関: ペルー国環境省地球物理庁(IGP)、(協力機関: 国家防災庁(INDECI))
- 案件概要: 地震分析に関する各種動作パラメータを作成し、過去地震、リアルタイム地震の検知結果を分析して、提案技術が有効に機能することを実証する。同時に、提案技術(EEWおよび震前大使)のビジネス展開の素地を固めるため、地震検知技術の活用方法等の研修を実施して、現地への技術移転と人材育成を進める。



日本式早期地震検知・伝達システム

開発ニーズ(課題)へのアプローチ方法(ビジネスモデル)

- ペルー政府が予算を確保して整備中であるSISMATE(第Ⅲ期)に適用を進める
- 地方自治体、警察、消防を中心に提案技術の普及を進める
- ペルーの経験から環太平洋地震帯に属する諸国へビジネス展開を図る

対象国に対し見込まれる成果(開発効果)

- 早期かつ精度の高い地震情報の把握が可能となる。
- 地震や津波の速やかな状況把握が可能となり、防災機関の初動対応が早まり、救助や復旧活動が向上する
- 住民に警報や地震情報が伝達されることで、早期の避難が可能となり人命被害が低減する

Development Issues Concerned in Disaster Prevention Sector

- An observation service to detect earthquakes at an early stage is not available and a system that quickly and accurately analyzes information acquired by the observation system has not been established.
- No system is in place for communicating information to local governments, police, and fire departments that need to respond to emergency and first-response situations.
- The disaster prevention information transmission system is inadequate for conveying earthquake and tsunami warnings to residents in a short period of time.

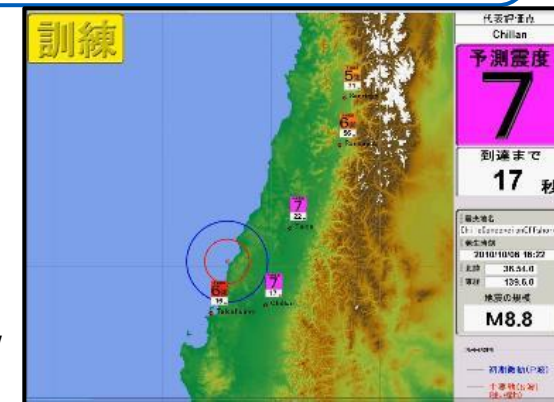
Products/Technologies of the Company

The proposed technology:

- identifies the epicenter location and analyses magnitude, intensity, etc. in an average of 7 seconds after the occurrence of an earthquake;
- displays and distributes the obtained analysis information in real time and provides the predicted seismic intensity and arrival time immediately after receiving early warning of an earthquake;
- and provides earthquake warnings to residents via e-mail, etc., in cooperation with SISMATE.

Survey Outline

- **Survey Duration:** Sept. 2022 - Jul. 2025
- **Country/Area:** Arequipa Province, Peru
- **Name of Counterpart:** Peru-IGP, (cooperating organization: INDECI)
- **Survey Overview:** Various operating parameters related to earthquake analysis will be created and the detection results of past and real-time earthquakes will be analyzed to demonstrate that the proposed technology works effectively. At the same time, in order to solidify the foundation for business development of the proposed technology, training on how to utilize the earthquake detection technology will be conducted to transfer the technology to the local community and promote human resource development.



Japanese Early Earthquake Warning System

How to Approach to the Development Issues

- Advance the application to SISMATE phase 3, which is under development with a budget secured by the Peruvian government.
- Promote the proposed technology mainly among local governments, police, and fire departments.
- Expand business to other countries in the Pacific Rim seismic zone based on Peru's experience.

Expected Impact in the Country

- Early and highly accurate earthquake information can be obtained.
- Early responses of disaster prevention organizations will be accelerated, and rescue and restoration activities will improve.
- Early earthquake and tsunami warnings to residents will promote early evacuation, thus reducing the number of fatalities due to such natural disasters.