

CROWDING THE RIM

Promoting a Better Understanding of the Shared Socio-Economic Consequences of Natural Hazards Risk in the Pacific Region

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1. ABSTRACT

How at risk are we to a regional disaster in the Pacific Rim?

Rapid growth of Internet dependency for governments, business, academia and personal use throughout the Pacific Rim has led to an equally rapid schedule for installation of undersea fiberoptic telecommunications cables throughout the Pacific. An infrastructure, both virtual and tangible, is now in place in the Pacific and impacts directly on governments, municipalities and the ability to conduct business throughout the Region. The Pacific Rim is also a region of extensive impact from geohazards such as earthquakes, volcanic eruptions, and tsunamis, all of which have the capacity to directly or indirectly impact the integrity of seabed telecommunications cables.

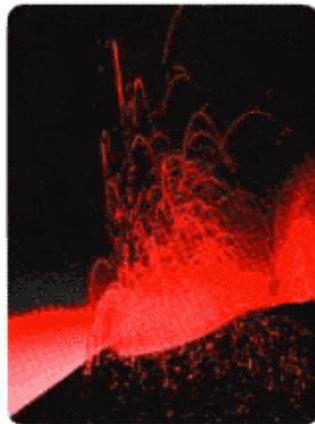


Figure 1. The Pacific Rim is subject to frequent and varied natural hazard events

2. INTRODUCTION

The Pacific Rim is a thriving, dynamic region where nearly two billion people live within a one-day overland commute of the ocean's edge. It is also subject to frequent and varied natural hazard events. In recent years, it has become evident that the devastating effects of one country's disaster have widespread consequences around the Pacific Rim. The global economy magnifies the social and economic impacts of what would formerly have been localized disasters. The seabed telecommunications infrastructure is a particularly precise example of this inter-dependency and regional consequences of failures or disruptions. Understanding local hazards within a regional framework in this strategically important part of the world will allow for more informed decisions by those responsible for the cable route selection, installation and continuous operational lifespan.



Figure 2. The global economy magnifies the social and economic impacts.

3. PLANNED SUMMIT

To support the regional and global importance of these issues, Stanford University, the American Red Cross, the U. S. Geological Survey and the Circum-Pacific Council (a non-profit organization of earth scientists and engineers) have joined together to create an international, public-private-industry partnership, entitled Crowding the Rim, to address the regional consequences of natural hazards on the Pacific Rim. Several industrial partners, including Thales Survey, have joined in the research and analysis with the initiative, and the seabed telecommunications cable industry is now being contacted to participate.

The goals of Crowding the Rim are to gain a better understanding of how natural hazards may result in regional disasters, to educate communities throughout the Pacific Rim regarding the extensive nature of regional risk, and to introduce scientific tools and technology that support effective risk-reduction decisions. To achieve these goals, the partners and their supporting institutions have initiated four key activities:

- An **International Summit**, August 1-3, 2001 at Stanford University, will bring natural and social scientists together with various stakeholders and decision-makers to examine the regional risks, project changes and challenges and begin a cooperative search for solutions. This strategic three-day dialogue will be the first forum committed to examining the economic and societal ramifications of the region's various potential disaster scenarios.
- The development of an international **educational module** for secondary school students based on the Summit findings, experiences and data tools, will engage and involve the region's future decision-makers in the issues.
- The development of a **geographical information system (GIS)** database entitled **HAZPAC**, which incorporates Pacific Rim data on geohazards, demographics, and infrastructure, will allow users to integrate science into regional decision making, and is already being used for Desk Top Studies and Cable Route selection analysis.

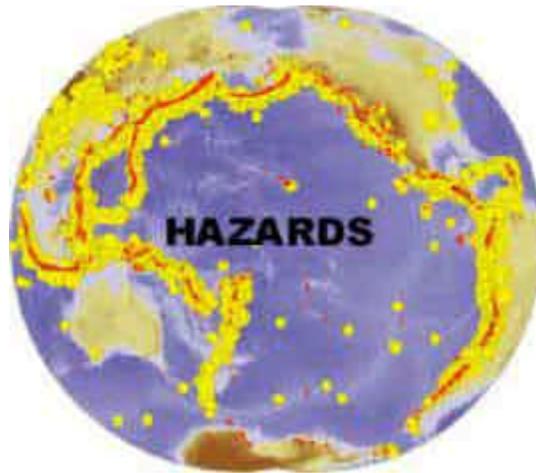


Figure 3. HAZPAC display of geohazards



Figure 4. HAZPAC display of infrastructure including submarine telecom cables
Post-Summit workshops will extend the Summit results and introduce the educational module and GIS to communities throughout the Pacific Rim region.



Figure 5. HAZPAC display of population distribution

4. CONCLUSION

As global telecommunications systems continue to expand in an environment of increasing economic globalization, the regional and cross-sector approach featured by the Crowding the Rim Initiative will foster increased comprehension of the Circum-Pacific regional framework. Understanding this regional context of complex economic systems and natural hazards in Pacific Rim states will in turn allow for more informed decisions by those responsible for designing infrastructure.

Sponsoring and Endorsing Organizations:

- The Asia Society
- Organization of American States
- International Union of Geodesy and Geophysics
- the Earthquake Megacities Initiative
- International Geographical Union
- International Union of Geological Sciences
- American Geological Institute
- American Association of Petroleum Geologists
- California Coastal Commission

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