

**Title:** **Implementation of the IDNDR-RADIUS Project in Latin America – Antofagasta, Guayaquil, Tijuana**

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**Hazard examined:** Earthquakes

**Study emphasis:** Economic development, disaster awareness and preparedness, response planning, and recovery efforts and risk management strategies.

**Summary:** Offers an evaluation of seismic risk at each location and potential risk management plans to be employed. Additionally, the study provides earthquake scenarios and action plans and promotes and facilitates collaboration among officials from participating cities in order to share experiences, identify common problems and solutions and form international partnerships.

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**Vulnerability Indicators:** Vulnerability functions were developed for structures and infrastructure to estimate damage due to a probable earthquake

**Economic Development, Disaster Preparedness, Disaster Response and or Disaster Reconstruction Application:** Action plans for seismic disaster preparedness of the cities were prepared including emergency response planning and recovery programs

**Data Requirements:** Information on city's structures, infrastructure, institutions and administration

**Output:** Working in close collaboration with local people in three Latin American cities, the project evaluated the seismic risk of those cities, prepared risk management plans based on those evaluations and, most importantly, raised awareness of the community on seismic risk. Significant progress was attained toward the incorporation of the entire community in risk management activities. Members and institutions of the society participated actively throughout the project and committed efforts were made to set up the conditions that will allow the establishment of long-term initiatives to reduce the seismic risk.

**Results of Application at Case Study Site:** Very significant progress has been attained in increasing awareness among the communities in the three cities and actions are already being

taken to implement the plans prepared by the project. Examples of the actions being taken include the following:

- The Municipality of Guayaquil created the Unit for Risk Management of the City which, among other things, will be in charge of implementing the plan prepared by RADIUS.
- The government of Antofagasta has allocated one million dollars to relocate 6 schools that were found to be located in a tsunami affected area.
- The Municipality of Tijuana has allocated US \$80,000 for the implementation of microzoning studies for the city. The results will be used in urban planning.
- The Municipality of Guayaquil is preparing a new building code for the city.
- Three small neighbor cities of Antofagasta, Chile have started similar projects; using the RADIUS methodology. The same is happening in Ensenada and Mexicali near Tijuana.
- The industrial sector of Tijuana asked the Municipality for assistance in the estimation of its seismic risk. The industry offered to support seismic safety efforts for the schools in exchange for the Municipality's assistance.
- Tijuana organized and hosted the UN-sponsored RADIUS Symposium in October 1999, in which representatives of more than 50 cities of the world discussed the RADIUS achievements, lessons, and possible implementation in other communities.

**Lessons Learned:** RADIUS proved to be important and effective for several reasons. It produced tangible results, such as the earthquake scenarios and action plans, that are already being used by the cities; The project also promoted and facilitated the collaborative work of cities worldwide that interacted to share experiences, identify common problems and solutions, and form international partnerships. Most importantly, RADIUS proved to be very effective in incorporating the entire community in the management of the seismic risk.

What worked to make RADIUS a successful project?

The UN's name. It would have been more difficult to implement the project without the name of the UN behind. The UN's name attracted the attention and participation of the local governments, increased credibility and trust, and facilitated access to information and institutions required for the implementation of the project.

Seed money. The project offered assistance that was attractive but not enough to complete the project. This generated local funding to cover the project's costs and, therefore, created a feeling of ownership in the locals. Since the city was paying for the project, they expected and demanded useful results from the project.

Presence of international advisers. They not only provided guidance and expertise, but also increased the project's credibility, facilitated communication among locals, especially between scientists and local authorities, and eliminated jealousy and distrust among the various institutions participating in the project.

Careful selection of the cities. We made sure that there would be sufficient information to complete the project, good communication between government and scientists, and that collaboration among the various institutions involved was possible.

The most important factor that contributed to the project's success was the feeling of ownership of the project developed by the local people. They felt that it was their project, their work, their ideas, and their contribution to the safety of their city. Key to the RADIUS success were the hard work and commitment of the many people that participated in the implementation of the project in each city, especially the members of the local steering committees whose leadership and enthusiasm made this project possible.