Effective Risk Communication

With the exception of some residents of California and a few other western states, most Americans have never been in a damaging earthquake, don’t expect to, and see little or no reason to protect themselves against one. Even in areas where there has been extensive experience with earthquakes, seismic safety messages must be continually reinforced. As with any risk, people must be regularly encouraged to improve their safety. Well-crafted communications campaigns can help seismic safety advocates achieve those goals.

Before going Public, Develop an Overall Strategy

When communicating with the public, policymakers, decision makers, or any other audience about earthquake hazards, it isn’t enough to focus only on the scientific information you want to convey. It is important to think about the following:

- the audience or audiences you want to reach,
- the distinctive characteristics and needs of those audiences,
- how to be seen as credible and trustworthy by those audiences,
- the best form for communicating scientific information on the earthquake threat (how the content of risk messages should be organized), and
- which media (print, electronic, face-to-face communication) and vehicles (news conferences, brochures, mass mailings, public meetings) will be most effective in reaching target audiences.

Know your Audiences

“The public” is very diverse, consisting of many different groups with different informational needs and retention capacities. A one-size-fits-all approach to communicating with them is almost sure to fail. Legislators, policymakers, private-sector decision makers, and the general public differ in their information requirements. Be prepared to express the same general point—that there is a significant earthquake risk—in many different ways for your various audiences. Consider what each audience needs to know to make good decisions about the earthquake threat. This will be based both on what you think they require and what they themselves may have expressed.

Be Credible

People will not act on information given to them by individuals and organizations they do not believe or trust, so analyze who would be the best spokespersons to communicate with different groups. Sometimes these spokespersons are well-respected earthquake experts, and they have gained the respect by adapting their message and delivery to various audiences. Do not assume that all experts can communicate clearly; many have trouble “speaking the language” of non-scientific audiences. When you do not have access to earthquake experts who can communicate well, find people or organizations that are credible to your audiences and ask them to serve as spokespersons for your earthquake-related messages.
The credibility of organizations and individuals can be harmed if they:

- take positions that appear to audiences to be unjustified, based on what those audiences already know,
- make statements that contradict what was said previously or that are inconsistent with information the audiences obtained from other sources,
- communicate about the earthquake threat in ways that appear to be self-serving, or
- gain a reputation for deceit, misrepresentation, or lack of full disclosure.

Once lost, credibility is difficult to regain.

**Organize your Information to be Understandable and Memorable**

Scientists are comfortable handling complex technical information, appreciating the implications of probabilistic statements, and retaining large amounts of data, but many other people are not familiar with such concepts. To make complicated ideas relevant, understandable, and interesting to non-experts, simple statements and good visuals are essential. Printed materials and brochures are appropriate for non-experts because they can be referred to as needed. In campaigns that rely heavily on radio and television, simple statements and repetition are especially important.

**Tell People What to Do**

Once you have people’s attention about the earthquake risk, it is very important to explain to them what they can do to reduce the possible damages. Include in your messages not only information on concrete steps they can take to protect themselves, but also where they can go for more information—both on the earthquake risk and on the various loss-reduction measures you are recommending.

**Use Multiple Media**

Effective communications campaigns use mass media and person-to-person contact. They employ all types of media and a variety of information “vehicles” (press conferences, radio and television public service announcements, newspaper and TV feature stories, public meetings). Generally, people process information slowly. They base decisions on what they learn from the media after they have discussed it with their families, co-workers, and neighbors. Reinforce media messages through more personalized ways of delivering information, such as neighborhood meetings and school and workplace preparedness programs.

**Be Consistent**

Always keep messages consistent across different media and vehicles, and among diverse groups. Risk communicators have learned that, when people get contradictory pieces of information about what to do, they do nothing. They do not pick a favorite and get on with it. Consistency will require that you work closely and carefully with all your partners—individuals and organizations—but it is worth your while to do so.
Communication Tools

Various computer-based resources can be used to improve risk communication. By graphically demonstrating the potential losses from an earthquake in a local area, they can help people “see” the problems they may need to cope with. Geographic Information Systems (GIS) are convenient places to store basic data about the local environment—natural as well as built—and the local or regional infrastructure. Loss Estimation Models go a step further and allow for those data to be manipulated to show probable damages from earthquakes of specific location and magnitude. HAZUS MH is such a loss estimation tool developed by the Federal Emergency Management Agency. Using GIS technology, the HAZUS MH software allows users to project earthquake damages and losses to many structures: highways and bridges, schools, hospitals, and residences, as well as to estimate resultant deaths and injuries and potential medical care and shelter needs. Local groups can enrich the basic HAZUS MH data with locally specific data, thereby making the tool more precise in its projections. For more information on how to acquire and use HAZUS MH, visit FEMA's website: www.fema.gov/hazus.