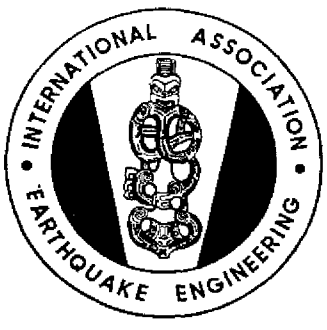
A TIME FOR ACTION:

WORLD SEISMIC SAFETY INITIATIVE

An Undertaking of the
International Association for Earthquake Engineering
in support of the
International Decade for Natural Disaster Reduction

JANUARY 1993



The original version (July 1992) was prepared by the IAEE Panel consisting of Haresh C. Shah, Chairman, Charles C. Thiel Jr., and Wilfred D Iwan with the support from the Earthquake Engineering Research Institute, and reviewed by Luis Esteva, Giuseppe Grandori, George W. Housner, Tsuneo Katayama and Kenzo Toki. This version was revised after taking into account the written comments from concerned people after the 10th World Conference on Earthquake Engineering held in Madrid, July 1992

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Preamble

Building collapse is the principal cause of deaths as well as social and economic impacts of earthquakes. Structures collapse or suffer unacceptable damage because they are either poorly engineered, or poorly constructed, or they do not incorporate earthquake resistant engineering knowledge that is known.

About one-third of the world's population lives in earthquake prone areas, most in buildings with little seismic resistance compared to what we know. To protect these residents their buildings have to be made safer. Engineering practice is very good in some parts of the world, very poor in others. Where it is poor, buildings suffer damage and collapse even in small and moderate earthquakes. In strong earthquakes, poorly engineered buildings collapse by the hundreds, sometimes thousands, causing substantial death and damage that takes years to recover from. Where there is good practice, moderate earthquakes often cause little damage and even large earthquakes principally do not cause large loss of life.

The International Association for Earthquake Engineering (IAEE) believes that by improving engineering worldwide, buildings will be much safer. Better structures will mean fewer deaths, less

Erzincan Erathquake, Turkey, March 1992

damage, and quicker recovery. Therefore, the IAEE has decided to found the World Seismic Safety Initiative, a long-term international cooperative scheme that will advance and spread earthquake engineering knowledge worldwide.

The World Seismic Safety Initiative (WSSI) has three goals:

- Disseminate state-of-the-art earthquake engineering information throughout the world.
- Incorporate experience and research findings into recommended practices and codes in earthquake-prone countries.
- Advance engineering knowledge through problem-focused research.

The WSSI will make the best engineering knowledge in the world available to every engineer on the globe. Through seminars, data banks, newsletters, translations, etc., the WSSI will give engineers everywhere the knowledge they need to design and build safe *buildings*.

The term "building" is used in a general sense and includes not only buildings, but all the structures in a community—pipelines, towers, industrial facilities highways power poles, and bridges, to name a few. It also includes engineered structures and traditional (non-engineered) construction

The WSSI will sponsor projects, both research and practice, that will answer crucial engineering questions such as how to design and construct earthquake resistant structures. These are questions that must be answered if we are to make buildings safer —questions that require coordinated, global effort to address. The WSSI will sponsor education, training and technology transfer efforts to bring the benefits of existing and new knowledge on earthquake resistant design to those who need it.

The WSSI was endorsed by delegates to the Tenth World Conference on Earthquake Engineering in Madrid, Spain, in July 1992. Delegates pledged to support, participate in, and enlist their countries' participation in WSSI activities. As the WSSI begins, they and other engineers worldwide will form the backbone of this unprecedented global effort whose end result will be better engineering practice and safer buildings.

The problem of poor buildings requires urgent attention. If we don't act *now*, the situation will only get worse. Unsafe buildings will continue to be built. Existing buildings will not be strengthened adequately. Population increases will have more people living and working in unsafe buildings.

What will the result of a vigorously implemented WSSI be? It will be a future with fewer deaths and injuries, and less damage and social and economic disruption from earthquakes than we anticipate if nothing at the world level is done. People and their property will be safer. The benefits will begin immediately with better engineering response and repair actions following earthquakes. The long term benefits can be substantial when building codes and practices around the world incorporate safer standards and practices, when new buildings are designed and constructed to be earthquake safe, and when existing highly hazardous buildings are strengthened to levels that provide adequate safety.

We cannot wait. *The time to act is now.*