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Norsar, NORWAY

Norwegian Geotechnical Institute, NORWAY

Icelandic Meteorological Office, ICELAND

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National Research Institute of Astronomy and Geophysics, EGYPT

National Research Institute for Earth Science and Disaster Prevention, JAPAN

Koninklijk Nederlands Meteorologisch Instituut, THE NETHERLANDS

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**Do you want to know more about the SAFER project?**

**Then please visit our website:**

**[www.saferproject.net](http://www.saferproject.net)**

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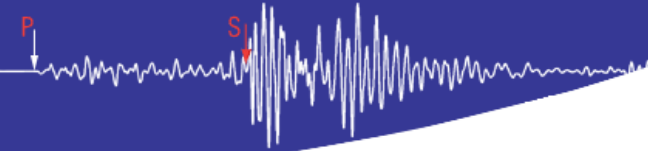
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**SAFER**

Seismic eArly warning For EuRope



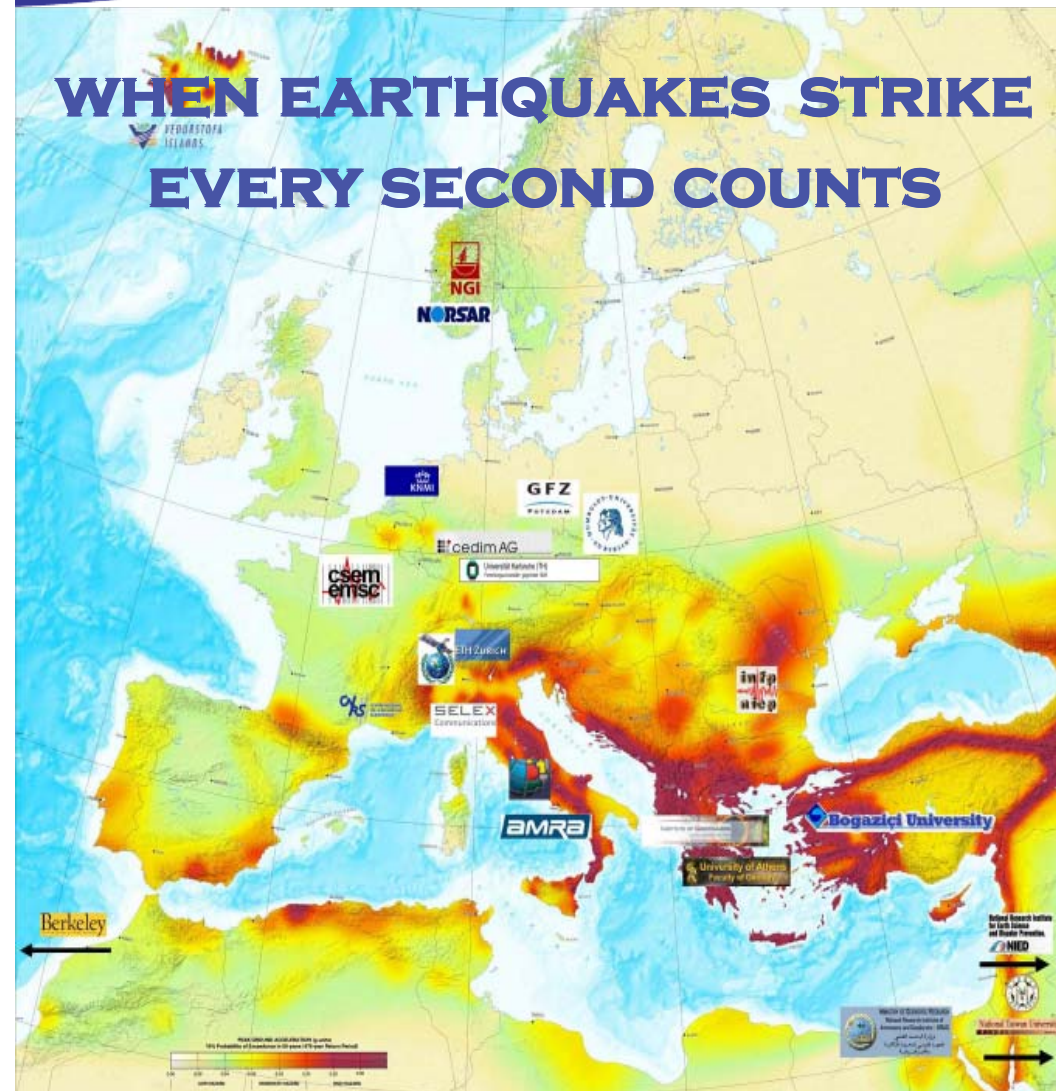
Starting Date:

15 June 2006

Termination Date:

15 December 2008

# WHEN EARTHQUAKES STRIKE EVERY SECOND COUNTS



SIXTH FRAMEWORK PROGRAMME

SUSTAINABLE DEVELOPMENT, GLOBAL CHANGE AND ECOSYSTEM





## WHY THE SAFER PROJECT?



Earthquakes are a serious threat for many countries of Europe, particularly those around the Mediterranean Sea. Early warning systems, based on the real-time, automated analysis of ground motion measurements, can play an important role in reducing the impact such catastrophic events could have on densely populated areas and, in particular, in mitigating damage to strategic structures and lifelines. Europe is covered by numerous high quality seismic networks, managed by national and European agencies, including local networks specifically designed for seismic early warning around large cities such as Bucharest, Istanbul and Naples.

SAFER aims to fully exploit the possibilities offered by the real time analysis of signals coming from seismic networks for a wide range of protective actions, performed over time intervals of a few seconds to some tens of minutes.



## WHAT ARE THE APPLICATIONS OF SEISMIC EARLY WARNING?

- Controlling or reducing exposure;  
*Closing a bridge to traffic when an earthquake is detected;*
- Limiting societies' exposure;  
*Shutting down transportation facilities when a potentially damaging seismic signal is detected;*
- Decreasing the risk of triggered incidents;  
*Activate systems for the protection of industrial plants, gas supply networks, electricity, etc.;*
- Reducing social vulnerability in its different dimensions;  
*By implementing a real-time alert system, and ensuring the continued operation of critical systems such as hospitals.*

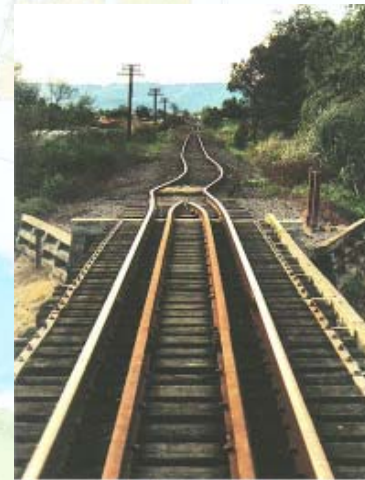


## WHAT WILL THE SAFER PROJECT DELIVER?



SAFER is not only focused on research but also aims to disseminate the results, by providing Civil Protections Authorities with tools for crisis management.

The project develops improved algorithms for the rapid determination of earthquake source parameters, elaborating new concepts for providing real-time alert maps and predicted shake maps. Development of fast algorithms for damage scenario simulations and the deployment of real-time structural control mechanism for the immediate protection of threatened infrastructure are also considered within the project. The tools will be tested and applied to several test cities: Istanbul, Bucharest, Athens, Napoli and Cairo.



**Early warning system are the key to effective risk reduction....**

42nd President of the USA, William J. Clinton's statement at the Early Warning Conference III, Bonn, March 2006

