



## **INTER-INSTITUTIONAL CENTRE FOR SEISMIC RISK REDUCTION IN THE MESSINA STRAITS AREA: STATE OF ART**

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The Messina Straits area is well known to be one of the highest seismic risk areas in the European-Mediterranean region. It has been struck by earthquakes of magnitude as large as 7 in the last centuries, suffering in particular huge damage and losses during the earthquake of 28 December 1908.

Research activity on topics related to seismic risk in this area is carried out by the local universities (Messina and Reggio Calabria) and other research institutions, such as Istituto Nazionale di Geofisica e Vulcanologia. Research is funded by projects, among these, Messina University is partner of an EC PO FESR 2007-2013 project (ending in June 2015) specifically focused on seismic risk reduction in Eastern Sicily and the Straits area.

Cooperation and contacts between research organizations and other institutions devoted to government or administration of the territory at different levels (Municipalities, Provinces, Regions, Prefectures, Civil Defense bodies, etc) have been active for several years and furnished a number of products such as, for example, local emergency plans, contributions to civil defense exercises, project activity, etc. To date, however, no stable and systematic organization of this cooperative work does exist, in other words the joint work of the institutions simply starts when a specific goal is requested. Lack of systematicity precludes, unavoidably, the optimization of the potential of synergy.

Representatives of local administrations, prefectures and research teams have repeatedly declared their interest towards a more systematic inter-institutional cooperation. This fits, among other things, the guidelines and strategies indicated by international organizations for disaster risk reduction such as UNISDR and matches also well with the plans of activity of ESC concerning know-how transfer from science to technical and administrative bodies.

The Hyogo Framework for Action (HFA) is a key instrument for disaster risk reduction adopted by the Member States of the United Nations. The HFA offers five areas of priorities for action: (1) Make Disaster Risk Reduction a Priority; (2) Know the Risks and Take Action; (3) Build Understanding and Awareness; (4) Reduce Risks; (5) Be Prepared and Ready to Act. A stable and systematic inter-institutional cooperation for seismic risk reduction in the Messina Straits area may fit the HFA guidelines.

The integration of people and activities across the Messina Straits has its roots in the distant past and has been developing over historical times. Relationships between the two sides of the Straits have even intensified in the last decades because of the increased commercial interests and circulation of workers and students across the Straits. Territorial re-organization occurring in Italy just in these years is adding new, strong motivation on both sides of the Straits in favour of a formal integration of the whole Straits area through the establishment of a new administrative subject (the “Area Integrata dello Stretto”) aimed to realize a faster and more harmonic socio-economic growth of the territory. This is an excellent framework for the Inter-institutional Centre in argument.

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On these grounds, the scientific and administrative institutions working on the different aspects of seismic risk reduction in the Messina Straits area are working to implement a systematic cooperation based on day-by-day joint work in a stable location site, e.g. the Inter-institutional Centre for Seismic Risk reduction in the Messina Straits Area.

The Centre is called to carry out basic and applied research on the topics related to seismic (and tsunami) risk with particular attention to the local territory. Activity will include applicative work requested by public and private subjects also in the form of production of services. The dissemination of knowledge and know-how at different levels (from simple citizens to professional workers or civil defense bodies) will be one of the main activities.

Funding is expected to come from (i) public institutions at local and national level in Italy, (ii) the European Community and (iii) private subjects. Major goals of the Centre are: (i) improving seismic hazard estimates both at regional and local scale, (ii) testing procedures for risk mitigation associated to short- and middle-term earthquake prediction methods, (iii) defining methods and strategies for assessment of seismic vulnerability of buildings, lifelines and infrastructures, also in the perspective of giving methodological support to reinforcement works, (iv) disseminating the culture of seismic risk mitigation at all levels in the society with different means (lessons in the schools, preparation and distribution of reports and brochures, diffusing information by the media, etc), (v) supporting civil defense emergency planning and related exercises, and (vi) investigating proper strategies to persuade citizens concerning the opportunity of checking vulnerability of private buildings (this goal may require efforts for soliciting the introduction of financial and/or fiscal helps similar to those already existing in Italy for supporting private works for house energy savings).

The ESC Special Session on Urban Earthquake Hazards is an ideal place for wide discussion concerning the state of art of works in the Messina Straits area. Experience exchange with scientists and decision makers working in other urban contexts or megacities affected by high seismic risk over the planet can be expected to bring both technical and organizational benefit to all workers along the path indicated by UNISDR with the campaign “Resilient Cities: My city is getting ready”.