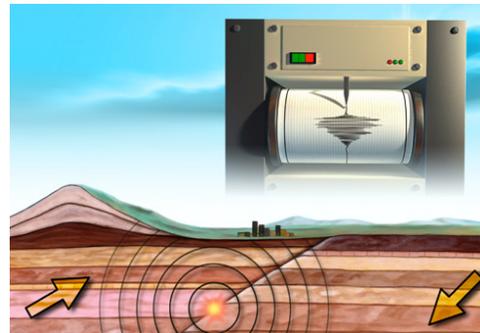


ASSOCIATION OF RISK AND CRISIS COMMUNICATION



RISK COMMUNICATION CAMPAIGN PROPOSAL for URBSIS

Assessing Vulnerability and Managing Earthquake Risk at Urban Scale



Aveiro, November 18, 2013

1/ CONTEXT

The University of Aveiro

The University of Aveiro (UA) has a mission to provide and develop graduate and postgraduate education, research and cooperation with society. Founded in 1973, it quickly became one of the most dynamic and innovative Universities in the country. Determined not to be left behind in development (social, technological and scientific), the University of Aveiro has always positioned itself at the forefront of innovation. Not just by providing degree programmes in advanced scientific and technological areas and developing modern infrastructures and sophisticated equipment, but also investing in the training and recruiting of teachers and researchers with proven track records in the development of research projects and in terms of close relations with the worlds of business and industry.

Today, UA is a key partner for many companies, providing services, know-how and highly qualified graduates and participating in numerous research projects in the development of new products. The excellence of its research is the trademark of this institution, with 70% of its research units having been classified as “very good” and “excellent” in recent external evaluations. National and international cooperation are key areas for the University of Aveiro, taking place through participation in numerous European education and research programmes.

The Instituto Superior Técnico (IST) is one of the largest and oldest engineering schools in Portugal, with approximately 8500 undergraduate and 1500 post-graduate students in the areas of engineering, science, technology and architecture. IST is a research-oriented school, with a large record of participation in international research projects and involvement in international University Networks. The Department of Civil Engineering and Architecture has testing capacities the field of seismic engineering (structural laboratory, reaction wall/floor system) capable to test.

The Earthquake Engineering group of the national research organization IST/ICIST will mainly carry out the work described in this project. Between the main research interests, the following topics could be highlight: assessment of the seismic performance and strengthening of the existing buildings and monuments, lifelines and infrastructures; Civil Protection emergency planning; non-linear behaviour of masonry and reinforced concrete structures, all of them relevant to the tasks attributed to IST and have published papers in international journals and conferences.

URBSIS

Recently, in August 2010, it was published a Resolution of the Portuguese Parliament for the adoption of measures to reduce seismic risk, promoting research in this scope and encouraging a national plan to reduce seismic vulnerability. Amongst various recommendations made, it is referred the encouragement of scientific research in the fields of seismic risk prevention, earthquake engineering and seismology. In addition, it is also stated that it is imperative to develop methodologies that allow the socioeconomic evaluation of the consequences of seismic events.

Bearing in mind the exposed, it is necessary to stimulate collaboration between the local municipalities with the support of the government and the scientific and technical community in the development of seismic risk maps for historical city centres that identify the most vulnerable building typologies and which can be used on the definition of management strategies and emergency planning at the urban scale.

In many urban areas of southern European countries, as in the case of Portugal, the majority of the masonry building stock lacks adequate seismic resistance. Most of these buildings generally require urgent retrofitting interventions in order to reduce their seismic vulnerability and physical risk, particularly for the increased seismic action requirements of recent European code standards.

The development of vulnerability assessment methodologies and risk evaluation management tools is therefore a key issue, and the main aim of URBSIS, a project for "Assessing Vulnerability and Managing Earthquake Risk at Urban Scale" in order to avoid incalculable loss of architectural valued buildings, human casualties and economic losses. It is also worth highlighting that the evaluation of the seismic vulnerability of the existent building stocks, in the perspective of the seismic risk mitigation, should not be placed only in relation to isolated buildings of relevant historical and cultural importance, but also, in relation to ordinary building.

Experience from previous rehabilitation processes is the starting point for this research project. From this experience, very soon it was understood that such processes cannot be sustainable without a vulnerability assessment and risk evaluation. This research has shown that the development of a seismic vulnerability assessment approach within the rehabilitation process taking place reduces the financial resources and time consuming stage for assessing the old masonry buildings of the historical city centre in a detailed manner of a large number of buildings. Consequently, the vulnerability assessment results have been used for damage distribution scenarios and loss estimation supporting emergency planning strategies.

The historical city centres of Aveiro (with 521 buildings) and Faro (809 buildings) are the selected continental localized study cases, and the historical city centre of Horta (443 buildings), Faial island in the Azores archipelago is the third case study. The selection of these two particular case studies, as well as the delimitation of their working perimeters, were strategically defined taking into account that extensive information for these old city centres is assured.

Moreover, the city of Horta was chosen due to its prone seismic location and also because of the information that is currently available, since part of the research team has in the past years also developed work in the Azores archipelago. The case studies of the historical city centres of Aveiro and Horta will allow to apply the new methodology and improve as well the methodology created through the validation and calibration of the procedure defined in the tasks to be carried out. The uniqueness and future impacts of this research proposal will hopefully be observed: development of a comprehensive database completely integrated within a GIS environment, as a risk management guidance tool, enabling to estimate and forecast the direct and indirect consequences of economical and physical impact; establishment and validation of a modular approach for creating building vulnerability databases for other historical centres in urban areas.

The innovative feature of this proposal is the approach for vulnerability assessment at the level of masonry building aggregates (group of buildings). From the reconnaissance missions that the team members have incorporated, it is clear that the level of physical damage and single building response is ruled by the global seismic response of the building aggregate. Therefore, the development of vulnerability assessment procedure for building aggregates is a necessary step forward to attain more reliable assessment for masonry building at the urban scale.

This project proposal is strongly supported by the University of Aveiro and the three City Councils, aiding in the logistics needed to assess old city centre buildings. A team of experienced researchers on seismology and earthquake engineering constitutes this project proposal. The project has guaranteed the collaboration of experienced consultants in this field with the insight on establishing future joint initiatives.

ARCC PORTUGAL

Risks and crises cannot be managed without communication because, as research shows, communication is the most powerful influence on people's risk decision-making and behaviour. Increasingly, communications is being recognized as essential to enabling people and organizations, including governments, to manage risks and crises effectively.

ARCC Portugal is the Portuguese association of the International Association of Risk and Crisis Communication. The INTERNATIONAL ASSOCIATION OF RISK AND CRISIS COMMUNICATION ("IARCC") is a non-governmental, independent and international network of nationally organised associations with headquarters in Geneva, Switzerland. Today, five national associations are member associations of the IARCC. They are registered in Austria, France, Portugal, Switzerland and the United Kingdom.

The objectives of the ASSOCIATION OF RISK AND CRISIS COMMUNICATION are the furthering of responsible and professional communication and its recognition as an important tool to reduce risks, prevent crisis and catastrophe scenarios or reduce the harm they cause. In order to meet these objectives, the ASSOCIATION OF RISK AND CRISIS COMMUNICATION provides a platform to all actors interested by these goals.

RISK COMMUNICATION PROPOSAL OF ARCC PORTUGAL

ARCC Portugal offers to accompany the URBSIS research team and proposes the following tasks:

1/ Qualitative research phase:

In non-directive or semi-directive interviews with some key people, ARCC shall find out what issues related to risk and crisis communication in the context of earthquake preparedness and crisis management need to be addressed.

2/ Risk Communication Audit:

How do the communities prepare themselves for a natural hazard like earthquakes?

In this phase, ARCC will collect statements, comments, ideas, and proposals of those who are engaged in the communities because of their work or interest. This step includes a qualitative survey. It will also analyse the data available from state and local governmental structures related to earthquake risks.

3/ Quantitative phase:

This phase consists of a first quantitative survey, which will be organised at the technical kick off meeting and of a second quantitative survey geared towards the whole population of the community. The questions will be defined by treating the results of phase 1 and phase 2.

3/ Risk and Crisis Communication Strategy and Plans:

ARCC proposes to accompany the actualisation of risk and crisis communication strategies for the two communities as well as the drafting of communication plans in preparation of seismic risks and catastrophes.

THE OBJECTIVES OF THE RISK COMMUNICATION PROJECT

By adding a communication part to the mission, the scientific team of the University of Aveiro wants to accomplish the following goals:

A/ Ensure a good cooperation with the population of Faro, Faial and Aveiro and its representatives;

B/ Make sure that the contents of the audit report of the scientific team are well understood and that practical actions are taken in accordance with the report findings;

C/ Improve the risk and crisis communication strategy and plan of earthquake catastrophes. Enhance risk awareness, preparedness and crisis management capabilities.

TIME FRAME OF THE MISSION OF ARCC PORTUGAL

Tasks in Faro	Activity	Period
Qualitative research	Qualitative research interviews (unstructured or Semi-structured Interviews, and Analysis of documents and materials) with key people engaged in Earth Quake Prevention, preparedness and crisis management in Faro	November – December 2013
Risk Communication Audit in Faro	Collecting, reading and analysing existing studies, articles, rules etc.	November 2013 – April/May 2014
Technical kick off meeting in Faro	Presentation of the project First quantitative questionnaire	End of January, beginning of February 2014
Quantitative research	Questionnaire to population	March 2014
Risk and Crisis Communication Strategy and Plans	Treatment of questionnaires Presentation of outcome and suggestions Consultation with engaged actors Defining strategy and plans	From April 2014 onwards

The planning for the tasks in Faial and Aveiro will be available at the beginning of 2014.

THE TEAM OF ARCC PORTUGAL

Romeu VICENTE

Assistant Professor at Civil Engineering Department of University of Aveiro
President of the Association of Risk and Crisis Communication in Portugal

Tiago FERREIRA

Researcher at Civil Engineering Department of University of Aveiro
Treasurer of the Association of Risk and Crisis Communication in Portugal

Herbert KOCH

Public relation and crisis communication consultant in France
President of the International Association of Risk and Crisis Communication in Geneva
Secretary of the Association of Risk and Crisis Communication in Portugal

THE BUDGET OF THE MISSION

IARCC, ARCC, partners, and sponsors, private and public institutions will fund the mission.
ARCC Portugal will contact the business community for sponsoring their mission.
Each mission (Faro, Faial and Aveiro) requires a budget of Euros 11 000. --.