

CERU – Activity Report 2019

During 2019, CERU activities mainly addressed the development of the project *BEACHRISKS – Beach and Coastal Resorts Risks*, co-financed by the Council of Europe in the aim of EUR-OPA Agreement (European and Mediterranean Major Hazards Agreement - EUR-OPA), and the preparation of the 2nd International Conference on Urban Risks – ICUR2020, scheduled for the end of June 2020.

In addition, CERU promoted and participated in several initiatives, developed by different institutions, on the evocation of the 50th Anniversary of the 28th February 1969 earthquake. CERU has also developed, collaborated and participated in several awareness sessions on natural hazards and risks, in collaboration with different Municipal Civil Protection Departments (devoted to different audiences), as well as with the University of Lisbon (through IDL – Instituto Dom Luiz), devoted to teenager students.

Results of the work developed by CERU or with its support, were presented in different national and international meetings.

Below is a summary of the developed activities.

1. Participation in awareness sessions, meetings, conferences and workshops

- CERU supported the elaboration of the itinerant exhibition “February 28, 1969 - Memories of the earthquake”, held within the scope of the Evocation of the February 28, 1969 Earthquake, promoting its dissemination. This exhibition, by Luis Matias, was shown in several places in the municipalities of Torres Vedras, Albufeira, Loulé, Almada, Portimão, Lamego and Coimbra.
- Participation in the population awareness session of the Evocation of the February 28, 1969 Earthquake, promoted by the Portuguese Society of Seismic Engineering (SPES), by the Portuguese Association of Meteorology and Geophysics (APMG) and by the Lagos Municipality, which took place in Lagos in February 28, 2019, through the presentation of a poster summarizing the activities that have been developed by CERU in recent years. Frederico Mendes Paula, from Lagos City Council, gave a presentation entitled “Local intervention in minimizing seismic risk - the example of Lagos”, where he presented some of the projects carried out in partnership with CERU.
- Participation, as an observer, in the Civil Protection exercise prepared by the Cascais Civil Protection Department (May 31), within the scope of the European Exercise Cascade'19, where 2 beaches in the municipality were evacuated in a simulation of the occurrence of a tsunami. In this exercise, the evacuation

routes implemented were those studied and proposed by CERU in former projects.

- *Seminar "If Portugal shakes again?"*. Ponte de Lima, 26 January 2019. Organized by the Ilumiano Association and the Portuguese Society of Seismic Engineering (SPES). Luis Matias participation.
- *XII National Meeting of Risks: Seismic Risk - Learning from the past*. Faro, 27 April 2019. Luis Matias participation.
- Participation in outreach activities promoted by the IDL – Instituto Dom Luiz (University of Lisbon) on seismic and tsunami hazard and risks (Luis Matias & Paula Teves Costa). In particular, implementation of an early warning system at the tsunami tank (<https://www.youtube.com/watch?v=PTAAVKfG3nk>)

2. Institutional supports and Protocols

- CERU signed a protocol with the Association of Municipalities with Historical Centre aiming to prepare and developed projects of interest to both institutions on the study and mitigation of different urban risks (protocol signed in Lagos, on September 13, 2019).

3. Activities developed in the framework of the project financed by the EUR-OPA Agreement, Council of Europe

Within the scope of the BEACHRISKS - Beach and Coastal Resorts Risks project, coordinated by CERU, the following activities were carried out:

- Organization of the final seminar of the BEACHRISKS project, held in Lagos, on the 12th and 13th of September. The seminar was performed, in collaboration with the Lagos Municipality, and was attended by representatives from partner centers, CEPRIS (Morocco) and ICoD (Malta), in addition to several Portuguese technicians and researchers. The project's final conclusions and recommendations were discussed, in particular the need to hold other work sessions on specific topics, with two future actions proposed: a workshop in Torre Vedras, on the discussion and implementation of tsunami warning signs and evacuation routes and other in Albufeira focused on the awareness and involvement of tourism agents and hoteliers in the discussion and implementation of measures to mitigate seismic and tsunami risks.
- Production and publication of a brochure on Coastal and Beach Risks (http://www.ceru-europa.pt/pt/downloads/Guia_FINAL_EN.pdf). This leaflet was produced in Portuguese and in English and will be made available in several coastal municipalities.

- Study on tsunami warning signs and evacuation routes implemented in 4 municipalities in Portugal. Identification of heterogeneities and difficulties in reading, visibility and maintenance.
- Collaboration, with the National Maritime Authority, in the production of information on tsunami risk and mitigation measures, to be implemented in the next training manual for lifeguards.

4. Publications and Communications presented at conferences

- Matias L (2019) *The seismic sources*. Seminar "If Portugal shakes again?". Ponte de Lima, 26 January 2019. Organized by the Ilumiano Association and the Portuguese Society of Seismic Engineering (SPES). Ponte de Lima, 26 January 2019. [In Portuguese]
- Matias L, Custódio S (2019) *Education for earthquakes and the creation of more resilient societies*. XII National Meeting of Risks: Seismic Risk - Learning from the past. Faro, 27 April 2019. [In Portuguese]
- Oliveira L, Teves-Costa P, Pinto C, Gomes RC, Almeida IM, Ferreira C, Pereira TR, Sotto-Mayor M (2019) *Seismic microzoning based on data from geotechnical boreholes: Application to Lisbon*. SÍSMICA2019 - 11th National Congress on Seismology and Seismic Engineering, Lisbon, 29-30 April 2019. [In Portuguese]
- Oliveira L, Teves-Costa P, Pinto C, Gomes RC, Almeida IM, Ferreira C, Pereira TR, Sotto-Mayor M (2019) *Lisbon seismic microzoning based on the analysis of geotechnical surveys*. Revista Portuguesa de Engenharia de Estruturas (RPEE), Série III (11): 7-16. [In Portuguese]
- Oliveira L, Teves-Costa P, Pinto C, Gomes RC, Almeida IM, Ferreira C, Pereira TR, Sotto-Mayor M (2020) Seismic microzonation based on large geotechnical database: Application to Lisbon. *Engineering Geology*, <https://doi.org/10.1016/j.enggeo.2019.105417> (available online 16 November 2019).
- Ribeiro, MJ (2019) *Risk Governance Models: Comparative analysis between three National Civil Protection Systems*, Revista Crítica de Ciências Sociais, Centro de Estudos Sociais da Universidade de Coimbra, Coimbra. [In Portuguese]
- Ribeiro, M.J. (2019) *The forest fires of 2017 and the regulatory mechanisms in risk governance in Portugal*. Revista Territorium 26 (II), 131-144. RISCOS - Associação Portuguesa de Riscos, Prevenção e Segurança, Universidade de Coimbra, Coimbra. [In Portuguese]

Summary of the activities foreseen for 2020

The main activity scheduled for 2020 was the 2nd International Conference on Urban Risks (ICUR2020). However, due to the pandemic, this conference was postponed to 2021.

During 2020 CERU intend to develop and work on the following activities:

- Organization of the next International Conference on Urban Risks - ICUR2021;
- Supporting the elaboration of the project submitted to the Council of Europe, to be carried out by researchers from CEG / IGOT "*ABS-COVID: Anthropogenic Base factors of Spreading COVID*";
- Dissemination of the itinerant exhibition on the memories of the earthquake of 28 February 1969 (to be shown in the Lisbon City Hall lobby), prepared in 2019 as part of Evocation of the 50th anniversary of the earthquake of 28 February 1969 (continuation);
- Publication of a booklet on radiological risks, produced by TESEC (European Center for Technological Security, Kiev, Ukraine). Study of the dissemination actions to be implemented in Portugal and, eventually, in other Portuguese-speaking countries (Brazil, for instance);
- Collaboration with the National Maritime Authority, in the production of information on tsunami risk and mitigation measures, to be implemented in the next training manual for lifeguards (continuation);
- Collaboration in actions to disseminate risks promoted by IDL, by the Municipal Civil Protection Authorities, other official entities and by local associations;
- Participation in work sessions (seminars or workshops) promoted by different Municipal Civil Protection Departments in order to discuss measures to mitigate various risks;
- Collaboration and supporting projects developed by different institutions to increase and improve technical and scientific knowledge related to different risks (for instance, Lisbon microzonation studies performed in collaboration with IST – Engineering School);
- Updating and dissemination of the CERU's website in order to contribute to more resilient communities;
- Dissemination of the results obtained by the projects developed by CERU and its members on national and international conferences and workshops.

However, the development of these activities could be affected by the evolution of the Covid-19 pandemic.

Lisbon, June 19th 2020

Paula Teves Costa
President of the CERU Board

NOTE - CERU general information, activities, deliverables of the projects, papers and communications can be seen/download on CERU webpage:

1. Home/ main page / HIGHLIGHTS <http://www.ceru-europa.pt/en/index.php>
2. Under "PROJECTS" page (deliverables, communications and papers):
BEACHRISKS project <http://www.ceru-europa.pt/en/projectos.php>
3. Under "ACTIVITIES" page (other activities: workshop programs and communications)
<http://www.ceru-europa.pt/en/atividades.php>