

CERU – Report 2017

Summary of the activities developed during 2017

During the year of 2017, CERU activities were mostly focused on the development of the EUR-OPA (European and Mediterranean Major Hazards Agreement - EUR-OPA) financed projects (in particular the Project coordinated by CERU: *BAYWATCH - Involving sales and tourism agents on earthquake and tsunami mitigation measures.*) Apart from the activities associated to the other project financed by EUR-OPA, CERU has developed, collaborated and participated in several awareness activities regarding risks.

Besides, CERU also participated in research projects, in collaboration with Portuguese entities such as the University of Lisbon. The results of its work were presented in several workshops and conferences, both national and international.

Below is a summary of the activities developed.

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

- The "*Seismological Box*" educational project, involving children of Pre-School Education and developed under the project "Safety in School and in the Community", won the international competition Science at School promoted by the Ilídio Pinho Foundation (Ilídio Pinho Prize). CERU supported the realization of this project and Luís Matias, treasurer of this European Centre, participated in its preparation.
- Itinerant exhibition "*Risks - Learning and Avoiding*" which took place in three locations in Setúbal, between March 2017 and March 2018: (i) at the Municipal Gallery of Setúbal - Hotel and Tourism School, between March 30 and April 15, integrated in the International Conference on Risks, Security and Citizenship (30-31 March); (ii) at the School of Education of the Polytechnic Institute of Setúbal, from September 20 to 30; and (iii) at the Allegro Shopping Centre in Setúbal between December 2017 and March 30, 2018. CERU supported this exhibition and Luís Matias coordinated its scientific content.
- *Tsunami danger signalling evaluation – Assessment of the signalling regarding tsunami risks* – Communication presented by Paula Teves Costa. *International Conference Risk, Security and Citizenship*, Setúbal 30-31 March 2017.
- *Prevention of seismic and tsunami risk in Lagos* - Communication presented by Frederico Paula. Seminar "*The Reality of Seismic Rehabilitation on Building*". Lisbon, National Headquarters of the Order of Architects, 8 June 2017.

- *"Shake Out exercise 2017"* (13 October) - CERU announced and participated in this initiative (*"A Terra Treme"*) promoted by the Portuguese National Authority for Civil Protection.
- *Seismic risk and protection of cultural heritage* - Communication presented by Paula Teves Costa. Workshop on Safety and Security. Santa Casa da Misericórdia, Lisbon, November 2, 2017.
- *Tsunami Alert - Prevention and Response* - November 18, Auditorium of the Hydrographic Institute. Organization of the National Maritime Authority (I.S.N.). Participation of Luís Matias and Paula Teves Costa.
- Participation on the *14th Session of the Intergovernmental Coordination Group for the Tsunami Early Warning and Mitigation System in the North-Eastern Atlantic, the Mediterranean and Connected Seas* (ICG / NEAMTWS-XIV) - WG4. Lisbon, 21 - 23 November 2017 (Paula Teves Costa & Luís Matias).
- *The Earthquake of 1755* - Contribution of geology and geophysics to the interpretation of damages. Lecture given by Paula Teves Costa in partnership with Isabel Moitinho de Almeida, within the framework of the Visit to Lisbon of the City of Porto Unesco Club: The Lisbon 1755 Earthquake and the Pombaline reform. Lisbon, Aljube Museum, November 25. Initiative from the City of Porto Unesco Club in partnership with the Association Olisipo Forum and the Aljube Museum.
- *Biosphere – Seismic Risk* – Television Program RTP2 (16 Dec) – participation of Paula Teves Costa.
- *"Each of us is a civil protection agent"* - Interview with Paula Teves Costa to the *Alto Risco* Magazine - Supplement to the *Jornal Alto Risco* of the National Association of Professional Firefighters, nº 60, 8th series, September 2017, p.16-19.

2. Institutional support and Protocols

- CERU supported the awareness actions developed by the Neptune Serenity Association. A cooperation protocol is envisaged.

3. Projects

- Scientific and technological support to the LIQUEFACT research project, coordinated by the Faculty of Engineering of the University of Porto (FEUP), which involved the realization of 2 MASW seismic profiles in Lezíria do Tejo in collaboration with IST (UL). January - February 2017.
- Classification of Seismic Behaviour of Soils of the City of Lisbon. Lisbon Municipality (CML), November 2017 - July 2018.

4. Activities developed out under the projects financed by the EUR-OPA Agreement, Council of Europe

Under the BAYWATCH project "Involving sales and tourism agents on earthquake and tsunami mitigation measures", coordinated by the CERU, the following activities were carried out:

- Organization of a workshop held on 3 and 4 April, in Lagos (Algarve), on the prevention of tsunami risk for personnel responsible for safety in hotel and tourist facilities, as well as for the establishments that have concessions on the beaches. The workshop was attended by 46 people, including 4 foreign experts. From this seminar came several conclusions and recommendations, which have already been presented in several forums, in order to improve (1) the signals to be installed on beaches and (2) the awareness raising and information sessions to be developed in the future.
- Production and publication of a leaflet, in Portuguese and English languages, on "What to do in case of a tsunami", with application in the municipality of Cascais (an activity developed in collaboration with the SMPC of Cascais).
- Elaboration of a questionnaire addressed to hotel managers to assess their knowledge and sensitivity about the risk of tsunamis and the implementation of preventive measures.
- Elaboration of a proposal for a training module, to be introduced in the course of beach lifeguards, on the risk of tsunamis. This initiative was supported by the Ship Relief Institute (ISN) of the Portuguese National Maritime Authority (AMN).
- The CERU held meetings with the following entities: AHETA - Association of Hotels and Tourist Enterprises of the Algarve; ESGHT - School of Management, Hospitality and Tourism; RTA - Algarve Tourist Region; US Embassy in Lisbon. The objective of these meetings was to raise the awareness of the various institutions about the risk of tsunami and to evaluate the interest of developing training on this issue.

CERU also participated in the project *European Landslide Hazard Maps: Fostering European Harmonization of Slope Movement Hazard Assessment at various spatial scales*, coordinated by CERG (Centre Européen sur les Risques Géomorphologiques, Strasbourg, France). In the aim of this project work on the compilation of occurred landslides in Portugal and analysis of existing methods to assess the susceptibility of landslides was developed. This work was developed by Prof. Fernando Marques, from FCUL (University of Lisbon).

5. Publications and Communications presented at conferences

- Teves-Costa P, Mendes JM (2017). Risk Governance, Assessment, and Economic Impacts (Editorial). *International Journal of Disaster Risk Science* 8 (3): 235-236. (First online: 25 September 2017). <https://doi.org/10.1007/s13753-017-0144-7>.
- Teves-Costa P, Sousa ML, Matias L, Paula FM (2017) Tsunami danger signalling evaluation. *Proc. ICRSC - International Conference on Risks, Security and Citizenship, Setúbal (Portugal)* 30-31 March, 166-177.
- Teves-Costa P, Gomes RC, Vicêncio H, Gouveia F, Matias L, Caetano PS (2017) The use of non-invasive methods to characterize the terrain. *APMG2017 - 10th APMG Symposium on Meteorology and Geophysics, Lisbon* March 20-22.

Summary of the activities foreseen for 2018

During 2018 CERU intend to develop and participate in several activities:

- Development of the project BEACHRISKS, funded by EUR-OPA Agreement. This project aims to encourage the implementation of tsunami risk mitigation measures and other coastal risks, particularly those occurring on beaches. It intends to contribute to Tsunami Ready Community through two programs: Tsunami Ready Beach (TRB) and Tsunami Ready Hotel (TRH). The project is developed in collaboration with two specialized EC Centers: CEPRIS - Euro-Mediterranean Center for Evaluation and Prevention of Seismic Risk (Morocco) and ICoD - Euro-Mediterranean Center on Insular Coastal Dynamics (Malta). In addition, CERU will develop activities to raise awareness among local associations, hotels, beach concessionaires and other agents involved in tourism on the risks associated with beaches;
- Development of the project promoted by Lisbon Municipality (CML), on the Seismic Behavior of Soils in Lisbon, with the participation of researchers from the University of Lisbon (FCUL & IST);
- Participation, as an Associate Partner, at the 8th International Conference on Building Resilience, to be held in Lisbon (7-10 November), organized by the Faculty of Architecture of the University of Lisbon in collaboration with the Center for Social Studies of the University of Coimbra, and with the Global Disaster Resilience Center (GDRC) of the University of Huddersfield (UK);
- Supporting the preparation of a risk assessment proposal based on intergovernmental relations between central government and local government;

- Updating and promoting the CERU website to contribute to more resilient communities;
- Preparation of the next ICUR conference to be held in 2020 (ICUR2020): creation of the organizing committee;
- Collaboration in dissemination actions on risks promoted by the University of Lisbon (FCUL and IDL), by the Civil Protection Authorities at municipal level, and by local associations.

Lisbon, March 31st 2018

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):
BAYWATCH project <http://www.ceru-europa.pt/en/projectos.php>
European landslides project: <http://www.ceru-europa.pt/en/projectos.php?page=2>
3. Under "ACTIVITIES" page (other activities: workshop programs and communications)
<http://www.ceru-europa.pt/en/atividades.php>