

## 41th DPPI SEE Regional Meeting

CER!DES



*Large Scale Earthquake Management at Western Balkans through  
Joint Cross Border Cooperation Activities / BALANCE*

*DG ECHO FSX PROJECT (2021 - 2022)*

**“CHALLENGES ON ORGANIZING SIMULATION  
EXERCISES IN TIMES OF COVID1”**

# CER!DES – Excellence in Innovation and Technology

• Many thanks to Ministry of Interior of Montenegro and partners for trusting us

# CERIDES Aim

The **areas of focus** of **CERIDES** revolve around the development, use and evaluation of primarily quantitative and to a lesser degree qualitative methods in order to measure, assess, manage and communicate risk, and to analyze, design and implement decision-making mechanisms and systems.

CERIDES aims to create high quality output and build a high caliber reputation along three main areas:

- Research: **CERIDES** aspires to create a vibrant research community within Cyprus and the region.
- Education / Training: **CERIDES** intends to provide an academic framework for risk science and create a career path for researchers emerging from the University. The Centre will provide high-quality teaching that will challenge students and help them develop skills in critical thinking, research and problem-solving.
- Consultancy: One of the key aims of the **CERIDES** is to assist organisations to effectively manage risk and uncertainty and assist decision making in the fields of occupational, industrial, natural and environmental hazards.



## Facts and Figures in 2019-20<sup>4</sup>

- Employs 9 Faculty + 20 Researchers + 10 PhD Cand
- Has attracted already in excess of €5.7 M
- Coordinating 3 H2020, 1 I&EK, 1 DG ECHO
- 20+ EU funded projects
  - H2020
  - FP7
  - DG ECHO
  - DG Home
  - DG Justice
  - Research Promotion Foundation

# BALANCE General Overview

BALANCE aims to address the pressing needs of effective multi-lateral response, reducing the disaster risk in highly prone regions and among social groups with inadequate institutional capacities for disaster management, while enhancing response coordination to complex events and improving the skillsets and contingency plans and the bilateral and multilateral cooperation protocols in the field of civil protection. The relevance of the project can also be seen in the existing literature with a plethora of studies emphasizing on the need for:

National and local risk assessments to take account of transboundary risks, with a view to regional cooperation on risk reduction

Relevant information on disasters to be available and accessible at all levels, to all stakeholders (through networks, development of information sharing system etc.)

Social development policies and plans to reduce the vulnerability of populations most at risk

Changes in communication within organisations, between organisations and technical operators, and between organisations and civil society

Systems for monitoring and disseminating data

# BALANCE objectives

The overall objective of Balance is to carry out major emergency simulation exercise, in the context of the Union Civil Protection Mechanism, making it possible to respond to natural disasters and fight the consequences of it. Exercises will be organized as a combination of Table-Top Exercises and full-scale exercise, as a main event. The purposes of the project are to:

1. Implement a complete set of activities for an efficient and effective response to earthquakes and their cascading effects
2. Create, within the Union Civil Protection Mechanism and neighbouring countries, a common basis of understanding concerning the tasks, procedures and co-operation during international civil protection assistance interventions
3. Enhance existing SOPs for emergency response and especially cross border SOPs in an area with countries both within and outside the UCPM
4. Establish an integrated approach for protecting critical infrastructures, including cultural heritage
5. Utilize new technologies in rescue operations
6. Improve local and national emergency planning documents emphasizing in regional, inter-regional planning preparedness and response effectiveness by providing new insights from the exercise
7. Elaborate guidelines and novel suggestions for improving legislations in the area on protection and rescue and in the area of civil engineering (transposition EU and ISO standards)
8. Optimize operational procedures and coordination between Intervention teams
9. Provide clear understanding of the UCP Mechanism in order to implement HNS Guidelines and improving the HNS procedures

# BALANCE objectives

10. Use specialized equipment (including drones for various services), protection / evacuation of cultural monuments
11. Elaborate lessons learned by the operational forces of Partner countries (including capitalization and mainstreaming of results)
12. Check compatibility of different rescue and communication equipment (during the common work of international rescue teams)

The International Exercise also aims to implement the accepted standards for cross border cooperation in the area of Western Balkans. In addition, the exercise project will bring added value to the Institute of Hydrometeorology and Seismology (IHMS) of Montenegro by:

- Strengthening cooperation with Ministry of Interior – Directorate for Emergency Management
- Testing and improving of modes, means and procedures of communicating the first official information on earthquake
- Raising the awareness among the stakeholders and general public.
- Facilitation capacity building through technical support and training
- Raising capability of IHMS to support decision making of first responders through robust, fast, reliable and applicable information (reports and maps) on earthquake event
- Establishing the cooperation with ORFEUS and EIDA for the strong motion seismic waveform data
- Establishing national basis in way forward to scenario building and seismic risk assessment

Table Top Exercise – 05/2022

Command Post Exercise (CPX) and Full Scale Exercise (FSX) – 10/2022

3 planning conferences (2021 and 2022)

## SCENARIO – **EARTHQUAKE**, in the area of Boka Kotorska Bay

Exercises (TTX, CPX and FSX) will be realized in the area of Boka Kotorska Bay – area which has a huge cultural heritage as well as Kotor is area under the UNECSO protection while other places are declared as nature parks. This area is recognized as popular touristic destination at the Adriatic sea

The first time Mol Montenegro organized exercise in the cultural protected area especially because this area hit the devastating earthquake on 15<sup>th</sup> of April, 1979 and it is area with a possible maximum intensity in middle ground conditions of nine degrees of MCS scale





## SCENARIO

On 20<sup>th</sup> of June, 2022, at 16:40 a major earthquake hits southern Montenegro. Damages in all coastal towns are reported. **Earthquake of 6.6 magnitude Richter scale was located at the entrance of Boka Kotorska bay (42.389N; 18.515E), app 8 km south of Herceg Novi:** calculated foci is on the depth of 16 km

According to calculation model effects of **intensity VIII were expected in municipalities of Herceg Novi & Tivat & VII in Kotor**, decaying further with the epicentral distance. According to model earthquake had damaging potential in municipalities of Cetinje, Budva & Bar (VII intensity)

The aftershock of magnitude of 5.7 on Richter scale hit affected area & caused additional crashes & created the difficult conditions for rescue operations

Affected more than 100.000 people, including some 30.000 foreign tourists & officials. Estimated number of fatalities is more than 500 & an injured people is app. 1500. More than 70.000 residents need temporary shelters. Around 30.000 of them require complete re-housing. Estimates of missing person is few hundred most trapped under the ruins

Critical and other infrastructures are seriously affected and damaged (airport, ports, bridges, main roads, tunnels, hospitals, cultural monuments...)

Government of Montenegro sent the request for international assistance to the ERCC – Emergency Response Coordination Centre through the Operational Communication Centre 112 (OCC 112) of the Protection and Rescue Directorate of Ministry of the Interior. The request mainly concerns the following needs: MUSAR teams



**OBJECTIVES OF EXERCISE:**

- Exercise will identify possible potentials for temporary shortcomings (buffer capacities) of the capacities of the involved response actors
- Possibility of evaluations and comparisons in the context of past experiences, namely whether there is evidence of shortcomings or unmet requests for assistance, but also from the exchange of experience on the exercise
- Considerations about innovation (i.e. potential evolution of required future response capacities)
- Testing new operational procedures for people most vulnerable in a disaster, especially disabled / with reduced mobility / joint training of CP professionals / volunteers and professionals / volunteers working with those people.
- Enhancing the common capacity for quickly mobilizing the necessary resources, coordinating operations and thereby ensuring a timelier and efficient response capability
- Reinforcing networks among Civil Protection experts for a proper response to natural and other disasters
- Improving the capacity of the national staff to provide an effective Host Nation Support plan for the incoming international assistance (Teams/Modules and Resources)
- Test protection of cultural heritage monuments and artefacts
- Link exercises with communities resilience initiatives
- Explore Social Media potential in field exercises conduct (i.e. increasing interest of volunteers and professional groups)
- Explore added value of tools such as participatory GIS for activating citizens /local societies

## ANTICIPATED EXERCISE STAKEHOLDERS FROM THE HOST COUNTRY:

Ministry of Interior (all relevant departments especially Protection and Rescue Directorate), Ministry of Foreign Affairs, Ministry of Defence, Ministry of Health, Ministry of Finance and Social Welfare, Ministry of Ecology, Spatial Planning and Urbanism, Ministry of Agriculture, Forestry and Water Management, Water Administration)

First responders (firefighters, police and medical emergency service) Red Cross

Specialist units for protection and rescue

Volunteers firefighter's units

Entrepreneurial units for protection and rescue

### **Entities managing cultural heritage monuments and UNESCO Heritage sites**

- **Testing procedures and skills of intervention teams/modules in special condition in the cultural protected area**
- **Establishing close collaboration among intervention teams/modules and cultural experts**

Private companies (mobile operators, electricity, ferryboat company, port)

Local authorities of Herceg Novi, Kotor and Tivat (local secretariats for environment, cultural heritage, transport and urban planning, inspections and local touristic organizations)

Water supply companies and other public communal companies

Institute of Hydrometeorology and Seismology

Natural and Environmental Protection Agency and Administration for the Protection of Cultural Properties

University of Montenegro – Faculty of Civil Engineering

### **NGOs which dealing with persons and children with disabilities**

- **Trying to include persons and children with disabilities from the Special school in Kotor in the exercise in order to drill procedures with these persons**

NGOs for environment protection and protection cultural heritage

Others to be specified during initial project implementation phase

# SUCCESS FACTORS (Covid19 Era)

1. **Realistic Worse Case Scenario(s)** to challenge civil protection system at all levels, elaborated by operational partners and supported by scientific ones (i.e. Seismological Institute (s))
2. **“Adoption” of BALANCE FSX** exercise by Mol as part of the national programme of exercises
3. **Political willingness** from Mol Montenegro and partners to use BALANCE to improve specific elements (and interactions) of civil protection system / capabilities of teams – Linkage with other national / international initiatives
4. **Many local trips** by Mol and hosting country beneficiaries to pilot areas to discuss with stakeholders, local communities, identify where the exercise will take place (exact locations), check logistic issues etc
5. **Detailed Study Visit (of beneficiaries)**, to visualize activities, meet (and listen to) all players and stakeholders, know the area characteristics, “reveal” similar / complementary activities that stakeholders may implement and make it clear that BALANCE will produce added value for all parties (with their active participation). **Study visit creates a common picture and understanding of the actual needs and challenges, avoiding misunderstanding and mistakes in planning**

# SUCCESS FACTORS (Covid19 Era)

6. **Establishment of permanent partnerships** of major stakeholders on disaster risk reduction and management (i.e. Public – Private sectors and Local Communities / research and operational organizations) – to create trust and promote elaboration of safety culture regardless of the exercise
7. **DG ECHO support and Partners' full engagement** (synergies with other projects, knowledge transfer...) to gain from experience of other projects or from partners of the same consortium (i.e. in organizing planning conferences online or conducting online table top exercises)
8. **Thorough evaluation** of exercise(s) and project from the very beginning in order, creating an evaluation plan B if some exercise activities be held online
9. **Creating Working Groups (involving key stakeholders)** to work in details to various aspects of the exercise (i.e. how to engage disabled people, how to organize exercises in cultural heritage monuments etc). That procedure will create a clear picture which activities can be done online and may reveal solutions for field activities not initially identified

**Thank you !**  
**Ευχαριστώ!**  
**תודה !**  
**شكر**  
**Gracias !**  
**謝謝 !**

 [cerides.euc.ac.cy](http://cerides.euc.ac.cy)

 [info.cerides@euc.ac.cy](mailto:info.cerides@euc.ac.cy)

 [www.facebook.com/cerides](https://www.facebook.com/cerides)

