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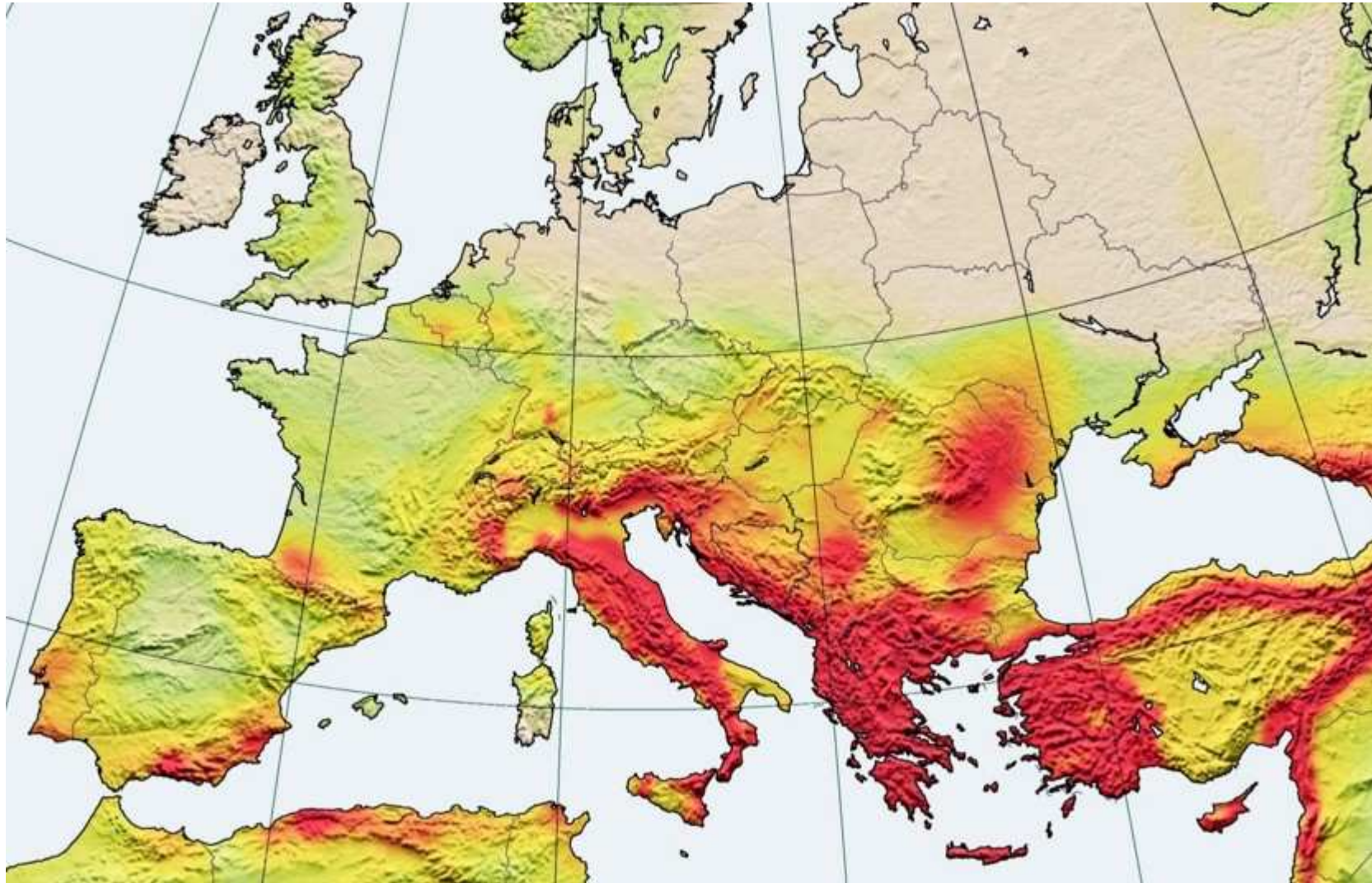
National Institute for Research and Development in Construction, Urban Planning and Sustainable Spatial Development “URBAN-INCERC”, Bucharest, Romania

ECBR – EUROPEAN CENTER FOR BUILDINGS REHABILITATION

**REPORT ON ECBR ACTIVITIES IN 2017
PROJECT FOR 2018-2019**

**DIRECTOR OF ECBR,
Dr. Eng. Emil - Sever Georgescu
Paris, 6-7 November 2017**

Half of Europe is seismic area



ESC - SESAME Project, 2003

MARCH, 4, 1977 VRANCEA, ROMANIA EARTHQUAKE DISASTER



- ◆ March, 4, 1977 Vrancea earthquake -
- ◆ $M = 7.2$, $I_{max} = 8$ MSK
- ◆ 23 of 40 counties were strongly affected, with Bucharest recording the highest loss, accounting for 70% of the total, i.e. US\$ 1.4 billion.
- ◆ Counties in the south-east of the country (Teleorman, Dolj and Prahova) but also in north-east (Iasi, Bacau) suffered significant damage.
- ◆ March 4, 1977

◆ Bucharest - Collapse of 25 buildings that were damaged in 1940 and left without strengthening

March, 4, 1977 Vrancea earthquake -

◆ Casualties :

- 1,578 deaths (1,424 or 90% in Bucharest)
- 11,300 injured (7,600 or 68% in Bucharest)

Damage to buildings:

- ◆ 35,000 homeless families
- ◆ 32,900 collapsed or destroyed housing units
- ◆ 763 collapsed or destroyed commercial/industrial units
- ◆ 47 collapsed or destroyed hospitals
- ◆ 257 collapsed or destroyed educational buildings
- ◆ 181 collapsed or destroyed cultural buildings



CITIZENS MUST BE EDUCATED AND TRAINED FOR BUILDINGS REHABILITATION AND EARTHQUAKE SAFETY

The ECBR Project 2016-2017:

Collective action for social resilience: earthquake training and preparedness of citizens, school students and volunteers from communities.

Note: In 2017 ECBR did not sign Administrative Arrangement. The work was done with resources existing in URBAN-INCERC.

a). Global objective:

- foster the resilience of societies as a whole by preparedness of citizens, school students and community volunteers for personal, family and group protection create stakeholders for earthquake preparedness.

ECBR objectives:

- organizing short time free-field seminars directly with citizens in 2 communities

b). Expected results:

- provide practical knowledge and create positive risk reduction perception for citizens

c). Results :

ECBR held seminars in ECBR room of URBAN-INCERC and expanded the preparedness activities and created more stakeholders for earthquake preparedness in Romania.

The **target communities** for seminars were enlarged to:

- Students, architects of University of Architecture and Urbanism „Ion Mincu”, Bucharest, and some engineers
- Community leaders – mayors of Prahova County, seismic area
- High level officials of PAID - Romanian Insurance Pool for Compulsory Disaster Insurance, Insurance staff involved in coverage of catastrophe risks in Romania.
- Staff of the central office of ANP-National Administration of Penitentiaries.

The obtained results were the same as planned, i.e. to create positive risk reduction perception.

ECBR results in 2017 in Romania and at international conferences:

- 4 presentations for national and international conferences
- 1 seminar presentation for students in University of Architecture
- 2 papers to 16th World Conference on Earthquake Engineering, 16 WCEE 2017 Santiago Chile, January 9th to 13th 2017:
 - *SCIENCE FOR EARTHQUAKE AWARENESS IN ROMANIA: EXPERIENCE OF URBAN-INCERC AND ECBR*
 - *NIRD URBAN-INCERC, ROMANIA SEISMIC STRONG MOTION NETWORK: State of the art and needs of development*

ECBR PROJECT 2018-2019

SEISMIC RISK PREPAREDNESS AND DISASTER RISK REDUCTION – DRR TRAINING FOR VULNERABLE GROUPS OF POPULATIONS, SCHOOL STUDENTS AND VOLUNTEERS IN NEIGHBORHOODS IN ROMANIA

Coordinator Centre: ECBR, Bucharest, Romania

Partner 1: ECRP Sofia, Bulgaria - providing expertise and educational materials for earthquake preparedness to ECBR

Partner 2: ECPFE, Athens, Greece – providing expertise and educational materials for earthquake preparedness to ECBR

Partner 3: ECMNR – Chisinau, R. of Moldova - providing expertise and educational materials for earthquake preparedness to ECBR

2018

- Development of specific knowledge transfer / training materials for neighborhoods with traditional, old and vulnerable low-rise buildings, for citizens and volunteers - in Romanian language;
- Knowledge transfer by training seminars for citizens / volunteers/ students using courses, printed materials and didactic seismic simulators

Activities

- ***Organization of short time free-field seminars directly with citizens in two neighborhoods - traditional, old and vulnerable low-rise buildings***
 - Date: May-June 2018
 - Duration: 2 hours in each of two neighborhoods places –
 - Participants: about 20-30 citizens in each vulnerable group

- ***Organization of training seminar for citizens / volunteers***
 - Date: May-June 2018
 - Duration: 2 days
 - Participants: 20 Romanian citizens / volunteers

Expected Results

- Provide practical knowledge and create positive DRR perception for citizens.
- Direct transfer of earthquake preparedness knowledge to the community using verbal explanations, didactic mini-simulators and leaflets for citizens in neighborhoods with traditional, old and vulnerable low-rise buildings
- Learning and understanding reason, means and ways of achieving earthquake preparedness knowledge, good practice and skills for persons, groups, family and community members
- Receive materials and have exchange of experience on earthquake disaster risk reduction in neighborhoods at risk within EUR-OPA centers

2019

- Development of specific knowledge transfer / training materials for neighborhoods with old and vulnerable high-rise buildings erected before 1940 and/or 1977 earthquake disasters, for citizens and volunteers - in Romanian language,
- Knowledge transfer by training seminars for citizens / volunteers/students using courses, printed materials and didactic seismic simulators;
- Confirming good practices during a Final Workshop with associated centers

Organization of short time free-field seminars directly with citizens in two neighborhoods – places with old and vulnerable high-rise buildings erected before 1940 and/or 1977 earthquake disasters

- Date: May-June 2019, Duration: 2 hours
- Venue: near buildings, in each of two neighborhoods places in Sector 2 of Bucharest
- Participants: about 20-30 citizens in each vulnerable group

Organization of training seminar for citizens / volunteers to become trainers for other citizens

- Date: May-June 2019, Duration: 2 days
- Venue: ECBR Room in URBAN-INCERC
- Participants: 20 Romanian students / citizens / volunteers

Organization of a Project Workshop with associated centers

- Date: October 2019, Duration: 2 days
- Venue: ECBR Room in URBAN-INCERC
- Participants: 3 Directors of EUR-OPA associated centers of Bulgaria, Greece, and Republic of Moldova

Expected results

- Direct transfer of earthquake preparedness knowledge to the community using verbal explanations, didactic mini-simulators and leaflets for citizens in neighborhoods with old and vulnerable high-rise buildings erected before 1940 and/or 1977 earthquake disasters
- Learning and understanding reason, means and ways of achieving earthquake preparedness knowledge, good practice and skills for persons, groups, family and community members
- Increase resilience and pro-active behaviour of citizens in risky neighborhoods, with assistance of volunteers.
- Confirmation of good practices on earthquake disaster risk reduction in neighborhoods at risk within EUR-OPA centers by an ECBR Workshop in Romania
- Fostering official duties of Civil Protection (IGSU) and attracting some NGO's to be partners of IGSU and ECBR in multiplying the risk reduction effect in neighborhoods.

Thank you very much !