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ACCORD EUR-OPA RISQUES MAJEURS



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

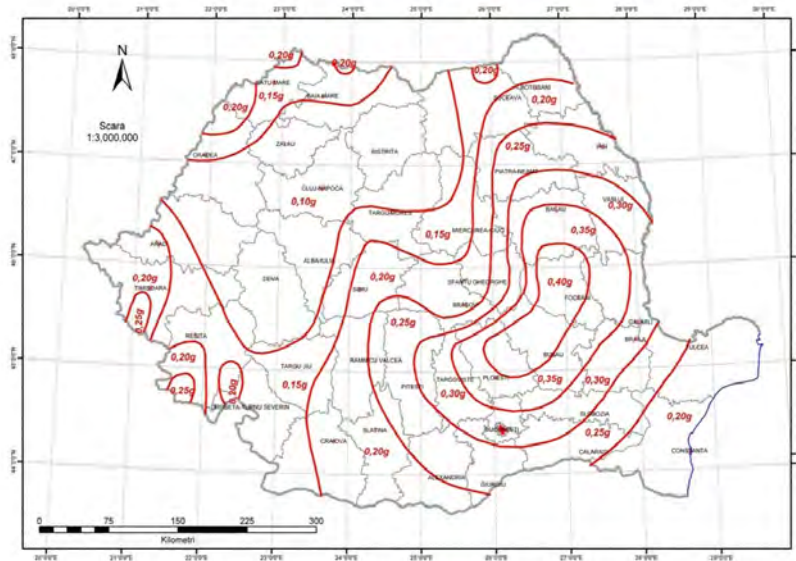
ECBR – EUROPEAN CENTER FOR BUILDINGS REHABILITATION

**REPORT ON ECBR ACTIVITIES IN 2019.
PROPOSAL OF ECBR PROJECT IN 2020-2021**

Dr. Eng. Emil - Sever Georgescu
DIRECTOR OF ECBR,

Paris, France, 5-6 November 2019

ALL ROMANIA IS A SEISMIC COUNTRY



Romania Seismic Zoning Map

Code P100-1/2013 for Seismic Design. Return period 225 years. Bucharest – design acceleration 0.3

VRANCEA DEEP SEISMIC SOURCE CAUSED TRANSBOUNDARY DISASTERS IN R. MOLDOVA, UKRAINE AND BULGARIA

ECBR is in the frontline to promote UNO-DRR Sendai Framework

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

**ALL SOCIETY SHALL BE RESILIENT.
PUBLIC INSTITUTIONS STAFF AND CITIZENS MUST
BE EDUCATED AND TRAINED FOR BUILDINGS
REHABILITATION AND EARTHQUAKE SAFETY**

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

SENDAI PRIORITIES FOR ACTION OF THE MEDIUM TERM PLAN:

- Promoting risk culture among population (children, adults and groups with special vulnerability).
- Fostering population's active participation (as individuals and as community) to DRR.

Activities in 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: October-November, 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: September 2019, Duration: 2 days
- Venue: ECBR Room in URBAN-INCERC
- Participants: 30 Romanian students / citizens / volunteers

SEMINAR ECBR 12-13 SEPTEMBER 2019



Organization of a Project Workshop with associated centers – Not feasible because of specific reasons

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

Other ECBR activities

- **ROMANIAN ACADEMY Simposium “Earthquakes of Vrancea Zone – a challenge for geosciences and society”, March, 4 2019**



ACADEMIA ROMÂNĂ
Simpozionul
“Cutremurele vrâncene: o provocare pentru
geostiințe și societate”
4 martie 2019

**RISCU SEISMIC ÎN ROMÂNIA:
scenarii, percepții și realități**
Dr. ing. Emil-Sever GEORGESCU
Director Științific
INCĐ URBAN-INCERC
Cercetător Științific I, Sucursala INCERC București

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MINISTERUL CERCETĂRII ȘI INOVĂRII

Institutul Național de Cercetare-Dezvoltare în Construcții
Urbanism și Dezvoltare Teritorială Durabilă URBAN-INCERC

ECBR



UNESCO International Platform for Reducing Earthquake
Disasters (IPRED) International Workshop
11-12 June 2019, Technical University of Civil Engineering
Bucharest, Romania

**EARTHQUAKE HISTORY OF UNESCO HERITAGE
BUILDINGS IN TRANSYLVANIAN BURG OF
SIGHISOARA, ROMANIA**
Emil Sever Georgescu
National Institute for Research and Development in
Constructions, Urban Planning and Sustainable Spatial
Development – URBAN-INCERC, Bucharest, Romania

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ACCORD EUROPEAN RESOURCES MAJORS

ECBR

- **UNESCO International Platform for Reducing Earthquake Disasters (IPRED) International Workshop 11-12 June 2019, Technical University of Civil Engineering Bucharest, Romania**
- **ECBR presentation on seismic risk and preparedness with demonstration with didactic seismic simulators for The 16th edition of the Research conference on constructions, economy of buildings, architecture, urban and territorial development “The smart city: synergies between spatial planning, urbanism and constructions”, 24 October 2019**
- **Conference on Building Resilience to Natural Disasters, organized by Ministry of Foreign Affairs, Palace of the Parliament of Romania, (Bucharest, 12 March 2019)**
- **ECBR presentation on seismic risk and demonstration with didactic seismic simulators for university students of USAMV – Faculty of Land Reclamation and Environment Engineering, May 2019**





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PREZENTARE SPECIALA PENTRU VIZITA STUDENȚI USAMV 2019

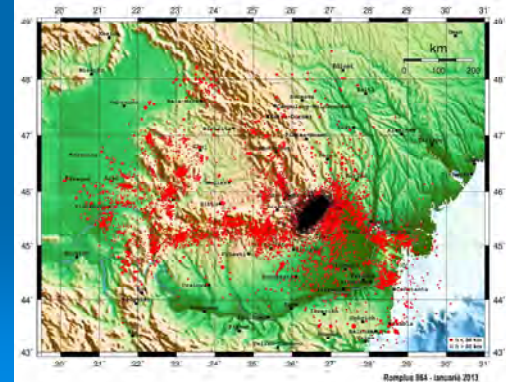
CUTREMURELE ȘI RISCUL SEISMIC DIN ROMANIA

Dr. ing. Emil-Sever GEORGESCU
DIRECTOR ȘTIINȚIFIC

DIRECTOR ECBR – Centrul European pentru Reabilitarea Clădirilor
din cadrul Acordului EUR-OPA Hazarduri Majore

Cercetător Științific I,
RETEAUA NAȚIONALĂ DE MONITORIZARE ȘI PROTECȚIE SEISMICĂ
A PATRIMONIULUI CONSTRUIT
INCERC URBAN-INCERC

De cât timp avem date despre cutremurele din
România ? Din 984 AD – cronicile bizantine
(Catalog ROMPLUS, INFP)



Obtained results in 2019

- 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.

NEW ECBR PROJECT 2020-2021

USING KNOWLEDGE FROM EUR-OPA SPECIALIZED CENTRES TO ENSURE EARTHQUAKE RESILIENCE OF IMPORTANT COMMUNITY BUILDINGS. PREPARATIVES TO SUPPORT THE FORTHCOMING STRATEGY OF SEISMIC RISK REDUCTION IN ROMANIA.

Coordinator Centre: ECBR, Bucharest, Romania

Partner Centre: ECPFE Greece, Athens

The main field of activity of ECBR in Romania, i.e. "building rehabilitation", has entered in a new phase, as **a new Strategy of Seismic Risk Reduction is under preparation at the ministry in charge – MDRAP with the support of the World Bank, to be enforced in 2020-2021.**

Recently, **the Law – Ordinance No. 20/1994 was modified as to make compulsory the risk assessment and classification of all schools built before 1978 by 2021.**

New ECBR Project for 2020-2021 - The general aim is to work in support of MDRAP to prepare the enforcement of the new strategy, such as:

- to speed the use of scientific and technological knowledge to promote the new Strategy of Seismic Risk Reduction and better assess risks and adapt accordingly the resilience strategies for important public facilities, as schools, hospitals and other public institutions/facilities.
- to strengthen the governance capacity of local authorities for implementing the new Strategy of Seismic Risk Reduction while developing cooperation among all decision-makers in DRR using the knowledge from EUR-OPA specialized centres (ECBR, Bucharest, Romania; ECPFE Greece, Athens)

2020-2021 ECBR PROJECT - SENDAI PRIORITIES FOR ACTION OF THE MEDIUM TERM PLAN:

- **Using scientific and technological knowledge to better assess evolving risks and adapt accordingly the resilience strategies.**
- **Developing cooperation among all decision-makers to better define authorities' adequate role in DRR.**

Specific objectives

2020

- Preparation of training materials and of scientific knowledge transfer on seismic risk reduction for school / educational facilities, addressed to professors, school principals / directors and administrative staff, by training seminars
- Knowledge transfer by training seminars for employees of local authorities to strengthen their governance capacity for implementing the new Strategy of Seismic Risk Reduction, using the prepared developed materials.
- Exchange of experience with the associated center (ECPFE Greece, Athens).

2021

- Preparation of training materials and provide knowledge transfer on seismic risk reduction for hospitals / medical / sanitary facilities, addressed to directors, medical and administrative staff, by training seminars
- Knowledge transfer by training seminars on seismic risk reduction for staff of crowded facilities, using specifically developed materials.
- Exchange of experience with the associated center (ECPFE Greece, Athens).

Activities in 2020

Coordinator Centre: ECBR, Bucharest, Romania

Organization of training seminars on seismic risk reduction for school / educational facilities, addressed to professors, directors and administrative staff

- Date: May-June 2020, Duration: one day
- Venue: ECBR Hall in URBAN-INCERC
- Participants: about 25 persons

Organization of training seminar for local authorities staff / employees

- Date: May-June 2020, Duration: one day
- Venue: ECBR Hall in URBAN-INCERC
- Participants: about 25 persons

Partner 1: ECPFE Greece, Athens - attending seminars for providing expertise and educational materials to ECBR and participants for earthquake preparedness to ECBR on specific risks reduction in schools or public institutions

Activities in 2021

Coordinator Centre: ECBR, Bucharest, Romania

Organization of training seminars on seismic risk reduction for hospitals / medical / sanitary facilities, addressed to directors, doctors and administrative staff

- Date: May-June 2021, Duration: one day
- Venue: ECBR Hall in URBAN-INCERC
- Participants: about 25 persons

Organization of training seminar on seismic risk reduction for staff of crowded facilities

- Date: May-June 2021, Duration: one day
- Venue: ECBR Hall in URBAN-INCERC
- Participants: about 25 persons

Partner 1: ECPFE Greece, Athens – attending seminars for providing expertise and educational materials to ECBR and participants for earthquake preparedness on specific risks reduction in hospitals / medical / sanitary facilities schools or public institutions and crowded facilities.

Expected Results

2020

- Provide scientific and practical knowledge about the objectives of the new Strategy of Seismic Risk Reduction and create positive disaster risk reduction perception for school / educational facilities, addressed to professors, directors and administrative staff and local authorities employees, respectively.
- Receive educational materials and have exchange of experience on earthquake DRR with ECPFE Greece, Athens

2021

- Provide scientific and practical knowledge about the objectives of the new Strategy of Seismic Risk Reduction and create positive disaster risk reduction perception for hospitals employees and staff of crowded facilities
- Receive educational materials and have exchange of experience on earthquake DRR with ECPFE Greece, Athens

Deliverables

2020

Coordinator Centre ECBR, Bucharest, Romania:

- Reports of seminars and workshops to be distributed to the EUR-OPA Secretariat and partners
- Publication of training materials for schools staff and local authorities employees and course support text for seminar participants
- Partner 1 : ECPFE Greece, Athens - reports, recommendations, brochures, leaflets including expertise and educational materials for earthquake preparedness in schools and public institutions in Greece

2021

Coordinator Centre ECBR, Bucharest, Romania:

- Reports of seminars and workshops to be distributed to the EUR-OPA Secretariat and partners
- Publication of training materials for hospital staff and staff of agglomerated facilities and course support text for seminars

Partner 1 : ECPFE Greece, Athens - reports, recommendations, brochures, leaflets including expertise and educational materials for earthquake preparedness in hospitals and crowded facilities.