

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 2021.
PROPOSAL OF ECBR PROJECT IN 2022-2023**

Dr. Eng. Emil - Sever Georgescu
DIRECTOR OF ECBR

Joint Meeting of the Committee of Permanent Correspondents and Directors of Specialised Centres
VIA VIDEO CONFERENCE
10-11 February 2022, 09:00-16:30 CET

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

► **ECBR activities in 2020-2021 - Because of the SARS-CoV-2 / COVID-19, the ECBR Seminars were held on-line**

Specific objectives in 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 **National Seismic Risk Reduction Strategy**, using the prepared materials.

Activities in 2020

- **Organization of an on-line training seminar – Webinar on seismic risk reduction for schools / educational facilities, addressed to professors, directors and administrative staff**
 - Date: 22 October 2020, Zoom Webinar broadcast from ECBR Hall in URBAN-INCERC, **about 100 attendees**
- **Organization of an on-line training seminar – Webinar for local authorities staff / employees**
 - Date: 23 October 2020, Zoom Webinar broadcast from ECBR Hall in URBAN-INCERC, **about 50 attendees**

Results - 2020

- Providing scientific and practical knowledge about the objectives of the new Strategy of Seismic Risk Reduction and creating positive disaster risk reduction perception for school / educational facilities - addressed to professors, directors and administrative staff and local authorities employees, respectively.

Deliverables - 2020

- 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, as well as course support for seminar participants

ECBR ACTIVITIES IN 2021

Specific objectives in 2021

- Preparation of training materials and providing 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.

Activities in 2021

- **Organization of an on-line training seminar on seismic risk reduction for hospitals / medical / sanitary facilities, addressed to directors, medical and administrative staff**
 - Date: 21 October 2021, Duration: one day, five sessions, Zoom Webinar from ECBR Hall at URBAN-INCERC
 - Participants: **54 persons**
- **Organization of an on-line training seminar on seismic risk reduction for staff of crowded facilities**
 - Date: 22 October 2021, Duration: one day, five sessions, Zoom Webinar from ECBR Hall at URBAN-INCERC
 - Participants: **22 persons**

Results – 2021

- Providing scientific and practical knowledge about the objectives of the new Seismic Risk Reduction Strategy and create positive disaster risk reduction perception for hospital employees and staff of crowded facilities

Deliverables – 2021

- 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

The most significant achievements as result of the grant during the time reporting period:

- ▶ *Organization in 2020 and 2021 of on-line seminars with numerous sessions and discussion sessions*
- ▶ *Preparation of deliverables for seminars by ECBR members:*
 - *Dr. Eng. Emil Sever Georgescu, Senior Researcher*
 - *Asssoc. Prof. Dr. Eng. Habil. Iolanda-Gabriela Craifaleanu, Senior Researcher*
 - *Lecturer Dr. Eng. Daniela Dobre, Senior Researcher*
 - *Asssoc. Prof. Dr. Eng. Claudiu Sorin Dragomir, Senior Researcher*
- ▶ *Invitation of relevant stakeholders, with presentations covering four themes, as follows:*
 - *The situation of seismic hazard, vulnerability and risk in Romania. Destructive earthquakes in the history of Romania. European and worldwide earthquakes that involved schools damage. Specific features of educational buildings, hospital facilities, crowded buildings, public institutions (including courts and tribunals). Seismic risk reduction and earthquake preparedness in such facilities. Actions to be taken before, during and after earthquakes. Education / teaching resources*
 - *National Seismic Risk Reduction Strategy – outline, objectives and pillars*
 - *Seismic risk reduction and earthquake preparedness in respective facilities. Actions to be taken before, during and after earthquakes. Education / teaching resources*
 - *The situation of seismic hazard, vulnerability and risk in Romania. Destructive earthquakes in the history of Romania. European and worldwide earthquakes that involved public authorities. Specific features of public authorities' buildings. Responsibilities of public authorities and methodology for post-seismic investigation and safety of buildings*
- ▶ *The connection of earthquakes impact with SARS-CoV-2 / COVID-19 impact*
- ▶ *Discussions and on-line surprise surveys on the participants' perception on specific aspects of seismic risk reduction in their places of residence and at work*

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MINISTERUL EDUCAȚIEI ȘI CERCETĂRII

EUR OPA

ECBR

Seminar ECBR on-line (Webinar) - 23.10.2020

HAZARD, VULNERABILITATE ȘI RISC SEISMIC ÎN ROMANIA.

CUTREMURELE DISTRUCTIVE DIN ISTORIA ROMÂNIEI!

Dr. ing. Emil-Sever GEORGESCU
Dr. ing. Iolanda-Gabriela CRAIFALEANU

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

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STRATEGIA NAȚIONALĂ DE REDUCERE A RISULUI SEISMIC

DR. ING. IOLANDA-GABRIELA CRAIFALEANU
DR. ING. EMIL-SEVER GEORGESCU

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

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RISUL SEISMIC: UNITĂȚI DE ÎNVĂȚĂMÂNT

TIPOLOGII DE CLĂDIRI

Proiecte tip – anii '50-80

Fig. 13. Tipologia școlii tipic comuniste din România (1950-1980) (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100) (101) (102) (103) (104) (105) (106) (107) (108) (109) (110) (111) (112) (113) (114) (115) (116) (117) (118) (119) (120) (121) (122) (123) (124) (125) (126) (127) (128) (129) (130) (131) (132) (133) (134) (135) (136) (137) (138) (139) (140) (141) (142) (143) (144) (145) (146) (147) (148) (149) (150) (151) (152) (153) (154) (155) (156) (157) (158) (159) (160) (161) (162) (163) (164) (165) (166) (167) (168) (169) (170) (171) (172) (173) (174) (175) 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EXEMPLE DE DEZASTRE SEISMICE CARE AU IMPLICAT ȘCOLI

DR. ING. EMIL-SEVER GEORGESCU

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

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EUR OPA

ECBR

Seminar ECBR on-line (Webinar) - 22.10.2020

RESURSE EDUCATIONALE PENTRU TRANSFERUL DE CUNOȘTINȚE PRIVIND PROTECȚIA LA CUTREMUR ȘI REDUCEREA RISULUI SEISMIC

Dr. ing. Emil-Sever GEORGESCU, CS I
Dr. ing. Daniela DOBRE, CS III

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

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII

EUR OPA

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REDUCEREA RISULUI SEISMIC ȘI PREGĂTIREA ANTICIPATĂ PENTRU CUTREMUR A CLĂDIRILOR, ECHIPAMENTELOR ȘI MOBILIERULUI DIN DOMENIUL SĂNĂȚĂȚII

Dr. ing. CS I Emil-Sever GEORGESCU
Dr. ing. CS III Daniela DOBRE
Dr. ing. CS I Iolanda-Gabriela CRAIFALEANU
Dr. ing. CS III Claudiu Sorin DRAGOMIR

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

REȚEAUA NAȚIONALĂ DE MONITORIZARE ȘI PROTECȚIE SEISMICĂ A PATRIMONIULUI CONSTRUIT
INCERC URBAN-INCERC

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

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII

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RISUL SEISMIC: CLĂDIRI ALE AUTORITĂȚILOR LOCALE

TIPOLOGII DE CLĂDIRI

Clădiri tradiționale și/sau monument istoric – structură din zidărie

Primăria Buzău <https://primariabuzau.ro/institutiade-arhitecturalocal/>

Primăria Timișoara <https://orasul-timoara.ro/local-10153/>

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MINISTERUL EDUCAȚIEI ȘI CERCETĂRII

EUR OPA

ECBR

Seminar ECBR on-line (Webinar) - 23.10.2020

REDUCEREA RISULUI SEISMIC ÎNTR-O CLĂDIRI CU FUNCȚIUNI PENTRU AUTORITĂȚI PUBLICE LOCALE

PREGĂTIREA ANTICIPATĂ A PERSONALULUI, CLĂDIRILOR, ECHIPAMENTELOR ȘI MOBILIERULUI PENTRU CUTREMUR

Dr. ing. CS I Emil-Sever GEORGESCU
Dr. ing. CS III Daniela DOBRE
Dr. ing. CS Iolanda-Gabriela Craifaleanu

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

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MINISTERUL CERCETĂRII, INOVĂRII ȘI DIGITALIZĂRII

EUR OPA

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RISUL SEISMIC: UNITĂȚI SPITALICEȘTI

TIPOLOGII DE CLĂDIRI

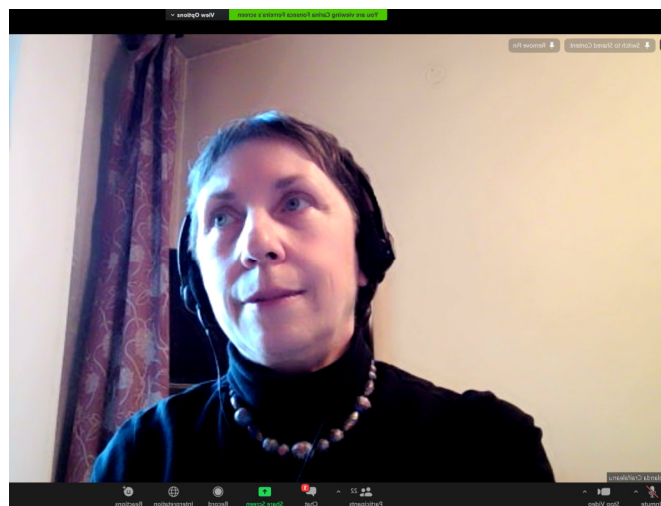
ECBR on-line presentations as Zoom webinars – in the 2020-2021 Project – training lectures on seismic risk reduction for school / educational facilities, hospitals and crowded facilities, for staff / employees

CUTREMURELE ȘI ... PANDEMIA Sars-Cov-2 / Covid-19

- ◆ Ce legătură poate fi între acestea ?
- ◆ S-a văzut în Croația la 22 martie 2020, cutremurul Zagreb de M 5,3 produs la o lună după impactul Covid-19
 - ❑ O persoană a murit, 27 au fost rănite, s-au produs avarii la 250 clădiri iar 59 de persoane au avut nevoie de adăpost temporar. Până la seism, în Zagreb erau 87 de cazuri de Covid-19 și 206 în toată țara; după 2 săptămâni au fost încă 337 cazuri în Zagreb (Silva and Paul, 2020)
 - ❑ Proprietarii au trimis 26.000 cereri de inspecție de urgență a clădirilor!
 - ❑ Avarii la 63 unități educative și 7 spitale

Într-o situație de impact din hazarduri multiple

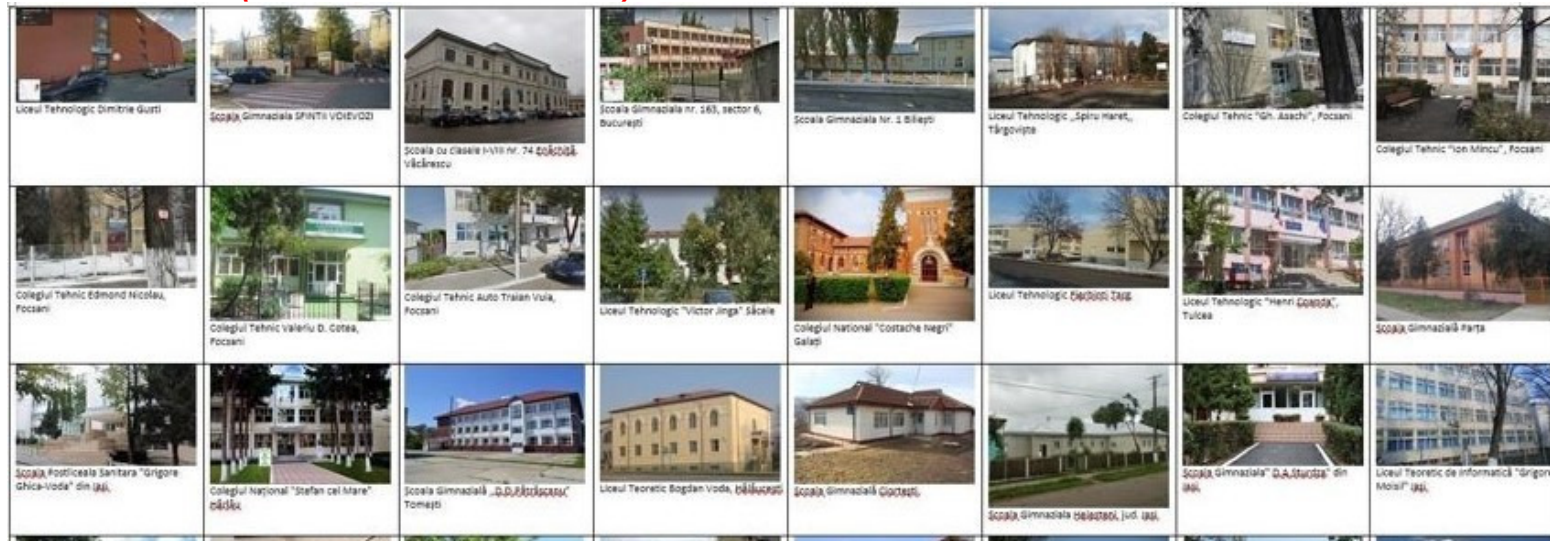
- ◆ Cum asigurăm investigarea avariilor și relocarea activităților din școlile avariate ?



The connection with SARS-Cov-2 / COVID-19 was related to the example of the Croatia Earthquake of March 22, 2020 in ECBR members' presentations

Let's be protected of SARS-CoV-2...but let's be prepared for the earthquake!

A part of school buildings whose staff participated in the October 22, 2020 Seminar , proving different ages and structural vulnerabilities (Photo source: Internet)



Three stories which best illustrate the successes and/or challenges of our work to date

I. During the ECBR Webinar with *hospital staff*, participants answered an on-line surprise survey on two questions:

- **Which are the words that come to your mind when you think about EARTHQUAKE?**
 - Answers: panic, disaster, savers, preparation, safety, training, stairwell, victims, furniture, trauma etc
- **How would you assess the seismic risk of the building in which you work?**
 - Answers: 33% low, 33% moderate, 33% high
- **How would you rank the importance of the objectives of the National Seismic Risk Reduction Strategy? (scale from 0 to 5)**
 - Answers: Objective 1 - 3.6; Objective 2 - 3.3; Objective 3 –3.4; Objective 4 – 3.9...Average ranking 3.6

II. During the ECBR Webinar with the staff of crowded buildings / facilities participants answered an on-line surprise survey on two questions:

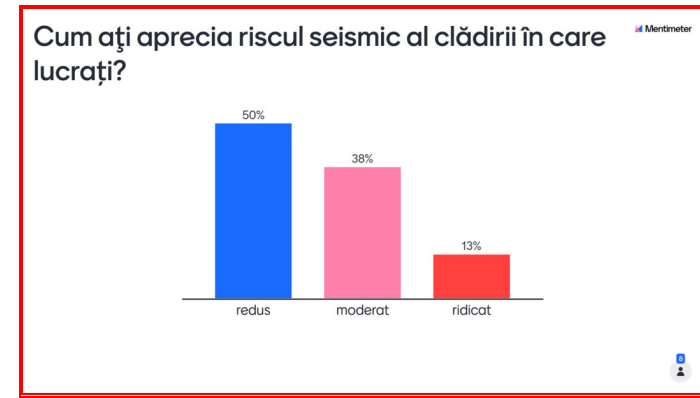
Which are the words that come to your mind when you think about EARTHQUAKE?

- Answers: panic, fear, noise, motion, doorframe, survival, chaos, alarm, survival, fire, agitation, catastrophe etc



How would you assess the seismic risk of the building in which you work?

- Answers: 50% low, 38% moderate, 13% high



How would you rank the importance of the objectives included in the draft of the National Seismic Risk Reduction Strategy? (please scale from 0 to 5)

Objective 1: Reduce seismic risk

Reduce seismic risk nationwide by saving lives, reducing injury, and protecting assets through prioritized and efficient investments

Objective 2: Promote well-being

Promote well-being by creating co-benefits on energy efficiency and sanitary conditions, among other functionality aspects; and

Objective 3: Boost resilience

Boost resilience by integrating risk considerations in territorial and sectorial planning and ensuring resilient recovery and reconstruction processes

Objective 4: Mobilize participation and inclusive action

Mobilize participation and inclusive action by raising public awareness on seismic risk management and building ownership in the implementation of risk reduction measures

Answers:

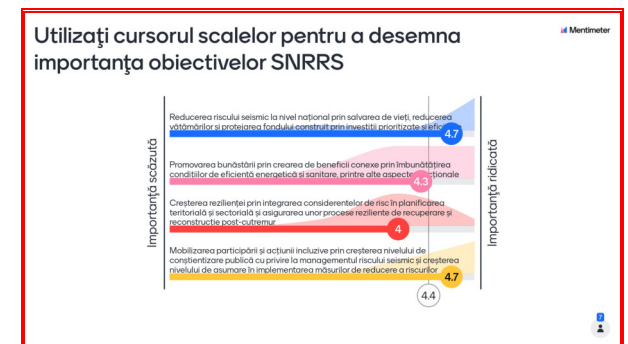
Objective 1 - 4.7;

Objective 2 - 4.3;

Objective 3 - 4.0;

Objective 4 – 4.7...

Average ranking 4.4





Steps that have been taken to ensure that the results of the project are sustained:

- ▶ ECBR preserved the stamina and the interest of school, hospital and other facilities staff, by posting course materials on the ECBR / URBAN-INCERC website
- ▶ MPWDA and the team working on the draft of the National Seismic Risk Reduction Strategy were informed about the opinions of the ECBR Seminars participants

REMARKS:

What has worked well and less well during the reporting period in terms of the strategies we have used to reach our key target groups

- ▶ ECBR members managed to turn some of the disadvantages of COVID-19 pandemic into advantages...

2020

- Schools and kindergarten staff from the seismic areas of Romania was very attracted by the topics and by the on-line attendance. The number of applications exceeded all our expectations!
 - Women represented 75% in the schools session and 69% in the session for local authorities. We shall give more attention to gender pattern, since women may be a factor of faster risk reduction process
- Local authorities were less able to attend, because of the recent local elections and the change of the teams; however, the number of attendees was higher than planned
- The participants have their own perceptions about seismic risk, as it was proved by the ECBR surveys
- Concerning the seismic risk of their school / office building, the school staff is more precautious, while local authorities staff are rather optimistic
- The objectives of the National Seismic Risk Reduction Strategy in preparation were highly appreciated and rated by the participants, with more emphasis on boosting the resilience
- We shall keep in touch with all participants and provide them support materials for training and dissemination to school students, families and population
- ECBR will further focus on the highly seismic zones of the Eastern Romania

2021

- The staff of hospitals / medical / sanitary facilities, universities, tribunals etc from the seismic areas of Romania was very attracted by the topics and by the on-line attendance, with a higher number of applications.
 - Women represented 39% in the hospitals's session and 36% in the session for agglomerated buildings. We shall give more attention to gender pattern, since women may be vulnerable but also a pro-active stakeholder in risk reduction process.
- Discussions and on-line surprise surveys on the participants' perception on specific aspects of seismic risk reduction in their places of residence and at work have shown that the participants have their own perceptions about seismic risk.
- Concerning the seismic risk of their hospitals building, **the medical staff is more precautious, while the staff in other facilities are at the beginning of learning**
- The objectives of the National Seismic Risk Reduction Strategy in preparation were highly appreciated and rated by the participants, with more emphasis on boosting the resilience
- We shall keep in touch will all participants and provide them support materials for training and dissemination - to medical staff and staff in crowded facilities
 - ▶ **Preparation of deliverables for seminars was ensured by ECBR members with high scientific qualification:**
 - All participants were stimulated by receiving Certificates of participation with the logo of EUR-OPA/ ECBR and NIRD URBAN-INCERC. There was a highly appreciative feed-back from many participants
 - As a result of 2021 attendance and surveys, ECBR will further focus on specific issues of women's disaster protection in the high seismic zones
 - ***The critical evaluation of situations that occurred in different facilities during the 2020 COVID-19 Pandemics and the possible multi-hazard scenarios in seismic zones will be considered in future ECBR training materials.***

PROPOSAL OF ECBR PROJECT IN 2022-2023

ENHANCING THE RESILIENCE OF BUILDINGS AND PERSONS WITH SPECIAL VULNERABILITIES TO EARTHQUAKES AND PANDEMICS IN ROMANIA, WITHIN THE EUR-OPA GOALS FOR INCLUSIVE SOCIETIES

Project background

- ▶ Romania was struck by earthquake disasters and recently by the COVID-19 pandemic.
- ▶ **In 2022 there are 45 years since the great earthquake disaster on March 4 1977. The exposure to seismic risk is still high**
- ▶ **A new National Strategy of Seismic Risk Reduction – for buildings – will be enforced by the ministry in charge – Ministry of Public Works, Development and Administration – MPWDA, with the support of the World Bank, starting with 2022. The ECBR field, i.e. “building rehabilitation” needs to be combined with the protection of persons with special vulnerabilities for these risks, as to enforce EUR-OPA goals for inclusive societies.**

In this context, *the general aim of the new ECBR Project for 2022-2023 is to work as a partner to enforce that strategy in a new and integrated approach*, such as:

- **to use of scientific and technological knowledge to promote this Strategy in order to strengthen the governance capacity** and cooperation of local authorities and for implementing the new National Strategy of Seismic Risk Reduction while enhancing networking among all decision-makers in DRR.
- **to share and disseminate the risk culture for communities, children, adults and staff in charge / groups with special vulnerability, migrants, disabled etc.**
- **to use the knowledge from EUR-OPA specialized centres and specifically from ECBR, Bucharest, Romania and ECPFE - European Centre on Prevention and Forecasting of Earthquakes, Greece, Athens.**
- It is a continuation of the previous successful project (on public facilities, as schools, hospitals and other crowded public institutions/facilities) but with new aims and other social stakeholders.

THE ECBR PROJECT CORRESPONDS TO THE FOLLOWING 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.*
- *Promoting risk culture among population (children, adults and groups with special vulnerability).*

Expected Results

2022

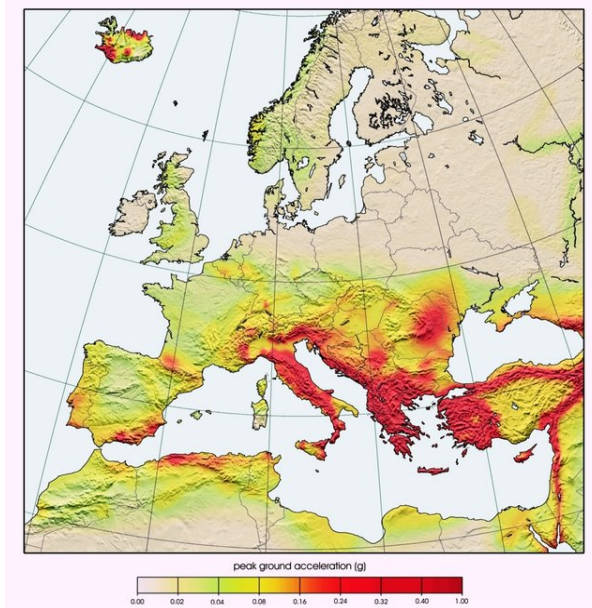
- Transfer of knowledge in prone-risk areas, concerning the **risk reduction and protection and behavior in an emergency, for vulnerable groups and staff in charge, in case of institutions for care and treatment of disabled, NGO for disabled individuals and some individuals, special schools for students with disabilities.**
- Social impact and immediate outcomes by training of staff and volunteers on anticipated preparedness and safe behavior during earthquakes and pandemics of vulnerable groups as disabled students in schools.
- **Increased networking and exchange of experience using knowledge from EUR-OPA specialized centres, especially of the partner centre (ECPFE Greece, Athens).**

2023

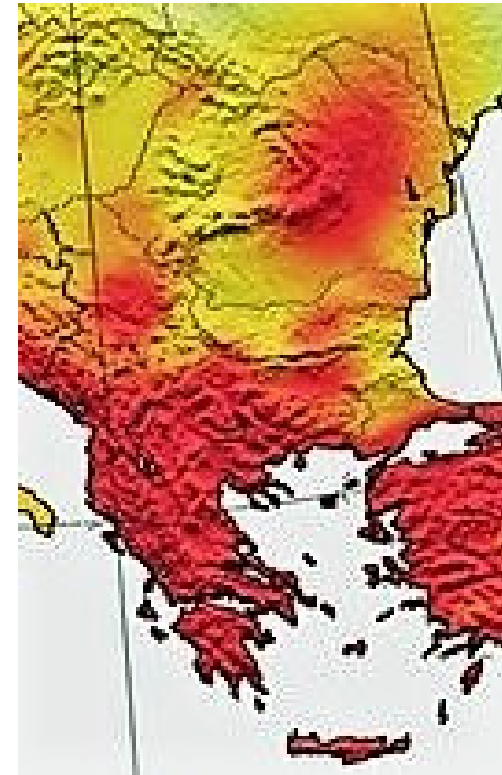
- Transfer of knowledge in prone-risk areas, concerning the **risk reduction and protection and behavior in an emergency, for vulnerable groups and staff in charge, in case of buildings and persons with restrained conditions (penitentiaries) and in centers and facilities for migrants, asylum seekers and refugees.**
- Social impact and immediate outcomes by training of staff on anticipated preparedness and safe behavior during earthquakes and pandemics of vulnerable groups in such special centres and facilities.
- Increased networking and exchange of experience using knowledge from EUR-OPA specialized centres, especially of the partner centre (ECPFE Greece, Athens).

Europe is exposed to a high seismic hazard in south and south-east

ECBR Romania, Bucharest and ECPFE Greece, Athens have a common high seismic risk situation in their countries and are able to share experience



The European Seismological Commission-
SESAME European-Mediterranean seismic hazard map
for the peak ground acceleration with 10% probability of
exceedance in 50 years for stiff soil condition



Deliverables (Outputs)

2022

Coordinator Centre: ECBR, Bucharest, Romania

- Training materials with recommendations for vulnerable groups in case of institutions for care and treatment of disabled, NGO for disabled individuals and for individuals, special schools for students with disabilities, as seminar support text (brochures, leaflets in printed and/or electronic version) and scientific knowledge transfer on seismic risk reduction and pandemics protection for seminar participants
- Reports of ECBR seminars to be distributed to the EUR-OPA specialized centres

Partner 1: ECPFE Greece, Athens

- Presentations and recommendations (brochures, leaflets) including expertise and educational materials for earthquake and pandemics preparedness in similar facilities in Greece, to be shared with Romanian participants in seminars.

2023

Coordinator Centre: ECBR, Bucharest, Romania

- Training materials with recommendations for vulnerable groups in case of buildings and persons with restrained conditions (penitentiaries) and in centers and facilities for migrants, asylum seekers and refugees, as seminar support text (brochures, leaflets in printed and/or electronic version) and scientific knowledge transfer on seismic risk reduction and pandemics protection for seminar participants
- Reports of ECBR seminars to be distributed to the EUR-OPA specialized centres

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- Presentations and recommendations (brochures, leaflets) including expertise and educational materials for earthquake and pandemics preparedness in similar facilities in Greece, to be shared with Romanian participants in seminars.

Activities

2022

Coordinator Centre: ECBR, Bucharest, Romania

- Organization of a training seminar on seismic risk reduction and pandemics protection for vulnerable groups in case of institutions for care and treatment of disabled, NGO for disabled individuals and some individuals, for staff in charge.
 - Date: October 2022, duration - one day
 - Venue: ECBR Hall in URBAN-INCERC, about 25 participants (On-line seminar)
- Organization of a training seminar on seismic risk reduction and pandemics protection for vulnerable groups in case of special schools for students with disabilities, addressed to professors, school principals / directors and administrative staff, as well as to some students.
 - Date: October 2022, duration - one day
 - Venue: ECBR Hall in URBAN-INCERC, about 25 participants (On-line seminar)

Partner 1: ECPFE Greece, Athens – participating as on-line lecturers to ECBR seminars for providing expertise and educational materials

2023

Coordinator Centre: ECBR, Bucharest, Romania

- Organization of a training seminar on seismic risk reduction and pandemics protection for vulnerable groups in case of buildings and persons with restrained conditions (penitentiaries), for staff in charge.
 - Date: October 2023, duration - one day
 - Venue: ECBR Hall in URBAN-INCERC, about 25 participants (On-line seminar)
- Organization of a training seminar on seismic risk reduction and pandemics protection for vulnerable groups in case centers and facilities for migrants, asylum seekers and refugees, for staff in charge and some centre's residents.
 - Date: October 2023, duration - one day
 - Venue: ECBR Hall in URBAN-INCERC, about 25 participants (On-line seminar)

Partner 1: ECPFE Greece, Athens – participating as on-line lecturers to ECBR seminars for providing expertise and educational materials

Target groups and community involvement in the ECBR Project 2022-2023

- ▶ In Romania, according to the law, the concerned facilities belong to some ministries and/or central/local government agencies, while NGO or others are self governed.
- ▶ The earthquake safety and adequate training for proper behavior of staff, patients and students, old or disabled persons, visitors etc as vulnerable groups, is a matter of community interest.
- ▶ Besides the implementation of the National Strategy of Seismic Risk Reduction, the project aims at a multiple impact, since the know-how will be shared after ECBR seminars and a cascade effect of “training of trainers” is quite expected.
- ▶ The gender equality is addressed by training a fair share of women to ECBR seminars, as well as disabled or vulnerable persons
- ▶ ***The disasters risk reduction and seismic risk mitigation can be addressed to protect citizens, in an inclusive society, with EUR-OPA countries and specialized centers partnership...***

***Let's be resilient for the earthquake impact, while
let's be protected of SARS-CoV-2...!***

**URBAN
INCD
INCERC**

EUR-OPA
EUR-OPA MAJOR HAZARDS AGREEMENT
ACCORD EUR-OPA RISQUES MAJEURS

ECBR



Take care!

Thank you!