



AUSTRIA IST ÜBERALL.

CHANCEN DURCH EU-GELDER FÜR SLOWENIEN UND KROATIEN

WIR STARTEN IN KÜRZE

WAS SIE TECHNISCH WISSEN SOLLTEN

- ✓ **Fragen? Jederzeit eingeben!** Antwort folgen - je nach Zeit - am Ende des Vortrags oder anschließend per Mail
- ✓ Eine Sequenz nochmal sehen? Spannende Passage verpasst? Kein Problem: Es gibt eine **Aufzeichnung: [youtube.com/user/aussenwirtschaft](https://www.youtube.com/user/aussenwirtschaft)**
- ✓ Technische Schwierigkeiten? TechniksUPPORT im Chat

AUSTRIA IST ÜBERALL.



AussenwirtschaftsCenter Laibach

CHANCEN DURCH EU-GELDER FÜR SLOWENIEN

Mag. Wilhelm Nest
Österr. Wirtschaftsdelegierter

Ljubljana, 21. April 2021



CHANCEN DURCH EU-GELDER: SLOWENIEN

9.00 – 9.05

BEGRÜSSUNG / EINFÜHRUNGSWÖRTE

Mag. Wilhelm Nest, österreichische Wirtschaftsdelegierter in Slowenien

9.05 – 9.25

EU-GELDER: ERFOLGREICHE POST-CORONA ERHOLUNG

Klemen Košir – Regierungsamt für Entwicklung und Kohäsionspolitik

9.25 – 9.30

Q & A

9.30 – 9.50

FÖRDERUNGEN FÜR UNTERNEHMEN

Nataša Florjančič und Mag. Matej Skočir, Ministerium für wirtschaftliche Entwicklung und Technologie

9.50 – 9.55

Q & A

9.55 – 10.00

ABSCHLUSSWÖRTE DURCH WIRTSCHAFTSDELEGIERTEN

EU FUNDING OPPORTUNITIES: POST-PANDEMIC RECOVERY STRATEGY

Klemen Košir, Head of Funds Unit, GODC (Government Office for Development and European Cohesion Policy)

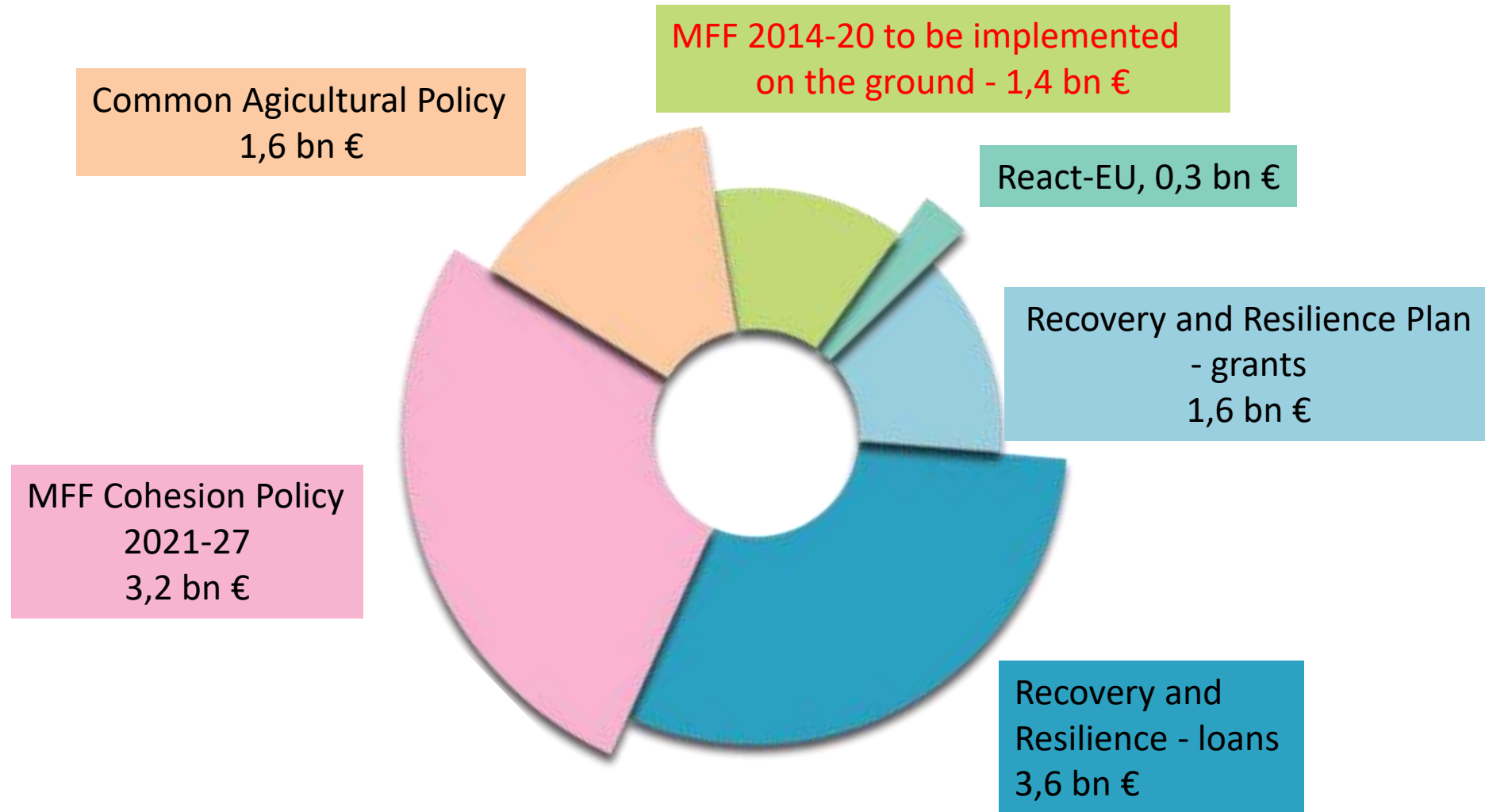
www.eu-skladi.si



EVROPSKA UNIJA
EVROPSKI STRUKTURNI IN
INVESTICIJSKI SKLADI
NALOŽBA V VAŠO PRIHODNOST

Available Funds till 2030

cca. 6,7 bn € grants + 3,6 bn € loans



Timeline for disbursement?



Slovenian profile -



Population (2020)	2,1 million
GDP (2020, current prices)	46,3 bn EUR
GDP per capita (2020, current prices)	22.014 EUR
Coverage of imports by exports [%]	89,7 %
Population 65+ age (2020)	20,36 %
RES overall share (2019 %)	21,97 %

[Source: SURS, Podatkovna baza SiStat](#)

Preparation and implementation of the RRP



- **Strong leadership on the top:**

Working group #NGS1 (led by the Prime Minister)

Working group #NGS2 (document preparation)

- **Intensive cooperation with EC** (more than 30 technical meetings)
- **Strong coordination** within different Ministries on reforms and investments
- **Involvement of stakeholders:** regions, social partners, companies etc.
- **New procedures for RRP investments:** reduce bureaucracy, streamline administrative procedures, enhance public-private cooperation
- **Tenders** are scheduled for the second half of 2021

CHALLENGES in SLOVENIA



- Pandemic situation and different organization of work in public sector
- Coherence with national strategic documents and operational programmes for programming period 2021-2027
- Cost of reforms
- Balance between loans and grants
- Public consultation vs time pressure, interests of different stakeholders
- The preparation of the document is administratively very demanding (long-lasting process)

CHALLENGES and key REFORMS in accordance with CSR



- To ensure the resilience of the health and long-term care system
- To mitigate the social and employment impact of the COVID-19 crisis
- To sustain the economy and provide liquidity and financing to businesses and households
- To improve the business environment by reducing regulatory restrictions and administrative burden
- To invest in mature (ready to go) public investment projects and promote private investment to support the economic recovery, focusing on the green and digital transition, in particular on clean and efficient production and use of energy, environmental infrastructure, sustainable transport, research and innovation, promote digital capacities in business and strengthen digital skills, e-commerce and e-health

Three key orientations – ADVANCED SLOVENIA



RESILIENT
towards
Safety



GREEN
towards
Climate-
neutral
economy



DIGITAL
towards
Industry 5.0

Main priorities of Slovenian RRP

- 48 % contribution towards green transition
- 26 % contribution towards the digital transition

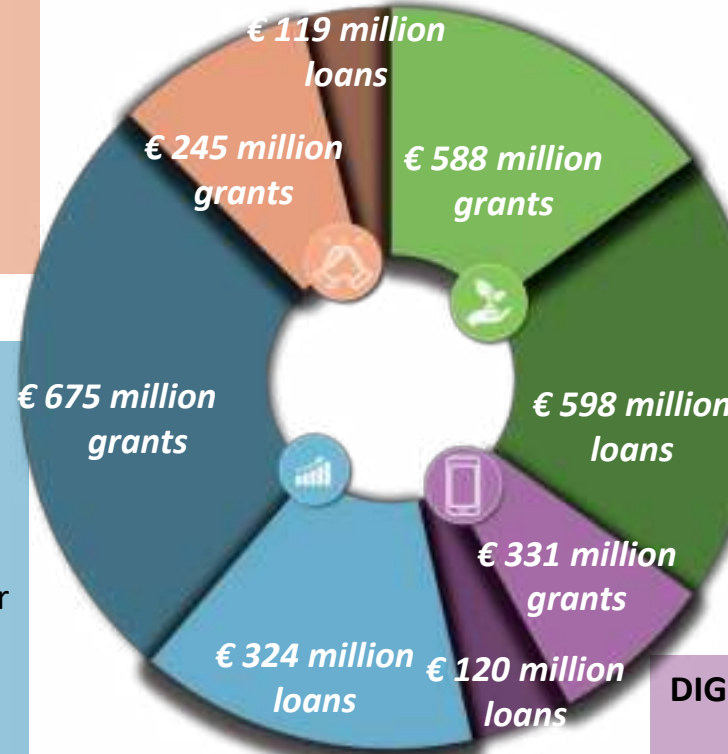


HEALTH AND SOCIAL SECURITY SECTORS

- K1 Health sector
- K2 Social security and long-term care
- K3 Housing policy

SMART, SUSTAINABLE AND INCLUSIVE GROWTH

- K1 Investments in research and development, innovations
- K2 Promoting productivity, business friendly environment for investors
- K3 Labour market – measures for reducing consequences of negative structural trends
- K4 Transformation of Slovenian tourism and investments in infrastructure in the area of tourism and cultural heritage
- K5 Strengthening competences, especially digital competences and those that are strengthening development of knowledge and skills for jobs of the future
- K6 Efficient public institutions



GREEN TRANSITION

- K1 Renewable energy resources and efficient energy use
- K2 Sustainable renovation of buildings
- K3 Clean and safe environment
- K4 Sustainable mobility
- K5 Circular economy – efficient use of resources

DIGITAL TRANSFORMATION

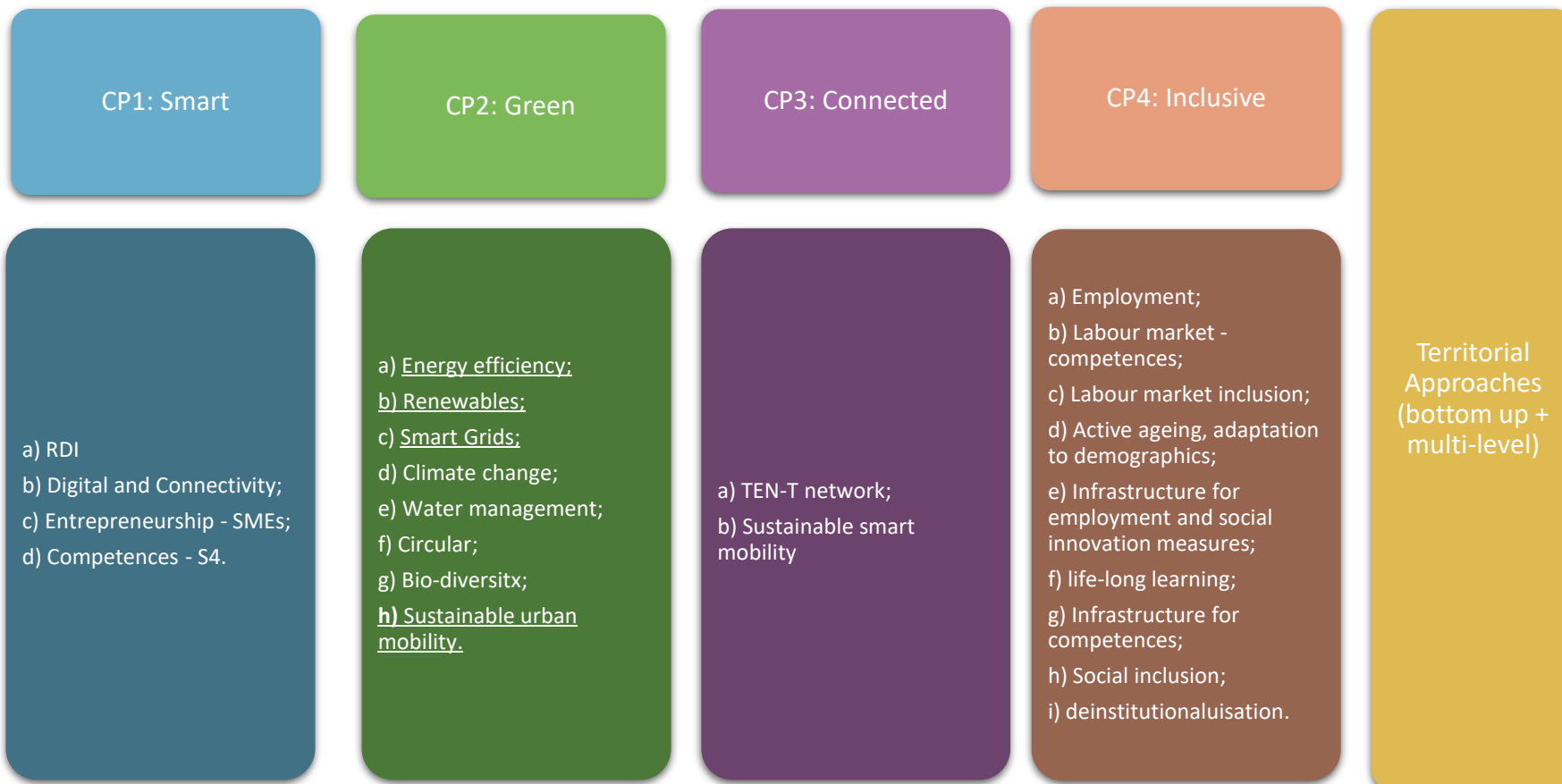
- K1 Digital transformation of economy
- K2 Digital transformation of public sector and public administration

Cohesion Policy Programme(s) 2021 -2027 – link between EU policy objectives and SI priorities



a) Enabling Conditions

b) Partnership Agreement – 10 SI priorities: Knowledge Society, Energy efficiency, Water Management (WWTP), Railway, Competences, Long-term care, Social Inclusion, Safe food, Natural Resources, Aquaculture, Maritime and Fisheries



Key features



1. Programmes in preparation, Partnership agreement in final consultation with the EC
2. Enabling conditions – especially Smart Specialisation Strategy – key market niches for SI development
3. Thematic concentration (ERDF) – more than 90% of ERDF for PO 1 nad PO1 for Western Cohesion Region (more developed), Eastern Cohesion Region (less developed) – more even distribution of funds through Pos;
4. Complementarities MFF – RRF – React and other sources



Thank you for your attention!



Incentives in 2021, React EU, RRP SI & cohesion policy 2021-27

Nataša Florjančič, Development Funds Service, Ministry of Economic Development and Technology



Open calls in 2021 - internationalisation of SMEs

Call	Deadline for submission of applications
Incentives for strengthening brands	30. 9. 2021, 30. 9. 2022
Establishment or upgrade of e-commerce in SMEs	1. 10. 2021
Co-financing of participation of companies at international fairs abroad	14. 5. 2021, 3. 9. 2021, 5.1. 2022 and 16. 5. 2022
Promoting sustainable business strategic transformation and developing new business models in Slovenian companies to facilitate integration into global value chains	23. 4. 2021



Open calls in 2021- wood industry, tourism

Call	Deadline for submission of applications
Incentives for SMEs to develop and introduce new products in wood processing industry 4.0	15. 5. 2021, 15. 9. 2021
Incentives for the introduction of environmental and sustainability labels for tourist accommodation in catering providers	5. 5. 2021, 8. 9. 2021
Co-financing of promotion activities of tourist providers	7. 6. 2021
Co-financing of marketing activities of receptive travel agencies and tour operators	10. 6. 2021



Repayable incentives, financial instruments

- FI COVID-19 - financing investments and working capital for SMEs, RDI
- FI 2014-2020 - financing investments in the areas of RDI, SMEs, EE, Urban Development
- PS1-wood – financing investments in the wood processing chain
- PS1-RR13 - Financing of technological development projects
- PS3 - patient loans - Encouraging investment, business and capital consolidation of SMEs
- SI - SK 2021- Seed capital - Co-investment with private investors, deadline for submitting application: 31 December 2021
- SK75 2021 - Seed capital - Convertible loans for start-ups, application deadline: 1. 10.2021
- P1 plus 2021 - Guarantees for bank loans with interest rate subsidy, application deadlines: 20.4., 5.5., 20.5., 5.6., 20.6., 5.7., 5.9., 20. 9., 5.10. and October 20, 2021
- P7C 2021 - COVID-19 Mitigation Credits, application deadlines: 22 April, 20 May and 10 June 2021



Calls in preparation –React EU

Digitization and digital transformation of SMEs, 30 M EUR, May 2021

implementation of investments in digital transformation in production and operations of supported companies and increase added value of supported companies (eligible costs: tangible fixed assets, intangible fixed assets, costs of outsourcing services, labour costs, indirect costs)

Incentives for researchers in companies, 7 M EUR, June 2021

Incentives for companies to maintain researchers employed and thus to maintain their innovation potential.

Investments in tourism infrastructure, 50 M EUR, June 2021

Incentives for investments in higher quality accommodation capacities, restructuring of mountain centres into year-round mountain destinations for active tourism

Voucher system, small value incentives for SMEs, 13 M EUR, June 2021

Companies can receive up to 10.000 EUR, for increasing their digital competences, digital marketing (f.i. set up a web site, organize online store), improving cyber security by preparing the CS report and preparing digital strategy, also incentives for circular economy, protection of intellectual property, transfer of ownership, internationalisation.



Support for companies in SI RRP

- **Energy efficiency** – 5 M EUR grants, 60 M EUR loans
- **Circular economy and strengthening of wood value chain** – 48 M EUR grants, 50 M EUR loans, 15 M EUR guarantees for bank loans with interest rate subsidy
- **Digital transformation of companies** – 55 M EUR grants, 120 M EUR loans
- Incentives for **RDI projects fostering green and digital transition** – 75 M EUR grants, 30 M EUR loans
- **Incentives for higher value added investments** with green and digital requirements **and for innovative economic and business infrastructure** – 157,5 M EUR grants, 120 M EUR loans, 50 M EUR equity financing
- Incentives for **sustainable development of higher value added accommodation capacities in tourism** and for public and common tourism infrastructure and natural attractions in tourist destinations – 80 M EUR grants, 50 M EUR loans

**Leverage is not yet included in numbers for loans, the values will be higher.*



Cohesion Policy 2021-27 – main areas of support

- Fostering **research and development** capabilities: SDIPs, RDI projects, complementary incentives: Eureka, Horizon Instruments for SMEs
- **Growth and development of SMEs:**
 - further developing business support ecosystem (general services – SPOT services, support for start-ups, scale-ups, technology parks, incubators, economic and business infrastructure, tourism destination management)
 - Grants for start-ups, scale-ups, product and process innovations, social innovations, branding, vouchers, social innovations
 - Grants for internationalisation
- **Digitization and digital transformation of SMEs** and development of services of business support ecosystem (also eDIH)



Cohesion Policy 2021-27 – main areas of support

- **Energy efficiency:** incentives for the reduction of process emissions in industry, reuse of waste / excess heat / cold in production processes or by other customers, replacement of production technologies or parts of production processes that are energy consuming with energy and materially more optimal parts of production technologies, introduction of green technologies, etc.
- **Circular economy:** Introduction of sustainable or circular and digital business models, introduction of new low-carbon products, processes and technologies to strengthen value chains



Thank you for your attention.

Questions?

Contact us: eusredstva.mgrt@gov.si



Empowering business
GREEN. CREATIVE. SMART.

WEBINAR: SLOVENIA
„Incentives for investments in Slovenia”

Matej Skočir, MSc, Head of Internationalisation
Ministry of Economic Development and Technology



**I FEEL
SLOVENIA**

GREEN.



CREATIVE.



SMART.

Join Slovenia's family of investors, experience country's green qualities, tap into its creative talent and discover its smart solutions to grow your business.



BUSINESS AND INVESTMENT ENVIRONMENT

TAX INCENTIVES

CORPORATE INCOME TAX

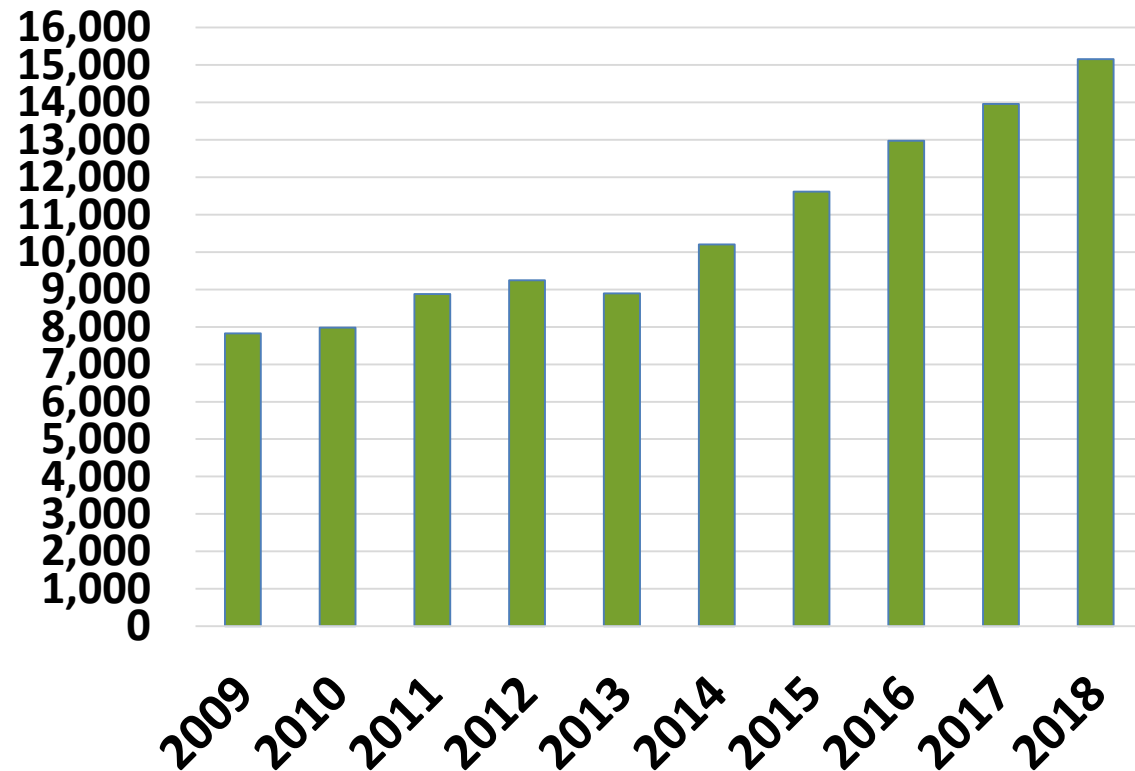
19 %

- Up to 100 % of the amount invested in R&D
- Up to 40 % of the amount invested in equipment and intangible long-term assets

Investments in Slovenia:

FDI & Investment in material/immaterial assets

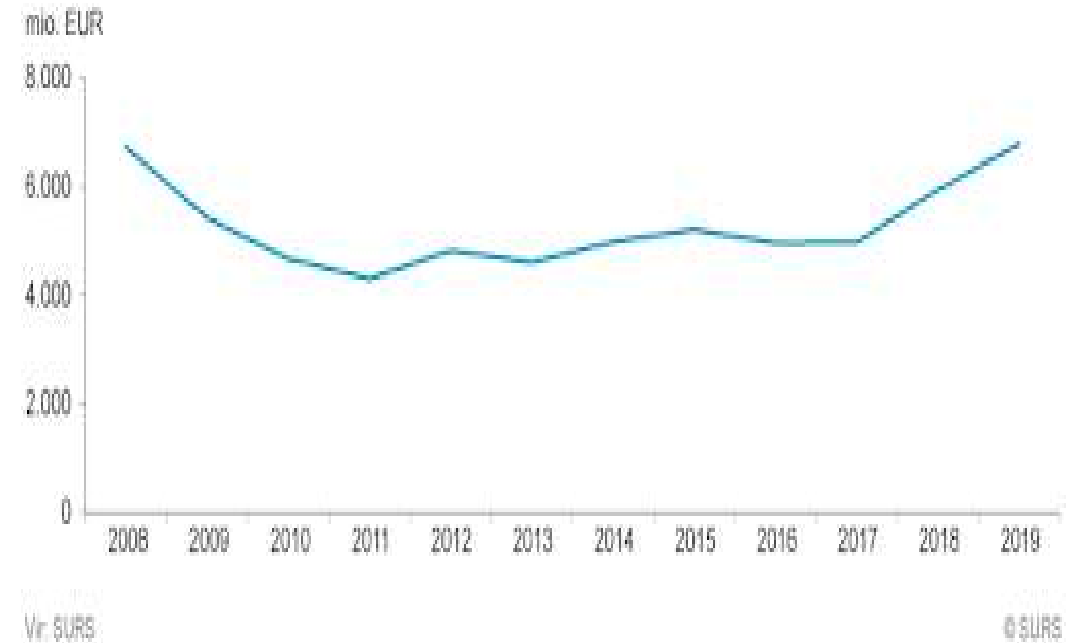
FDI stock in Slovenia, in mio EUR



FDI stock 2019: 16.1 billion EUR

Investments in material/immaterial assets

Investicije v osnovna sredstva, Slovenija



FINANCIAL INCENTIVES PROGRAMMES

- **Investment Promotion Act (Zakon o spodbujanju investicij)**
 - **Promotion of Balanced Regional Development Act**
(Zakon o spodbujanju skladnega regionalnega razvoja)
- **financial incentives: lower % in Western part of Slovenia (up to 10-30%), higher % in Eastern part of Slovenia (up to 25-45%)**





Investment Promotion Act



Activity	Investment Value	No of New Jobs
Manufacturing	15 mio EUR (*12 mio EUR)	50 (10 highly qualified) (*preservation)
Services	3 mio EUR	40 (10 highly qualified) (*preservation)
Research & Development	3 mio EUR (*2 mio EUR)	20 (10 highly qualified) (*preservation)

*Act on Additional Measures for Mitigation of Consequences COVID-19, until 30.6.2021

-50% of the investment in machinery and equipment

-crucial criteria: added value per employee and industrial zoned land

-open procedure, transparent methodology, published in Official Gazzette

-strategic investment (Intergovernmental Task Force and expropriation)





Promotion of Balanced Regional Development Act

-article 31: Regional State Aid

-crucial criteria: regional development impact and multiplication effect

- **Investment value: 2 mio EUR**
- **No of new jobs: 20 (depriviligied areas: preservation)**

-open procedure, consents and permissions required, condition of urgency

List of some companies that received support for investments



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odelo
Automotive Signal Lights



INVEST SLOVENIA



WHAT NEXT: RRF-Recovery and Resilience Facility

- Component: Supporting Environment for Companies**
- Reform Package**
- Digital and Green Transition**
- Increasing Productivity (Added Value per Employee)**
- Submission: April/May 2021**



THANK YOU FOR YOUR ATTENTION



REPUBLIC OF SLOVENIA
MINISTRY OF ECONOMIC DEVELOPMENT
AND TECHNOLOGY



AUSTRIA IST ÜBERALL.

AussenwirtschaftsCenter Zagreb

CHANCEN DURCH EU-GELDER FÜR KROATIEN

Mag. Sonja Holocher-Ertl
Österr. Wirtschaftsdelegierte

Zagreb, 21. April 2021

CHANCEN DURCH EU-GELDER: KROATIEN

10.00 – 10.05

BEGRÜSSUNG / EINFÜHRUNGSWORTE

Mag. Sonja Holocher-Ertl, österreichische Wirtschaftsdelegierte in Kroatien

10.05 – 10.25

AKTUELLE UND ZU ERWARTENDE BAUPROJEKTE IN KROATIEN MIT SCHWERPUNKT AUF WIEDERAUFBAU UND SANIERUNG IN DEN VON ERDBEBEN BETROFFENEN REGIONEN INKL. ZAGREB

Prof. Josip Atalic – Professor an der Zagreber Bau fakultät und Leiter der freiwilligen Statiker, die nach den Erdbeben Statikprüfungen durchgeführt haben

10.25 – 10.30

Q & A

10.30 – 10.50

KURZER AUSBLICK AUF DIE KOMMENDE EU-FINANZIERUNGSPERIODE / SCHWERPUNKT: FINANZIERUNG DES WIEDERAUFBAUS NACH DEN ERDBEBEN 2020

Filip Benjak – EU-Förderberater bei Projekt jednako razvoj d.o.o.

10.50 – 10.55

Q & A

10.55 – 11.00

ABSCHLUSSWORTE DURCH DIE WIRTSCHAFTSDELEGIERTEN AUS LAIBACH UND ZAGREB

Reconstruction projects after the earthquakes 2020 in Croatia

Josip Atalić
Mario Uroš
Marta Šavor Novak
Marija Demšić
Maja Baniček
Tea Žagar
Damir Lazarević
...



Last year ...

Zagreb

Petrinja



preparedness ???



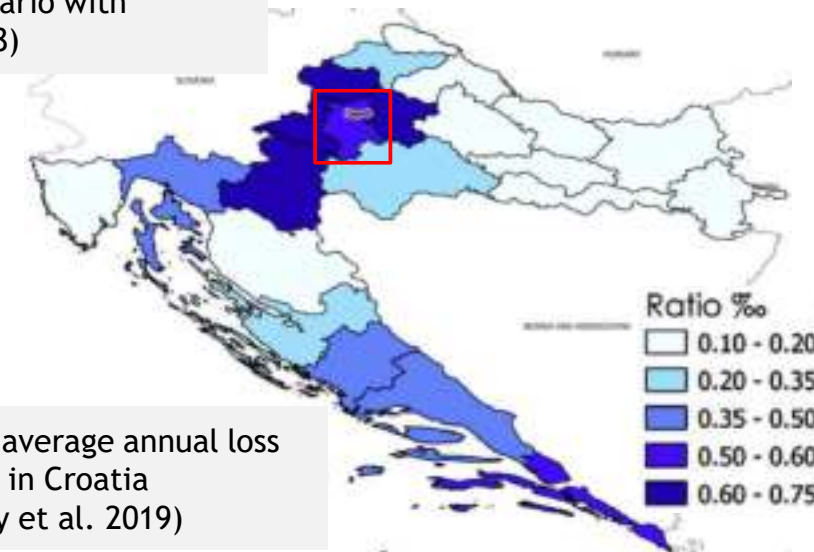
National Risk Assessment in Croatia

- Risk identification (2014)
 - Top three
- Seismic risk assessment (2015)
 - Scenario for City of Zagreb (Sanja Hak)
 - Counties
- Multi-risk assessment (2015)
 - Floods, fires, ...
- Seismic risk assessment for counties (2015)
 - Very rough ,,,
- Assessment of risk management capability
 - Risk Management Planning
 - Implementing Risk Prevention and Preparedness Measures
- Updated seismic risk assessment (2018)
 - Scenario for City of Zagreb (Miroslav Nastev)
 - Big step forward



Economic losses in mil. EUR for the worst-case probabilistic hazard scenario with (Atalić et al. 2018)

initiatives ???

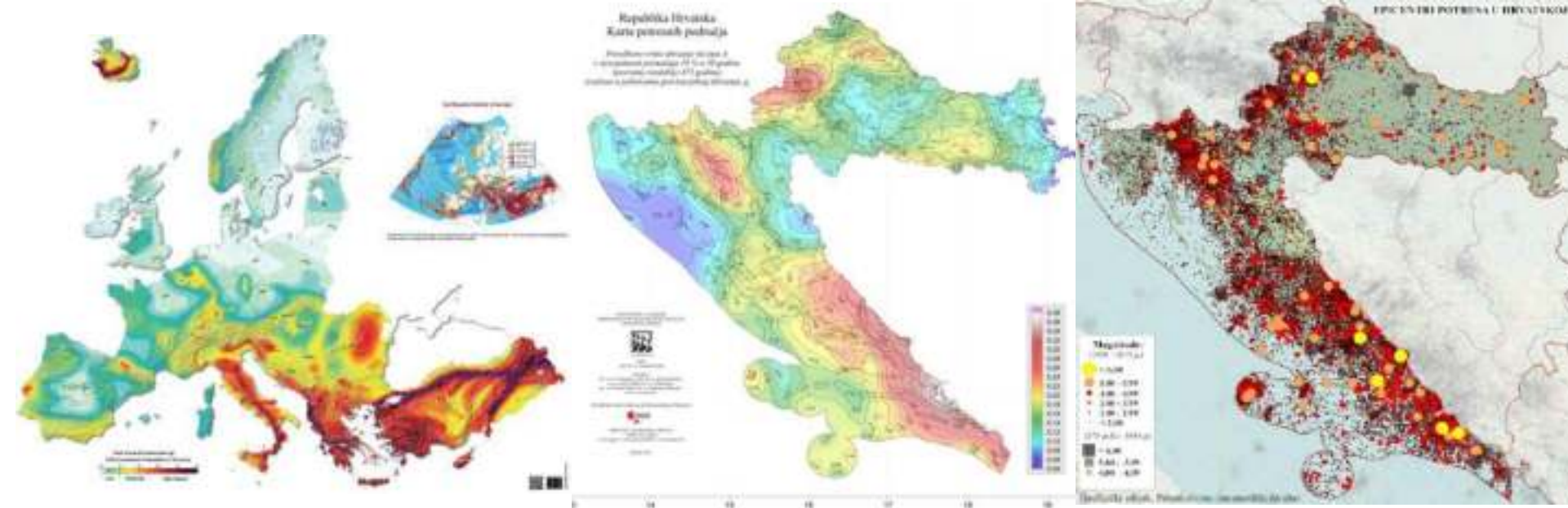


Distribution of average annual loss ratios in Croatia (Crowley et al. 2019)

In general ...

- very earthquake-prone region
- in Croatia PGA up to 0.38g (475 years return period, bedrock)

- 1667. Dubrovnik $M_L 7,1^*$
- 1880. Zagreb $M_L 6,2^*$
- 1909. Pokuplje $M_S 5,8$,
- 1942. Imotski $M_L 6,2$,
- 1962. Makarska $M_L 6,1$
- 1969. Banja Luka $M_L 6.4$,
- 1963. Skopje $M_L 6,1$,
- 1979. Crnogorsko primorje $M_w 7.0$
- 1996. Ston $M_w 6,0$



Seismic hazard map
(Giardini *et al.*, 2013)

Seismic hazard map
(Herak *et al.*, 2011)

Earthquake epicentres
(https://www.pmf.unizg.hr/geof/seizmosloska_sluzba/seizmicnost_hrvatske)



strong earthquakes have occurred in the past and will occur again
almost **30 %** of the territory and **60 %** of the population exposed to moderate/high seismic hazard
urban centers (Zagreb, Rijeka, Split, Dubrovnik) located in seismically active zones

Zagreb: exposure and vulnerability

□ exposure and vulnerability

- **aged building stock**
 - >36% of all the habitable dwellings built before 1964 (Skopje EQ) – NO CODE
 - additional 51 % before 1981 - 30-50% of EUROCODE – LOW CODE
 - only 5% acc. to Eurocode (gradually introduced from the beginning of the millennium, while its implementation, achieved by technical regulations, became completely obligatory in 2017)
- **poor maintainance** as in most of the region, including massive **illegal construction** and undocumented reconstructions (> 100.000 applications for legalization since 2012!)
- **Seismic risk awareness (key problem) !!!**



Zagreb: exposure and vulnerability

Period	before 1945	1946-1964	1965-1981	1982-1998	1998-2012	2013-today
Valid seismic code	No code	Temporary technical code for building loads	Ordinance on Temporary Technical Regulations for Construction in Seismic Areas.	Ordinance on Technical Standards for Construction of Building in Seismic Areas	transition period: acceptance of European Standards ENV (Eurocode 8)	European Standards EN (Eurocode 8)
Motivation for code modification			Skopje earthquake 1963	Montenegro earthquake 1979		
Number of DWELLINGS	app. 40 000 (app. 12%)	app. 75 000 (app. 24%)	app. 87 000 (app. 29%)	app. 70 000 (app. 22%)	40 000 (app. 12%)	Few
Building seismic resistance (rough classification by structural type and analysis method)	buildings with an initial level of earthquake resistance (mostly masonry buildings with wooden floors, since 1920 the introduction of RC floor)	buildings with minimal level of earthquake resistance (RC floors: partly prefabricated or constructed in-situ, masonry buildings without confining elements, etc.)	buildings with a low level of earthquake resistance (masonry buildings with horiz. and vert. confining elements, RC residential buildings etc.)	buildings with a medium level of earthquake resistance (masonry buildings with horiz. and vert. confining elements, RC frames, RC, etc.)	buildings with a high level of earthquake resistance (masonry, concrete, steel, wood, etc.)	
Structural analysis (horizontal load)	earthquake was not accounted for as an action, but the horizontal wind load was defined	earthquake was accounted for by utilizing simplified methods (e.g. concentrated force at the building top)	first codes for design of seismic resistance, (seismic map of 1964)	regulations, modifications and amendments to codes for design of structures for seismic resistance (simple rules, preliminary seismic maps, 1981 and 1988)	development and gradual introduction of modern codes for design of structures for earthquake resistance, increase of the seismic design loads	European standards for design of structures for earthquake resistance Seismic hazard map, 2013
SEISMIC LOAD	up to 5% of the design load according to EC8	up to 10% of the design load according to EC8	30-50% of the design load according to EC8	30-50% of the design load according to EC8	75-100% of the design load according to EC8	<u>100%</u> of the design load according to EC8

Zagreb earthquake 2020

M_L5.5 ZAGREB EARTHQUAKE ON MARCH 22, 2020

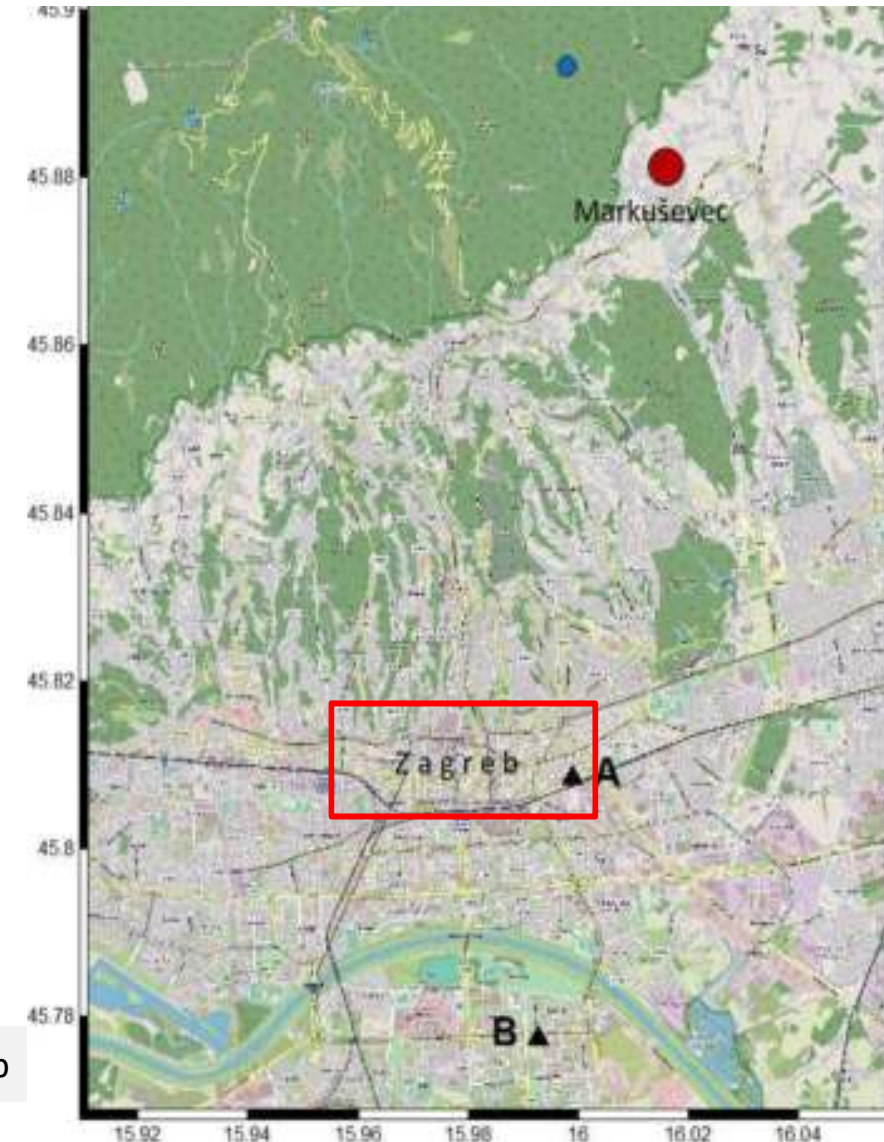
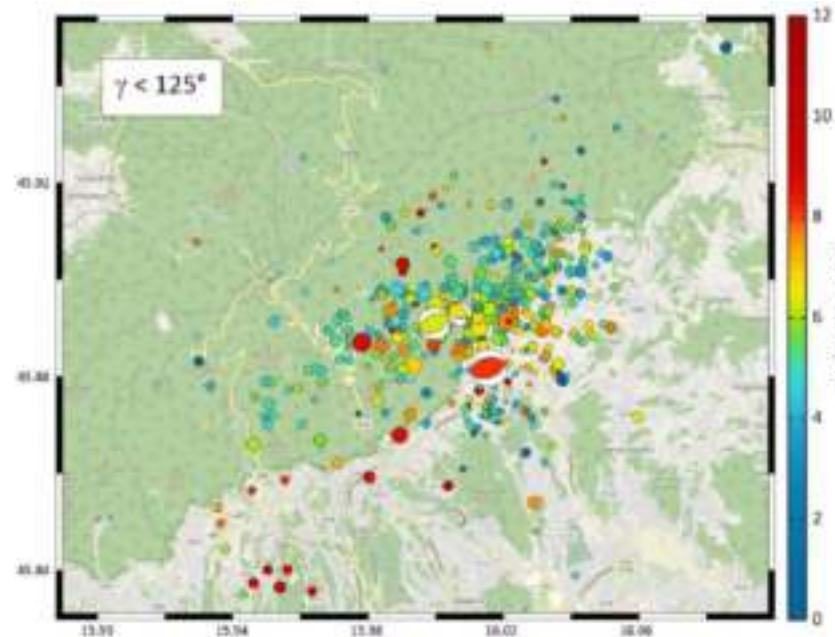
- Sunday, March 22: M_L5.5 main event 06:24 am CET and M_L4.9 aftershock 07:01 am CET
- the epicenter **7 km north** of the historical center, at a **depth of 8 km**
- seismic activity: more than 1.400 earthquakes in 45 days post-earthquake

main event:

$$a_{\max,A} = 0,22 \text{ g}$$

$$a_{\max,B} = 0,20 \text{ g}$$

estimated soil type C



source: Croatian Seismological Survey, Department of Geophysics, Faculty of Science, University of Zagreb

http://www.pmf.unizg.hr/geof/seizmoloska_sluzba/o_zagrebackom_potresu_2020

Zagreb earthquake 2020

☐ COVID-19 lockdown

- a day before earthquake (luck)

☐ IMPACTS

- one fatality, 26 injured
- psychological shock and panic among citizens (> 20.000 left their homes)
- widespread damage (especially to invaluable historic center)

financial losses far exceeding expectations for an event of this size which was much smaller than anticipated for the location



photos from the historic center (source: HCPI, 2020; AIR-RMLD d.o.o.; Šavor Novak et al. 2020.)

Zagreb earthquake 2020

❑ Zagreb Cathedral and Archbishop's Palace



source:
<http://www.zg-nadbiskupija.hr/detaljno-izvjesce-o-ostecenjima-zagrebacke-katedrale>
F. Foretić
HCPI, 2020

❑ Basilica of the Sacred Heart of Jesus



source: I. Ćurić, HCPI,
2020

Zagreb earthquake 2020

❑ Clinic for Women's Diseases and Obstetrics in Petrova Street



University



160 years old building
(350 years of University)



Zagreb earthquake 2020

URM
buildings

source:
M. Todorić, HCPI, 2020,
Šavor et al., 2020

❑ **DAMAGE:** roofs, chimneys and gable walls



Zagreb earthquake 2020



POST-EARTHQUAKE DAMAGE ASSESSMENT OF BUILDINGS

www.hcpi.hr

USABLE

- ☐ U1 bez OGRANIČENJA
- ☐ U2 UPORABLJIVO s preporukom

PROVEDEN BRZI PREGLED

75,1 %

TEMPORARILY USABLE

- ☐ PN1 potreban DETALJAN PREGLED
- ☐ PN2 potrebne mjere HITNE INTERVENCIJE

PROVEDEN BRZI PREGLED

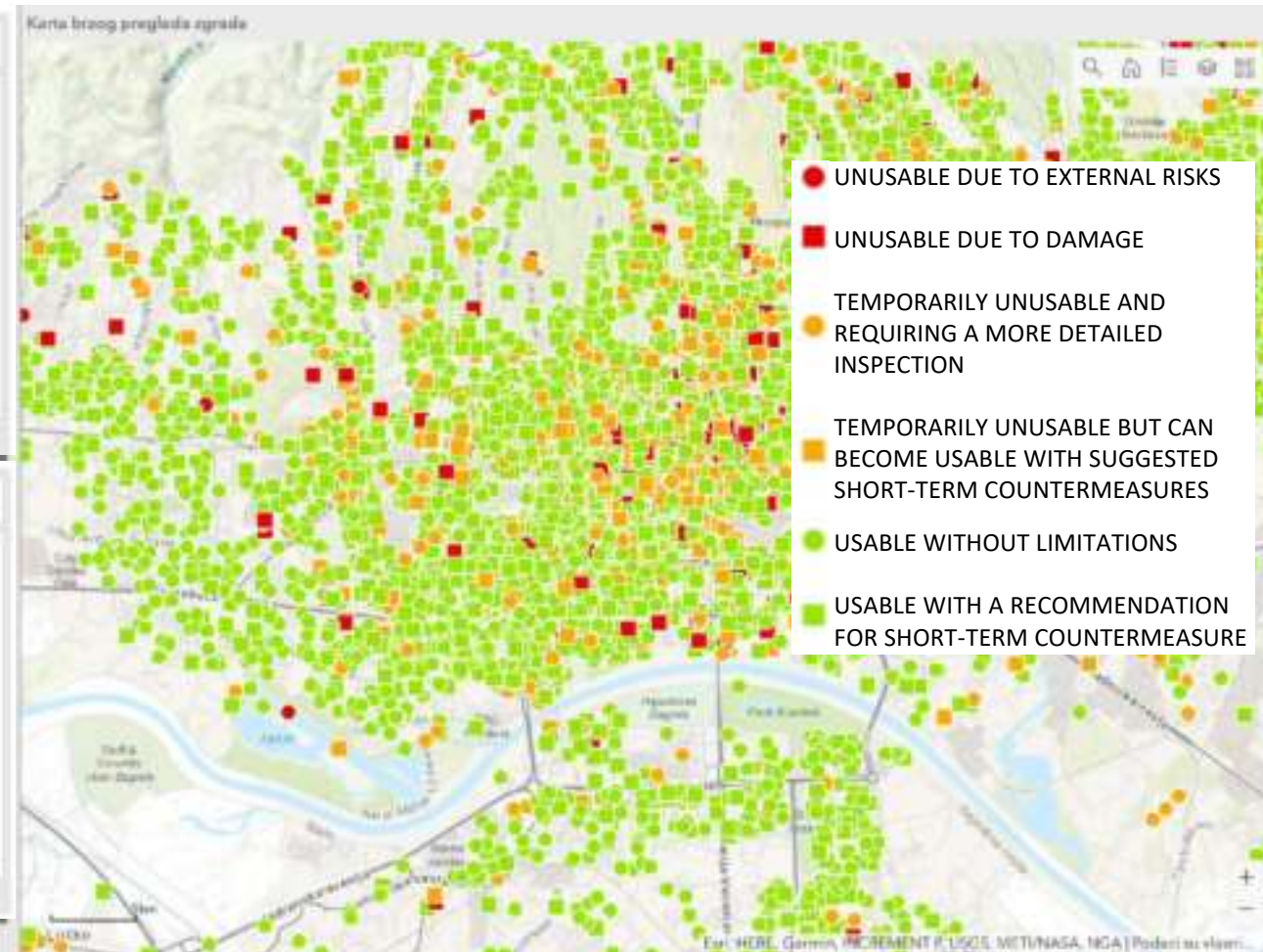
19,6 %

UNUSABLE

- ☐ N1 zbog VANJSKIH UTJECAJA
- ☐ N2 zbog OŠTEĆENJA

PROVEDEN BRZI PREGLED

5,3 %



”damaged m²”

		broj	BRP
stambene zgrade		5175	10.139.644
		1422	2.538.914
		295	553.656
	Suma	6891	<u>13.232.214</u>

		broj	BRP
obiteljske kuće		7448	3.338.217
		2052	964.689
		608	295.015
	Suma	10109	<u>4.597.922</u>

		broj	BRP
ostale javne zgrade		96	326.600
		29	113.217
		4	11.460
	Suma	129	<u>451.276</u>

		broj	BRP
obrazovne ustanove		220	825.553
		97	379.626
		8	37.825
	Suma	325	<u>1.243.004</u>

		broj	BRP
'kulturne" ustanove		111	848.340
		62	313.730
		15	50.513
	Suma	189	<u>1.212.583</u>

		broj	BRP
zdravstvene ustanove		99	311.185
		16	53.335
		2	8.455
	Suma	117	<u>372.975</u>

”billions”
(preliminary)

		broj	BRP
projekcija za sve zgrade		13050	15.478.354
		3663	4.310.176
		930	948.469
		17643	<u>20.736.999</u>

RDNA



ZAKON O OBNOVI ZGRADA OŠTEĆENIH
POTRESOM NA PODRUČJU GRADA ZAGREBA I
OKOLICE
Preliminarna procjena troškova

Zagreb, travanj 2020.

donosi se na temelju podataka iz izvješća o šteti na području Zagreba i okolice

1.2 milijardi €

3.3

4.8

5.1

5.6 milijardi €

6.0

7.0

8.7

13.3 milijardi €



> 7.1 milijardi €

> 12.3 milijardi €

> 11.0 milijardi €

> 17.5 milijardi €

Other activities

TABLE 1

Damage and losses by sector (in million EUR)

	Damage	Losses	Total
Housing	6,881	364	7,245
Health	826	61	887
Education	1,071	9	1,080

FIGURE 1

Surface area of buildings affected by the earthquake by sector (in m²)

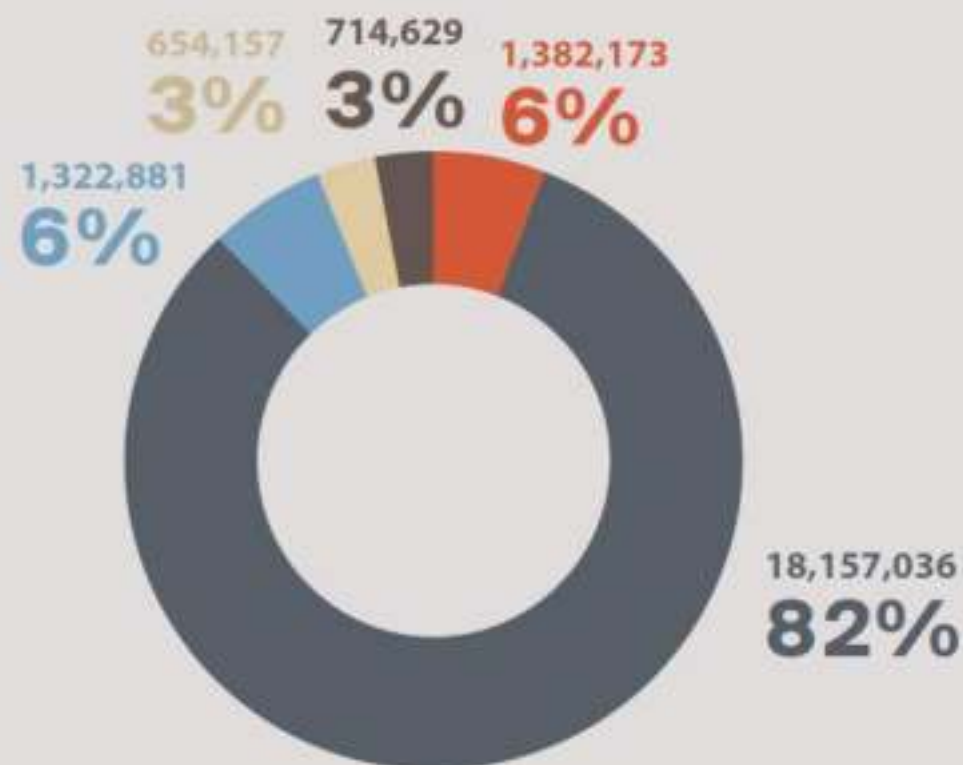


TABLE 2

Damage and losses by county (in million EUR)

”damaged m²”

”damaged m²” residential buildings:

Stambene zgrade	BRP (m ²)			UKUPNO
	Crvene	Žute	Zelene	
	561.841,3	2.901.322,7	14.457.022,7	17.920.186,7

”damaged m²” family houses (< 4 stories):

UKUPNO	277.824,0	1.023.257,3	3.502.769,3	4.803.850,7
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historical city center:

Donji Grad, Gornji Grad – Medveščak, Maksimir i Podsljeme

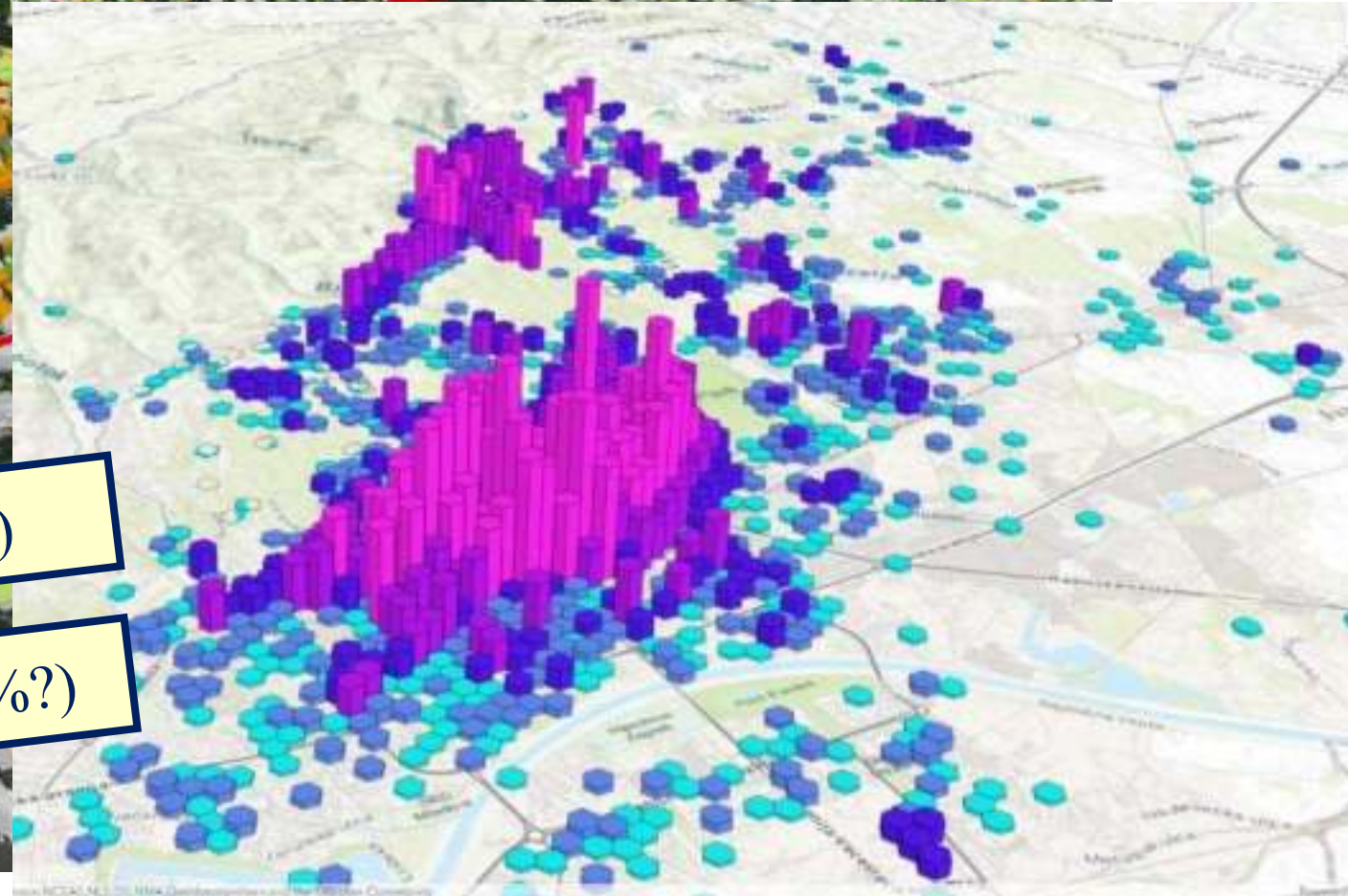
	BRP			
	Crvene	Žute	Zelene	
UKUPNO	404.490,7	2.265.322,7	5.705.292,0	8.375.105,3
	72,0%	78,1%	39,5%	

POST-EARTHQUAKE DAMAGE ASSESSMENT OF BUILDINGS

historic centre
(affected the most)

floors (rigid/semi rigid diaphragm)

walls (level of safety, 20%/50%/75%?)



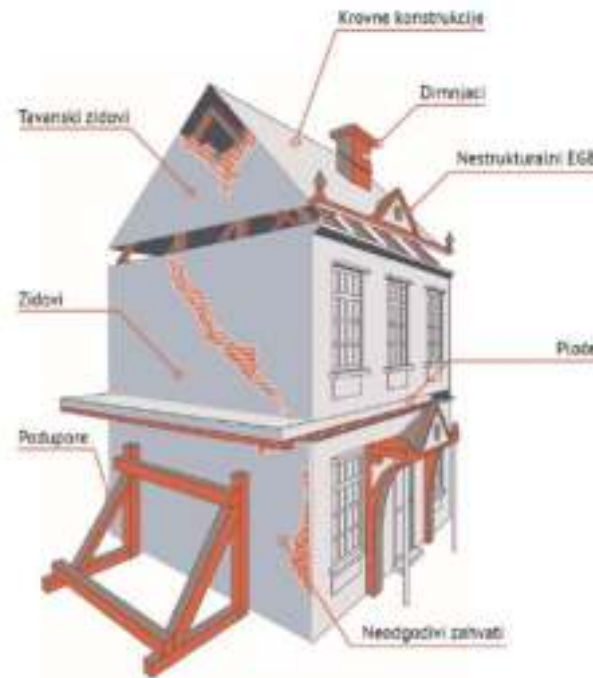
Other activities

URGENT PROGRAM OF POST-EARTHQUAKE RECONSTRUCTION: manual



expert group of 23
people

www.hcpi.hr/UPPO/

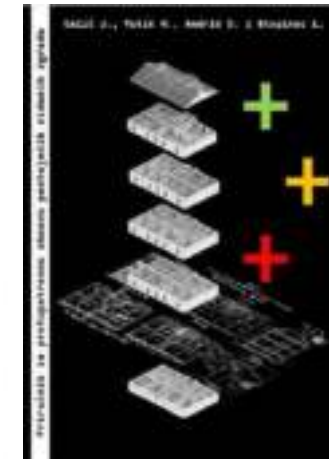


“live” version
(continuous updating)



“all in”

expert group of over
50 people



webinars / educations / ...

HRVATSKI CENTAR

stranica Hrvatskog podrijetla građevinarstva

Home O nama VOLONTERI

Oblasti iz institucije Inicijativa

Andrew Charleson: Retrofitting: improving the seismic performance of masonry buildings.

Željko Uhlir: Zakon o obnovi zgrada oštećenih potresom na području Grada Zagreba, Krapinsko-zagorske županije i Zagrebačke županije.

Mihaela Skurić: 40 godina iskustva iz obnove Dubrovnika

Domagoj Damjanović: Inženjerski rezultati ispitivanja

Sanjezan Prevornik: što bi jedan inženjer trebao

Miroslav Nastev: Ocjena seizmickog rizika od potresa u urbanim sredinama

Modeliranje nelinearnog odgovora povijesnih zidanih građevina pomoću Equivalent frame modela sa naglaskom na nizove zgrada

OBNOVA GRADA ZAGREBA

OBNOVA GRADA ZAGREBA

OBNOVA GRADA ZAGREBA

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OBNOVA GRADA ZAGREBA

OBNOVA GRADA ZAGREBA

Shake Zagreb with Knowledge



1st Croatian Conference on Earthquake Engineering
22-23 March 2021
Zagreb, Croatia



CroCEE 2021

konferencija građevinarstva 2020

Sanjeto vanje 4: OBNOVA ZAGREBA

POTRESNO INŽENJERSTVO

POTRESNO INŽENJERSTVO

POTRESNO INŽENJERSTVO

POTRESNO INŽENJERSTVO

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POTRESNO INŽENJERSTVO

POTRESNO INŽENJERSTVO

POTRESNO INŽENJERSTVO

POTRESNO INŽENJERSTVO

31.3.2020.: Mapei webinar: Konstrukcijska ojačanja

31.3.2020.: Baldinistudio webinar: Seizmička analiza zgrada

6.5.2020. Webinar: Sanacije u potresu oštećenih dimnjaka primjenom suvremenih rješenja - proizvođača Skoberne

13.5.2020. Webinar: Sanacija karakterističnih oštećenja građevina nastalih djelovanjem potresa, primjenom suvremenih rješenja proizvođača SIKA

19.5.2020. Webinar: Provedba i tumačenje uputstva za sanaciju dimnjaka, ugradnju novih bojlera te ostalih oštećenja namijenjeno vlasnicima zgrada i upraviteljima

20.5.2020.: Mapei sustavi i rješenja za sanaciju nakon potresa - webinar

3.6.2020. Panel rasprava o Prijedlogu Zakona o obnovi zgrada oštećenih potresom u Zagrebu i okolici

28.7.2020.: Potres - metode proračuna Mapei webinar

Webinar oprađ... Gabriela Gospić

Webinar oprađ... Gabriela Gospić

Webinar oprađ... Gabriela Gospić

Webinar oprađ... Gabriela Gospić

Webinar oprađ... Gabriela Gospić

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Webinar oprađ... Gabriela Gospić

Webinar oprađ... Gabriela Gospić

Webinar oprađ... Gabriela Gospić

education after earthquake ???

to help rebuild Zagreb !!!

Italy, New Zealand, Canada, ...

great need to raise the level of knowledge !!!

Universities Zagreb, Split, Rijeka Osijek, ...

Practitioners ...

22.i

Laws, regulations, standards,

New law on reconstruction

MINISTARSTVO GRADITELJSTVA I PROSTORNOGA UREĐENJA

1448

Na temelju članka 17. stavka 2. Zakona o gradnji («Narodne novine», broj 153/13, 28/17, 39/19 i 125/19) ministar graditeljstva i prostornoga uređenja donosi

TEHNIČKI PROPIS

O IZMJENI I DOPUNAMA TEHNIČKOG PROPISA ZA GRAĐEVINSKE KONSTRUKCIJE

Članak 1.

U Tehničkom propisu za građevinske konstrukcije («Narodne novine», broj 17/17) u članku 4. ta podstavka 2. dodaje se podstavak 3. koji glasi: »Prilog III. – Razine obnove potresom oštećenih konstrukcija zgrada u odnosu na mehaničku otpornost i stabilnost.»

Članak 2.

Nadjev poglavlja V. mijenja se i glasi: »V. REKONSTRUKCIJA, OPIŠ I UVRATA GRAĐEVINSKE KONSTRUKCIJE ZGRADA NAKON POTRESA I UVRATANJE GRAĐEVINSKE KONSTRUKCIJE».

Članak 3.

Iza članka 24. dodaje se članak 24.a i nadjev iznad njega koji glasi:

»Obnova građevinskih konstrukcija zgrada nakon potresa

Članak 24.a

(1) Obnova potresom oštećenih građevinskih konstrukcija zgrada obuhvaća popravak i pojačanja konstrukcijskih i/ili nekonstrukcijskih elemenata s razinom obnove koja je primjerena opasnosti područja, oštećenja zgrada i potresom oštećenja zgrada, a vezano za potresnu otpornost zgrada i njenim razinama.

(2) Razine obnove građevinskih konstrukcija zgrada nakon potresa u odnosu na područja propisane su u Prilogu III. ovog Propisa.

(3) Obnovom građevinske konstrukcije zgrada u skladu s Prilogom III. ovog Propisa ne smije se nepovratno otkazati na ispunjavanje ostalih temeljnih zahtjeva u odnosu na razinu na kojoj su bili ispunjeni prije potresa.

(4) Obnova se provodi na razinu potresne otpornosti prema Prilogu III. ovog Propisa ili na razinu potresne otpornosti koja je bila propisana u trenutku kada je zgrada izgrađena, a time da je ispunjavanje ostalih temeljnih potresne otpornosti.»

Članak 4.

Ovaj Propis stupa na snagu prvoga dana od dana objave u «Narodnim novinama».

Klasa: 300-01/20-04/0

Urbroj: 533-01-20-27

Zagreb, 26. rujna 2020.

Ministar
Predrag Stremac, v. r.

HRVATSKI SABOR

1915

Na temelju članka 89. Ustava Republike Hrvatske, donosi:

ODLUKU

O PROGLAŠENJU ZAKONA O OBNOVI ZGRADA OŠTEĆENIH POTRESOM NA PODRUČJU GRADA ZAGREBA, KRAPINSKO-ZAGORSKE ŽUPANIJE I ZAGREBAČKE ŽUPANIJE

Proglasavam Zakon o obnovi zgrada oštećenih potresom na području Grada Zagreba, Krapinsko-zagorske županije i zagrebačke županije, koji je Hrvatski sabor donio na sjednici 11. rujna 2020.

Klasa: 011-01/20-01/88

Urbroj: 71-06-01/1-20-2

Zagreb, 15. rujna 2020.

Predsjednik
Republike Hrvatske
Zoran Milanović, v. r.

ZAKON

O OBNOVI ZGRADA OŠTEĆENIH POTRESOM NA PODRUČJU GRADA ZAGREBA, KRAPINSKO-ZAGORSKE ŽUPANIJE I ZAGREBAČKE ŽUPANIJE

Amendment to technical code

New ...

NN 119/2020 (30.10.2020.), Odluka o donošenju Prvog programa mjera obnove zgrada oštećenih potresom na području Grada Zagreba, Krapinsko-zagorske županije i Zagrebačke županije

VLADA REPUBLIKE HRVATSKE

2389

Na temelju članka 11. stavka 3. Zakona o obnovi zgrada oštećenih potresom na području Grada Zagreba, Krapinsko-zagorske županije i Zagrebačke županije («Narodne novine», broj 102/20), Vlada Republike Hrvatske je na sjednici održanoj 29. listopada 2020. donijela

ODLUKU

O DONOŠENJU PRVOG PROGRAMA MJERA OBNOVE ZGRADA OŠTEĆENIH POTRESOM NA PODRUČJU GRADA ZAGREBA, KRAPINSKO-ZAGORSKE ŽUPANIJE I ZAGREBAČKE ŽUPANIJE

I.

Donosi se Prvi program mjera obnove zgrada oštećenih potresom na području Grada Zagreba, Krapinsko-zagorske županije i Zagrebačke županije.

Prvi program iz stavka 1. ove točke sastavljen je dio ove Odluke.

II.

Zahtijeva se Ministarstvo prostornoga uređenja, graditeljstva i državne imovine da o donošenju ove Odluke izvjesti nositelje provedbe Prvog programa mjera iz točke I. stavka 1. ove Odluke.

III.

Ova Odluka stupa na snagu prvoga dana od dana objave u «Narodnim novinama».

Klasa: 022-03/20-04/294

Urbroj: 50301-05/20-20-7

Zagreb, 29. listopada 2020.

Predsjednik
mr. sc. Andrej Plenković, v. r.

Petrinja earthquake

December 29th **M_L6.2**

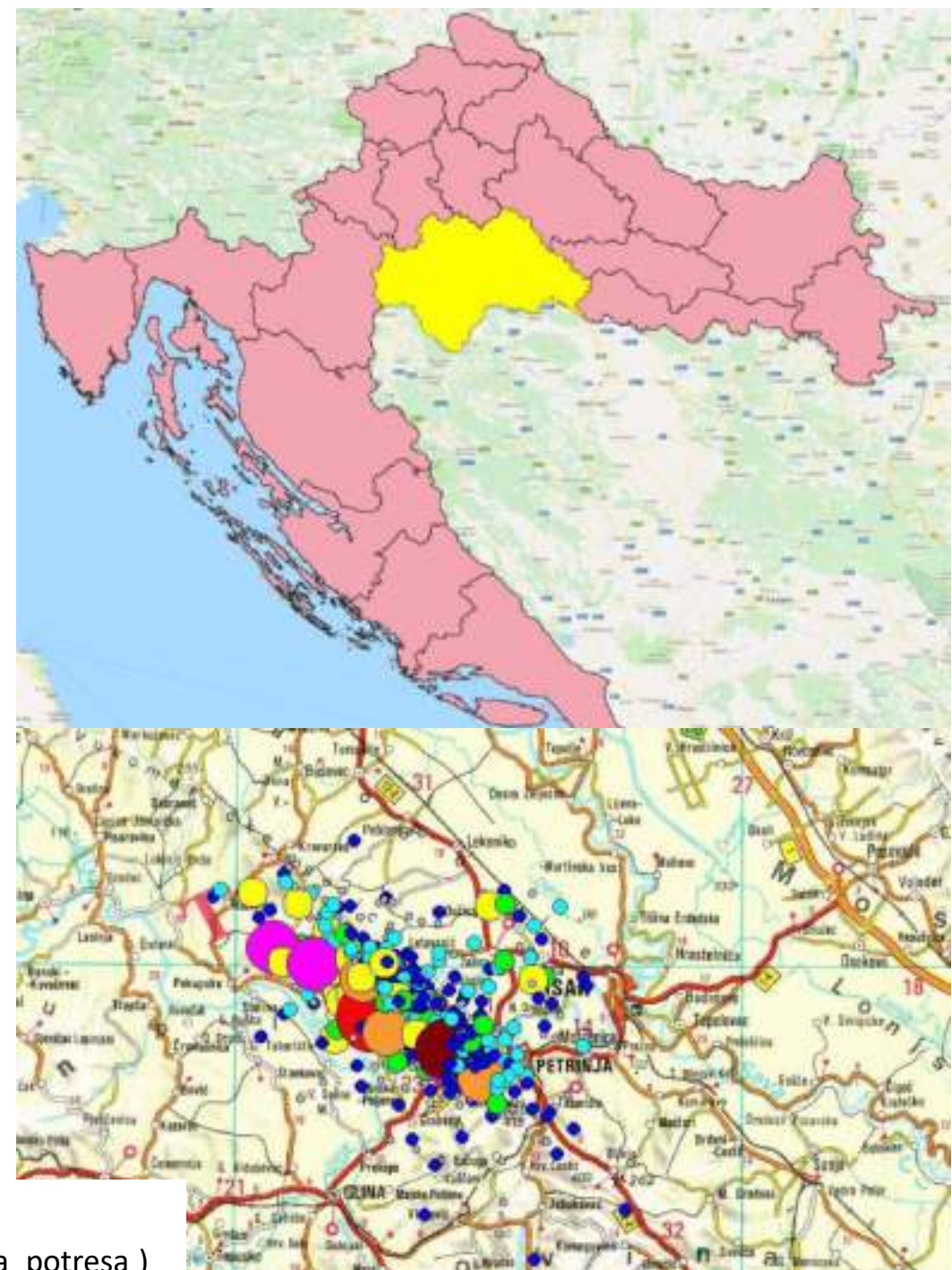


photos: D. Lazarević, J. Atalić, M. Baniček, HCPI database

Petrinja earthquake

Report on recent event near Petrinja

- the **largest earthquake** in Croatia since the introduction of modern seismic instrumentation
- December 29th **$M_L 6.2$ ($M_w 6.4$)** event preceded by December 28th $M_L 5.0$ magnitude event
- the **epicenters** less than 50 km SE of Zagreb, at a depth of app. 10 km
- **affected region: very poor** (economically, socially and demographically); **never truly recovered from devastation during Croatian war for independence**
- **7 fatalities**, widespread damage



earthquakes located from 28/12/2020 to 06/01/2021

(http://www.pmf.unizg.hr/geof/seizmoloska_sluzba/potresi_kod_petrinje/automatska_lokacija_potresa)

Petrinja earthquake

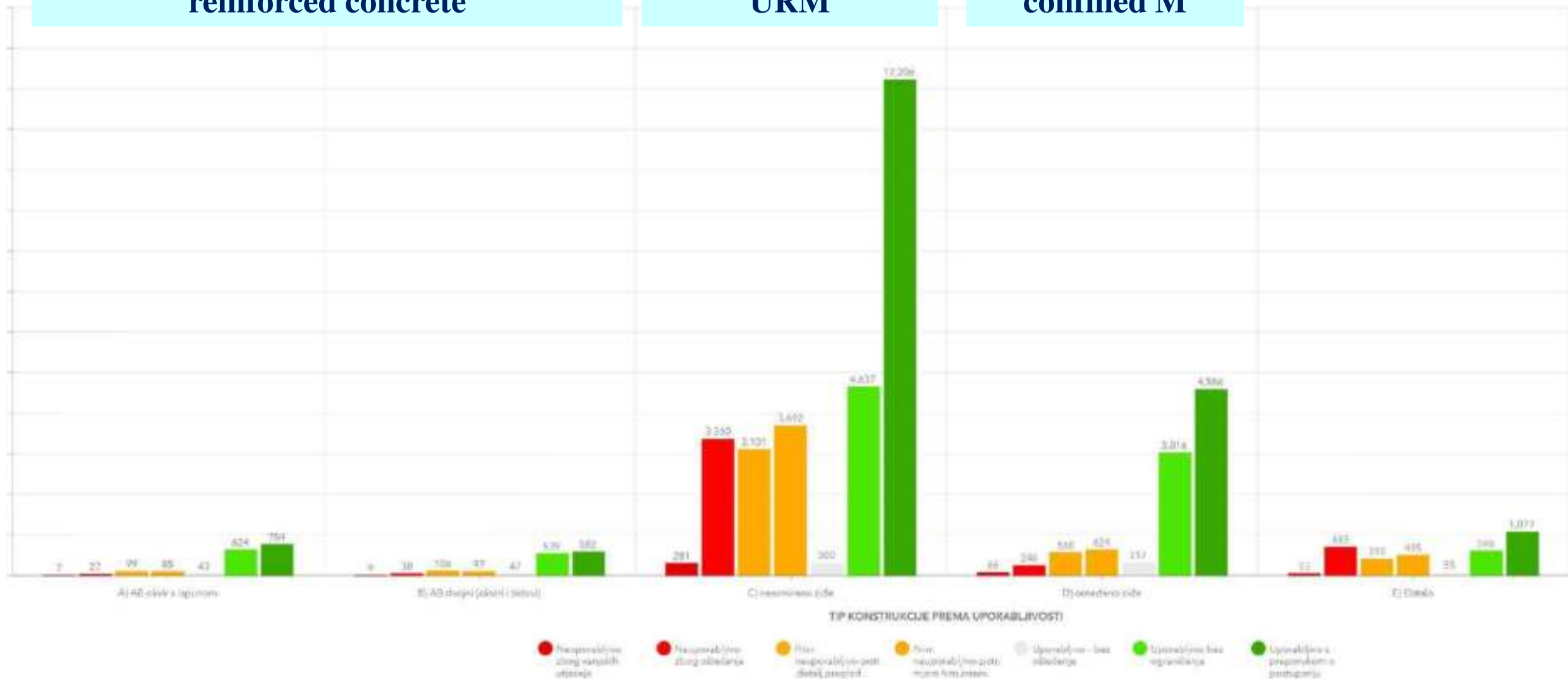


Petrinja earthquake

reinforced concrete

URM

confined M



Petrinja earthquake

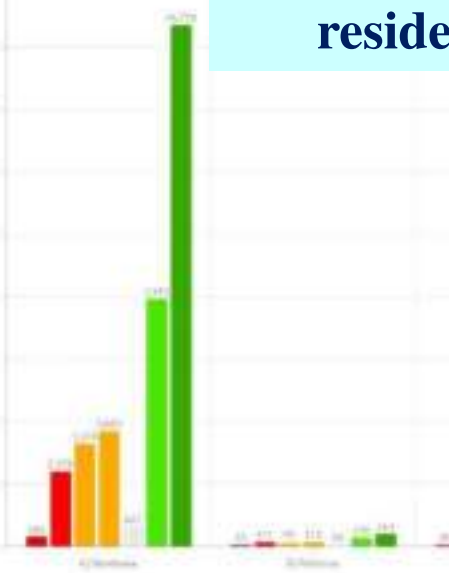
year of construction



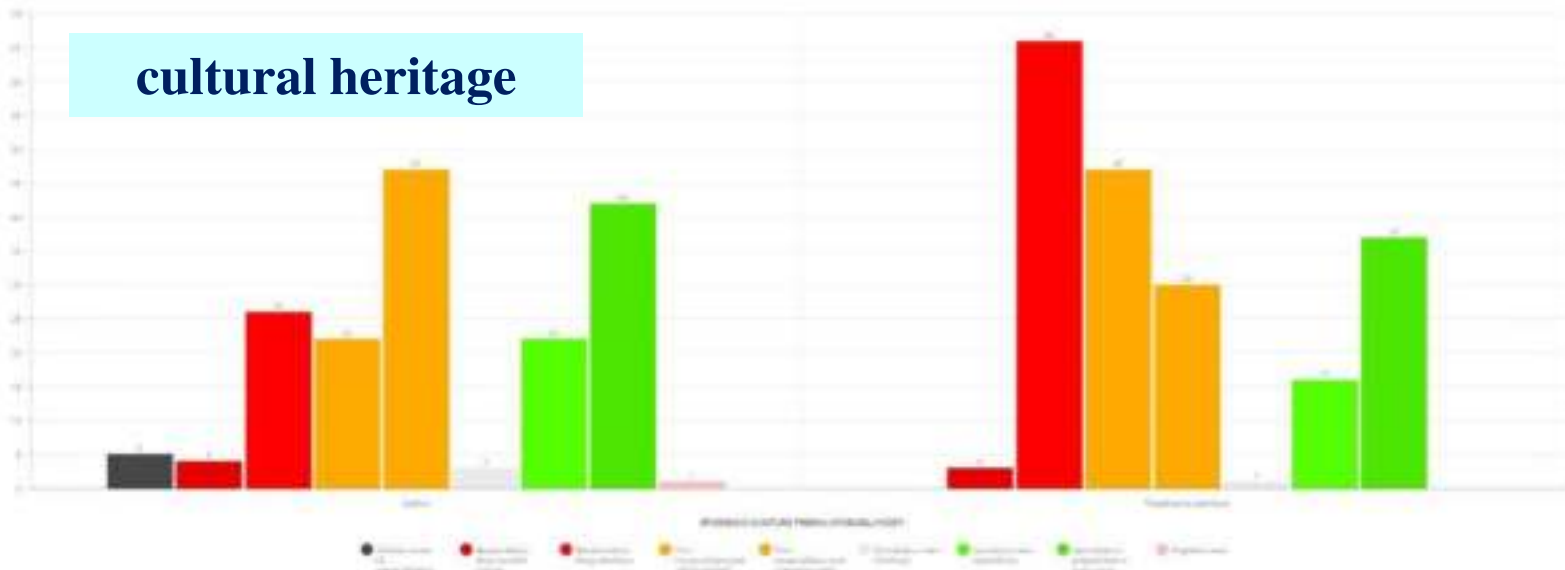
property



residential

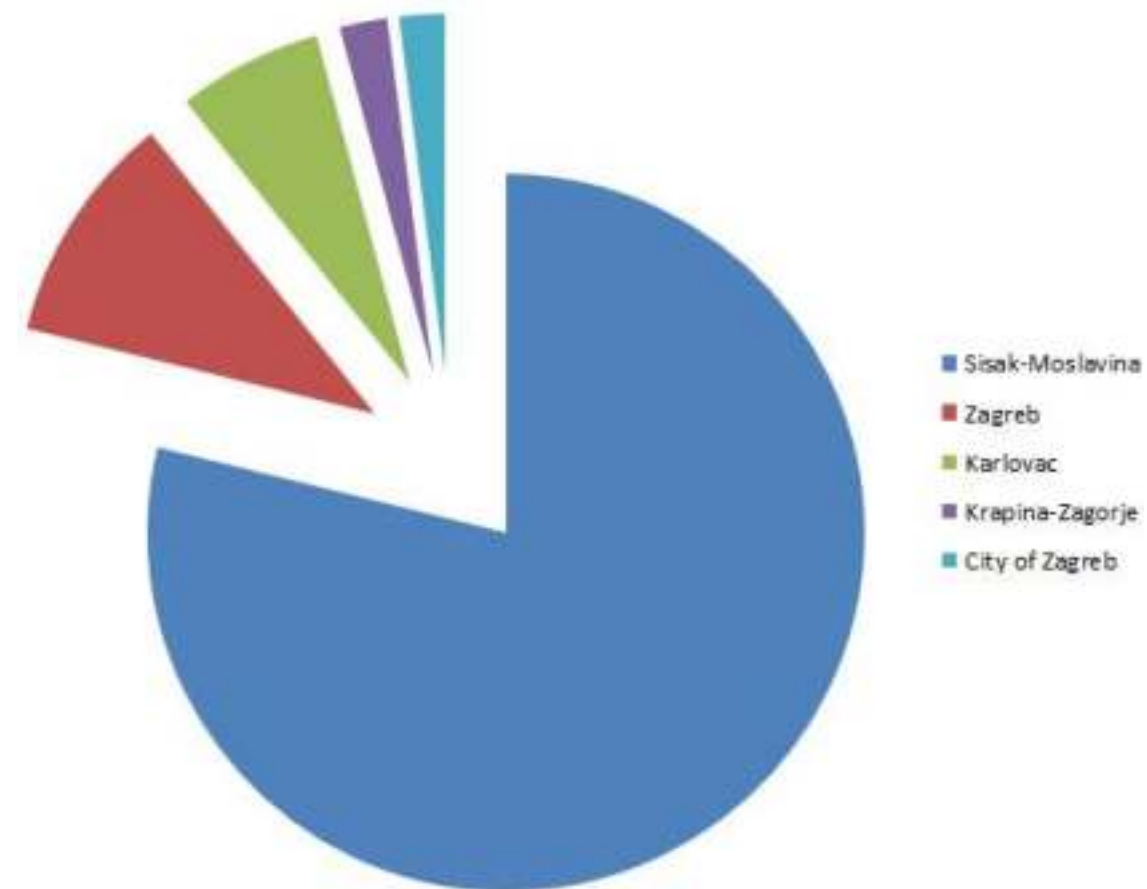


cultural heritage



Petrinja earthquake (PDNA report)

Counties



Damage and Losses



new houses !!!

	Number	m2
Family houses	30826	6.181.304
Residential buildings	945	1.715.739
Total	31771	7.897.043

Conclusion

Past

”sins” of the past

poor databases

seismic risk awareness

education

...

Present

preliminary analyzes

solidarity fund

emergency measures

education

...

Future

reconstruction process

seismic certificate

building maintenance

strategy

education

...

... forever ...

AUSTRIA IST ÜBERALL.

Q&A



Projekt jednako razvoj d.o.o
Project Equals Development



EU BUDGET 2021 – 2027.

NEW COHESION POLICY



EU BUDGET 2021 – 2027.

IN RELATION WITH „NDS CROATIA 2030”



EU BUDGET 2021 – 2027.

„NDS CROATIA 2030” / STRATEGIC GOALS

SUSTAINABLE ECONOMY AND SOCIETY

- Competitive and innovative economy
- Educated and employed people
- Efficient judiciary, public administration and management of state property
- Global recognition and strengthening of Croatia's international position and role

STRENGTHENING CRISIS RESILIENCE

- Healthy, active and quality life
- Demographic revitalization and better position of family
- Security for stable development

EU BUDGET 2021 – 2027.

„NDS CROATIA 2030” / STRATEGIC GOALS

GREEN AND DIGITAL TRANSITION

- Ecological and energy transition for climate neutrality
- Food self-sufficiency and bioeconomy development
- Sustainable mobility
- Digital transition of society and economy

BALANCED REGIONAL DEVELOPMENT

- Development of assisted areas and areas with developmental peculiarities
- Strengthening regional competitiveness

EU BUDGET 2021 – 2027.

MULTIANNUAL FINANCIAL FRAMEWORK 2021 - 2027 & NEXTGEN EU

EU expenditure 2021-2027



EU BUDGET 2021 – 2027.

MFF 2021 - 2027 – 14.48 billion EUR for CROATIA

MFF 2021-2027 total allocations per heading

	MFF	NEXT GENERATION EU	TOTAL
1. Single Market, Innovation and Digital	132.8	10.6	143.4
2. Cohesion, Resilience and Values	377.8	721.9	1 099.7
3. Natural Resources and Environment	356.4	17.5	373.9
4. Migration and Border Management	22.7	-	22.7
5. Security and Defence	13.2	-	13.2
6. Neighbourhood and the World	98.4	-	98.4
7. European Public Administration	73.1	-	73.1
TOTAL MFF	1 074.3	750.0	1 824.3

All amounts in EUR billion.
Source: European Commission.

EU BUDGET 2021 – 2027.

NEXT GENERATON EU – 11.026 billion EUR for CROATIA

NextGenerationEU

Grants	390.0
<i>of which provisioning for guarantees</i>	5.6
Loans	360.0
.....	
TOTAL	750.0

	Funding under NGEU	Funding under MFF	Total funding
Recovery and Resilience Facility	672.5	0.8	673.3
<i>Of which GRANTS</i>	312.5	-	313.3
<i>Of which LOANS</i>	360.0	-	360.0
REACT-EU	47.5	-	47.5
Rural development	7.5	77.9	85.4
Just Transition Fund	10.0	7.5	17.5
InvestEU	5.6	3.8	9.4
rescEU	1.9	1.1	3.0
Horizon Europe	5.0	79.9	84.9

All amounts in EUR billion in commitments, 2018 prices.
Source: European Commission.

EARTHQUAKES IN CROATIA

KEY NUMBERS

- 3 major earthquakes (March and December 2020)
- 5 counties affected (City of Zagreb, Zagrebačka County, Krapinsko-zagorska County, Sisačko-moslavačka County and Karlovačka County)
- **Damage estimations:**
 - March earthquake – **11.6 billion EUR**
 - December earthquake – **5.5 billion EUR**

17.1 billion EUR

FINANCING THE RENOVATION AND REBUILDING PROCESS

NATIONAL LEGISLATION AND GUIDELINES

- Ministry of Physical Planning, Construction and State Assets & The Reconstruction Fund
- Act on the reconstruction of buildings damaged by the earthquake in the City of Zagreb, Zagrebačka County, Krapinsko-zagorska County, Sisačko-moslavačka County and Karlovačka County area – **Reconstruction Act**
- Measures for the reconstruction of earthquake-damaged buildings in the City of Zagreb, Zagrebačka County, Krapinsko-zagorska County, Sisačko-moslavačka County and Karlovačka County area
- Guidelines for the reconstruction of earthquake-damaged buildings

FINANCING THE RENOVATION AND REBUILDING PROCESS



FUNDING SOURCES (current plan)

- 683.7 million EUR from the **EU SOLIDARITY FUND**
- 580 million EUR from the **RECOVERY AND RESILIENCE FACILITY**
- 111 million EUR from the **MFF**

- 184 million EUR – **WORLD BANK LOAN**
- 1 billion EUR – **EIB LOAN** (*planned*)
- 900 million EUR – **CEB LOAN** (*planned*)
- 300 million EUR – **EBRD LOAN** (*planned*)

FINANCING THE RENOVATION AND REBUILDING PROCESS

RENOVATION AND REBUILDING OPTIONS

1. Renovation of an existing earthquake-damaged building (apartment buildings, residential and commercial buildings, office buildings, family houses)
2. Removal of a building (apartment, residential-business, business) and an existing family house that has lost its mechanical resistance and / or stability to the extent that it has collapsed or its restoration is not possible
3. Construction of replacement family houses instead of earthquake-destroyed existing family houses
4. Financial aid for for temporary protection of earthquake-damaged buildings, structural reconstruction of earthquake-damaged existing buildings, the costs of preparing the main project for the reconstruction of the earthquake-damaged existing building, the construction of which began before the entry into force of the Reconstruction Act

FINANCING THE RENOVATION AND REBUILDING PROCESS



RENOVATION AND REBUILDING OPTIONS / EU SOLIDARITY FUND

Return to proper working condition of infrastructure in:

- Energy sector (2.5 million EUR)
- Water supply and wastewater management (1.22 million EUR)
- Transportation sector (109.59 million EUR)
- Health care sector (140.95 million EUR)
- Education sector (285 million EUR)
- Temporary accommodation (21 million EUR)

- Providing preventive infrastructure and protection of Cultural heritage (112.5 million EUR)
- Cleaning up disaster-stricken areas, including natural areas (0,9 million EUR)

FINANCING THE RENOVATION AND REBUILDING PROCESS



RENOVATION AND REBUILDING OPTIONS / EU SOLIDARITY FUND

Return to proper working condition of infrastructure in:

- Energy sector (2.5 million EUR)
- Water supply and wastewater management (1.22 million EUR) **31 December 2021**
- Transportation sector (109.59 million EUR) **31 December 2021**
- Health care sector (140.95 million EUR) **31 December 2021**
- Education sector (285 million EUR) **30 November 2021 & 31 December 2021**
- Temporary accommodation (21 million EUR) **31 December 2021**
- **Providing preventive infrastructure and protection of Cultural heritage (112.5 million EUR) closed**
- Cleaning up disaster-stricken areas, including natural areas (0,9 million EUR)

FINANCING THE RENOVATION AND REBUILDING PROCESS



RENOVATION AND REBUILDING OPTIONS / SISAK & PETRINJA

- Renovation of family houses owned by the Republic of Croatia in earthquake-affected areas (41 million EUR) **31 May 2021**
- Removal and construction of replacement housing units owned by the Republic of Croatia in earthquake-affected areas (42.9 million EUR) **31 May 2021**

FINANCING THE RENOVATION AND REBUILDING PROCESS



CALL FOR PROPOSAL SOURCES:

<https://strukturnifondovi.hr/en/natjecaji/>

<https://efondovi.mrrfeu.hr/MISCMS/>

CONSTRUCTION SECTOR OPPORTUNITIES 2021 - 2027



NEXT GENERATION EU OPPORTUNITIES

RECOVERY AND RESILIENCE FACILITY (NPRR) – 9.9 billion EUR

- Energy efficiency projects
- **Investments in production infrastructure**
- Construction of infrastructure for energy and heat management
- Waste management infrastructure
- Water management infrastructure
- Reconstruction of railway infrastructure
- Investments in tourism infrastructure
- Construction and rebuilding of preschool institutions, primary and secondary schools

CONSTRUCTION SECTOR OPPORTUNITIES 2021 - 2027



MULTIANNUAL FINANCIAL FRAMEWORK OPPORTUNITIES

BASED ON NDS CROATIA 2030

- Energy efficiency projects
- Investments in production infrastructure
- Investments in R&D infrastructure
- Investments in education infrastructure (schools, RCCs)
- Modernization and construction of health infrastructure
- Investments in basic social infrastructure
- Construction of infrastructure for energy and heat management
- Waste management infrastructure
- Water management infrastructure

CONSTRUCTION SECTOR OPPORTUNITIES 2021 - 2027



MULTIANNUAL FINANCIAL FRAMEWORK OPPORTUNITIES

BASED ON NDS CROATIA 2030

- Energy renovation of buildings
- Reconstruction and modernization of railway infrastructure
- Reconstruction and modernization of ports and waterways
- Reconstruction and modernization of airports

SUMMARY

- 17,1 billion EUR of earthquake damages (ASAP)
- NEXTGEN EU opportunities (key period: 2021. – 2023.) - 11.026 billion EUR
- MFF opportunities (2021. – 2027.) - 14.48 billion EUR

- Insufficient capacity of the national construction sector
- Insufficient number of design engineers and related professions
- Experts on green and circular economy



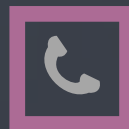
THANK YOU
For your attention!



Petrovaradinska 1
10000 Zagreb



www.pjr.hr
www.javna-nabava.info



Contact phone:
01 8897 152



E-mail adress:
info@pjr.hr

AUSTRIA IST ÜBERALL.

Q&A

Vielen Dank!

Für Fragen und Unterstützung stehen wir gerne zur Verfügung!

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