

Professional paper

BUILDING NATIONAL COOPERATION FOR PROTECTING CULTURAL HERITAGE FROM DISASTERS IN CROATIA

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Abstract: *The 2020 Zagreb and Petrinja earthquakes, amid the COVID-19 pandemic, exposed significant gaps in Croatia's disaster preparedness for cultural heritage. To address them, the CPforHERITAGE project was launched in 2024 to strengthen inter-agency collaboration between civil protection and cultural heritage sectors. Key activities included developing joint SOPs, conducting interdisciplinary training, and planning for future cooperation. The project produced a mid-term DRR strategy for cultural heritage with measurable outcomes, positioning Croatia on par with European best practices for integrated disaster risk management of cultural heritage. By promoting sustainable frameworks for coordination, knowledge transfer, and capacity building, the project ensures long-term resilience and the continued safeguarding of Croatia's cultural assets.*

Keywords: *cultural heritage, disaster risk management, inter-agency collaboration, Croatia, emergency preparedness*

1. INTRODUCTION

Over the past few decades, the frequency, intensity, and complexity of disasters have risen worldwide due to climate change, urbanization, and environmental degradation. These events—ranging from earthquakes and floods to wildfires and storms—not only threaten human lives and infrastructure but also endanger cultural heritage, which includes monuments, historic urban centers, archaeological sites, collections, and intangible heritage practices (European Commission, 2022). The loss or damage of cultural heritage in times of crisis represents a profound cultural, historical, and social disruption. It deprives communities of identity, memory, and continuity, making disaster risk reduction for cultural heritage an urgent priority at both national and international levels.

Global policy frameworks such as the Sendai Framework for Disaster Risk Reduction 2015–2030 (UNDRR, 2015) emphasize the critical need for integrating cultural heritage into DRR strategies. Despite these guidelines, implementation often lags due to limited coordination between cultural heritage institutions and civil protection agencies, as well as the lack of dedicated planning, resources, and training for heritage-specific emergencies.

Croatia, a country rich in both tangible and intangible cultural heritage, is particularly vulnerable.¹ Its seismically active zones and diverse topography, much of which placed along the Adriatic Sea expose it to recurring threats such as earthquakes, floods, and wildfires. The devastating earthquakes that struck Zagreb in March 2020 damaged mostly the historic center

¹ Croatian Register of Cultural Heritage lists 9044 immovable heritage assets (June 2025) which include protected urban and vernacular settlements, archaeology sites, cultural landscapes and individually protected buildings. It is roughly 13 % of entire building stock of the Republic of Croatia. Movable cultural heritage list counts even more assets.

as well as most buildings built after the 1880 earthquake. The following earthquake in Petrinja in December 2020 highlighted the fragility of the country's cultural heritage and the systemic challenges in its protection. In addition to progressive damage inflicted onto already damaged buildings in the Zagreb, Zagreb County, and Krapina-Zagorje County, these later earthquakes caused damage in other counties of central Croatia (Ministarstvo kulture i medija, 2024).

These disasters occurred amidst the global COVID-19 pandemic, compounding logistical and institutional constraints. Thousands of historical buildings, complex cultural heritage sites, churches, museums, archives sustained damage, together with their movable cultural heritage inventories, and the response revealed a pressing need for a more coordinated, inter-agency action.

While Croatia has longstanding expertise in both civil protection and cultural heritage conservation in times of crisis, gained in the Homeland War, as well as other disaster responses which followed since the 1990s, the events of 2020 revealed a weakness of acting through strong but parallel systems that had to be connected *ad hoc*.

Recognizing these gaps, Croatian authorities launched new initiatives aimed at fostering cooperation between sectors, the CPforHERITAGE project being the national flagship project in terms of disaster risk reduction for cultural heritage. It serves as a case study in how lessons learned from past emergencies can drive the development of more resilient, inclusive, and proactive systems for heritage disaster risk management.

2. DISASTER RISK MANAGEMENT FOR CULTURAL HERITAGE: A REVIEW OF KEY METHODOLOGIES

The field of Disaster Risk Management for Cultural Heritage has evolved significantly over the past few decades in response to the growing recognition that cultural heritage is both vulnerable to disasters and vital to post-crisis recovery. This is recognized in all relevant international guidelines on disaster risk reduction, amongst which in the afore mentioned Sendai Framework, the UNESCO standards as defined in the „Managing disaster risks for World Heritage” manual (UNESCO et al., 2010), as well as the more recent European Union principles elaborated in two documents: “Safeguarding cultural heritage from natural and man-made disasters” (European Commission, 2018) and „Strengthening cultural heritage resilience for climate change” (European Commission, 2022).

UNESCO's approach aligns with the Sendai Framework for Disaster Risk Reduction (2015–2030), which calls for the integration of cultural heritage considerations into national and local DRR strategies through four key actions. One, it calls for identifying and prioritizing risks to both tangible and intangible heritage through context-specific risk assessments. Two, it emphasizes the importance of preparedness planning and encourages development of site-specific response and salvage plans. Three, it advocates integrated management. Finally, it demands community involvement considering its role in sustaining cultural practices.

The same principles are further developed in the EU guidelines with a reference to climate change which additionally affects existing threats to cultural heritage. The EU approach in comparison to two other is more systemic and policy-driven: it seeks to embed cultural heritage resilience into governance, economics, and tool development.

The CPforHERITAGE project drew mostly from the EU strategies, aiming for structural integration, and joint digital tool development. Activities based on UNESCO's methods were aimed at field-level readiness. But most of all, the project was inspired by two other international initiatives dedicated to improving DRM for CH across the board: the PROCULTHER project and the PREVENT initiative.

The PROCULTHER project (Protecting Cultural Heritage from the Consequences of Disasters), supported by the EU Civil Protection Mechanism, was carried out between 2019 to 2021 by the Italian Civil Protection Department – DPC with the support of the Directorate-General for European Civil Protection and Humanitarian Aid Operations - DG-ECHO, and international partners (PROCULTHER, 2021). It offered a European operational perspective by promoting the idea of interdisciplinary response teams made of civil protection personnel and cultural heritage professionals, trained together to be capable of operating jointly in emergency contexts. These teams would ideally reinforce ties between heritage protection institutions and civil protection agencies, with defined roles and operational protocols. The project introduced standardized training modules for civil protection actors and heritage professionals, and promoted a standardized European methodology for DRM for CH.

Finally, one key baseline for developing Croatian national project was the PREVENT initiative developed as a flagship project by First Aid and Resilience (FAR) programme of International Centre for the Study of the Preservation and Restoration of Cultural Property in Rome (ICCROM). It was developed as a context-specific training with tools to combat two major threats to cultural heritage: fire and flood risk (PREVENT, 2024).² In comparison to PROCULTHER which promotes standardized training, the PREVENT courses are all tailor-made. They teach participants to design cost-effective mitigation and preparedness measures based on vulnerability and capacity assessments of their specific contexts. FAR provides support to their participants through follow-up site-based projects where learnings are applied directly. Finally, the initiative advocates engagement of communities and integration of traditional knowledge into DRM systems.³

3. STRENGTHENING INTER-AGENCY COLLABORATION for A RESILIENT and INTEGRATED CULTURAL HERITAGE DRM – METHODOLOGY and IMPLEMENTATION

The 'Operational Forces of Civil Protection for the Protection of Cultural Heritage' project (CPforHERITAGE) was conceived as a national-level initiative by a team of civil protection and cultural heritage protection professionals. It was carried out by the Directorate for Civil

² In fact, ICCROM's PREVENT – Mitigating Flood Risk for Heritage course was held in Croatia in the Historic City of Trogir, with the support of the Ministry of Culture and Media and the City of Trogir in autumn of 2024.

³ In addition to being familiar with these frameworks, most members of the CPforHERITAGE work team had been trained through both the PROCULTHER and PREVENT modules before drafting the Croatian project. Therefore, implementation of new international principles into the project's program was based on both theoretical and practical knowledge gained through in-person trainings as well as experiential understanding of positive outcomes of these initiatives.

Protection of the Ministry of Internal Affairs of Republic of Croatia together with the Directorate for protection of Cultural Heritage of the Ministry of Culture and Media of Republic of Croatia as an associated partner.⁴ It was supported by Croatian Restoration Institute. It had a one-year duration starting in January 2024 and ending in February 2025. It was funded by the European Union Civil Protection Mechanism in the amount of 359 713.95 EUR.



Figure 1: Logo of the project

The primary aim of CPforHERITAGE was to strengthen the existing operational forces by introducing artifact evacuation protocols into operational procedures specific to different types of movable cultural heritage and to improve handling skills, thus reducing the risk of additional damage in the first phases of response to a disaster.

However, the project preparation phase revealed an opportunity to build systemic resilience by fostering long-term collaboration between civil protection and cultural heritage institutions across all phases of the disaster risk management cycle. Rather than treating emergencies as isolated events, the project sought to establish an integrated framework for risk reduction.

⁴ The project work group nominated by the CP Directorate included Ivana Cesarec (head of team), Martina Cindrić, Valerija Karabatić, Tomislav Maravić, Andrijana Maslač, Ana Miličić, Sanja Novosel Grgljanić, Sandra Novosel, Mate Radnić, Matija Varović, and Sanda Milošević (who initiated the project but did not take part in its implementation). Members nominated by the CH Directorate included Tatjana Horvatić, Jasna Popović, Anja Radelić, Petra Smajić and Pia Sopta.

Despite the relatively short timeframe, it was designed to create long-term structural change by embedding results into national systems and procedures.

The twelve-month period starting in January 2024 and ending at the beginning of the 2025 had a clearly defined timeline. Since the initial planning had been done before applying for UCPM funds, the project was launched by a meeting of the work group deciding on details of activity implementation. In fact, online and in-person meetings were held regularly to ensure all potential challenges were met on time.

The project was structured into three major work packages, each led by cross-sectoral work team. Work Package One was dedicated to strengthening cross-sectoral cooperation, through the development of guidelines for the Standard Operating Procedure of an inter-agency response team and study trips abroad. Work Package Two was intended to strengthen the capacities of the civil protection and the cultural heritage protection sectors through a one-week interdisciplinary training of 30 members of the CP sector and 10 members of the CH sector. In addition, this package included a development of an action plan for capacity building and interdepartmental cooperation 2025-2027. Each work package incorporated joint drafting, peer review, and iterative testing of materials, culminating in simulation exercise and the creation of five regional interdisciplinary teams trained in cultural heritage emergency response.

Two trips abroad were undertaken by the work team members. One to Italy and one to France.⁵ These trips included site visits to different civil protection agencies and cultural

⁵ The trip to Italy was organized by Croatian Directorate for Civil Protection and hosted by the Italian Agency for Civil Protection, while the trip to France was organized by Croatian Directorate for Protection of Cultural Heritage and hosted by French Civil Protection Agency together with Research and Restoration Centre of the Museums of France.

heritage sites, and meetings with key stakeholders to understand disaster risk management for cultural heritage in these respective countries.



Figure 2: Photo of a visit to Versailles' CP Headquarters, by J. Popović

Members of both sectors of both countries freely shared their guidelines, directives and protocols, which then served as the basis for the draft of the first national SOP for an inter-agency response team.

The central activity of the Work Package Two was a five-day interdisciplinary training, which took place in Zagreb, Sisak and Petrinja in autumn of 2024. International and national experts held lectures and presented best practices within the conceptual framework of the project. These included Italian and Portuguese experts, as well as Croatian civil protection and cultural heritage professionals. The first four days were dedicated to understanding basic concepts of both fields, examining existing protocols, sharing experience and best practice examples. The participants mobilized from all parts of Croatia with the attempt to form five regional response teams included Directorate for Civil Protection, Directorate for the Protection of Cultural Heritage, Croatian Restoration Institute, emergency responders, architects, conservators, and technical experts. The fifth and final day of the course took

place in Sisak where participants' skills were tested in a real time simulation of an earthquake damaging a mock-up museum.



Figure 3: Photo of participants in the Sisak drill, by J. Popović

Additional collaboration was sought from international partners, including ICCROM, which provided methodological input and facilitated capacity-building workshop in Rome in February 2025 as part of the Work Package Three. ICCROM's FAR team with their international expertise provided a different perspective on two parallel DRM systems and

helped draft both the SOP and the Action plan with the aim of bringing together both sectors in the most effective way possible.



Figure 4: Photo of the training in Zagreb, on the topic of proper artifact handling, photo by J. Popović

The basic principle throughout the CPforHERITAGE project was collaborative inter-agency work which resulted in the formulation of a mid-term action plan designed to ensure institutionalization of inter-agency cooperation established through the project. The co-development process produced a strategy through participatory model engaging key representatives of both sectors. It was an effort rooted in shared designing of the projects, shared lessons of past emergencies as well as input gathered through study trips, the training course and ongoing communication and consultation between the Directorates. The draft of the action plan was first developed separately by the CH professionals, while the SOP was drafted by the CP professionals. These texts were then exchanged and refined through joint meetings and working sessions, thus ensuring mutual ownership of the outcome. The process

was further supported by technical guidance from international partners such as ICCROM, which helped align the strategy with international standards and best practices.

The final event of the project was a conference held in Pula in February 2025 as an opportunity to share projects' results with the wider community.

4. CPforHERITAGE KEY OUTCOMES

The CPforHeritage project has made several important, distinct contributions to Croatia's disaster risk management for cultural heritage framework. This was not achieved without challenges, some which were clearly defined in the Action Plan: 2025-2027 together with proposals of how to address them in future inter-agency cooperation.

One of the first issues detected was human resource limitations. Despite the relatively high number of people involved in the project preparation and implementation, it must be recognized that risk management for cultural heritage is still not a mainstream subject, therefore, there was not one person in either one of the partner organizations dedicated to the topic exclusively. This is due to differing sectoral priorities, another concern which will have to be tackled in future collaborative projects. Finally, perhaps the most challenging concern in the future will be technological integration of data collection and data sharing, since the current systems between sectors are not completely compatible.

Despite these obstacles the CPforHERITAGE project significantly transformed existing mechanisms.

One, it has attempted to establish inter-agency, cross-sector response teams. The term "attempted" is used on purpose since for these teams to become operational, one would need to adjust the legal framework as well. In addition, participation in the training was voluntary, therefore, there was no equal representation of all Croatian regions among the participants.⁶ Nevertheless, over 40 professionals from across the board and country completed joint modules including theoretical principles, tabletop discussions, and realistic drills—covering everything from damage assessment to evacuation of artifacts. This led to the creation of a joint future vision of DRM for CH system between CP and CH professionals.

Two, a Standard Operating Procedure (SOP) was drafted that clearly defines roles, coordination mechanisms, and joint actions during disaster response and first aid to heritage. It must be noted that new Law on Protection and Preservation of Cultural Heritage in the Republic of Croatia passed in December 2024 (NN 145/24). For the first time management of cultural heritage in times of crisis is explicitly addresses with Articles 31 and 32, reflecting Croatia's commitment to safeguarding cultural heritage in times of emergencies and finally providing legal foundation for the operational layer drafted in the CPforHERITAGE SOP.

⁶ This was in fact discussed in preparatory phase and solutions suggested to overcome the challenge of equal regional representation in the future.

The SOP draft will be the baseline for structuring a bylaw which will further formalize inter-agency collaboration and codify steps in first aid to heritage.

Three, the project adopted the best EU practices as well as international protocols and new tools such as the ICCROM FAR's vulnerability and capacity assessment tool.

Four, the project formalized integration of heritage considerations into national risk assessment framework which is a major shift in policy and practice direction, through the Action Plan: 2025-2027, which outlines major future activities and capacity building strategies through ongoing cooperation between the Directorate for Civil Protection and Directorate for Protection of Cultural Heritage.

Furthermore, this project generated new local and ongoing initiatives such as fire risk mapping in Istria and fire mitigation for cultural institutions projects in the Split-Dalmatia County and Dubrovnik-Neretva County.

Finally, a knowledge network across the country was formed that was activated in minor emergencies immediately after the ending of the project. Projects' participants helped organize inter-agency and interdisciplinary response within hours, following all protocols learned.⁷

5. CONCLUSION

The CPforHERITAGE project has successfully changed Croatian approach to DRM for cultural heritage by elevating joint response through formalized joint trainings. It has helped codify protocols and procedures by integrating the best European practices and helped embed cultural heritage protection and preservation in national governance and policy resulting in a more resilient and interconnected system. The logical and recommended future step will be institutionalizing regional response teams responsible for managing cultural heritage in times of crisis.

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⁷ The action was covered by media, see: <https://net.hr/danas/vijesti/hgss-uklanja-dio-zvonika-na-pagu-jak-potresga-pomaknuo-459d7f1c-e93d-11ef-b330-be8f7beeb0bb>

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