urban science

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Review

Towards Harmonized Reduction of Seismic Vulnerability: Analyzing Regulatory and Incentive Frameworks in the Adriatic—Ionian Region

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Abstract

The Adriatic–Ionian region is seismically very active and poses a major challenge for risk mitigation. Each country has developed laws, standards, and techniques to reduce seismic vulnerability. The ADRISEISMIC project created a database of existing regulatory and incentive frameworks, based on a comprehensive study conducted in six countries. The study covered seismic norms, building regulations, urban planning regulations, incentive frameworks, and post-earthquake planning. A comparative matrix was developed in which key parameters, such as year of issuance, references to EU regulations, level of enforcement, mandatory status, target groups, reference period in relation to earthquake occurrence, and consideration of cultural heritage, were analyzed. The database aims to support a harmonized strategy to reduce seismic vulnerability by promoting measures based on common reference standards. This increases safety, improves the built environment, and minimizes risks to people and nature. Particular attention will be paid to historic urban areas that are both vulnerable and rich in cultural heritage. The collected regulatory and incentive framework will serve as a basis for future research to support the identification of good practices and the formulation of customized roadmaps to apply them to reduce seismic vulnerability.

Keywords: seismic vulnerability; regulatory and incentive framework; survey; seismic norms; building regulation; urban planning regulation; seismic incentive frameworks; post-earthquake planning; Adriatic–Ionian region; collection and systematization of documents

Received: 2 July 2025
Revised: 7 August 2025
Accepted: 10 August 2025
Published: 14 August 2025

Citation: Triller, P.; Santangelo, A.; Marzani, G.; Kreslin, M. Towards Harmonized Reduction of Seismic Vulnerability: Analyzing Regulatory and Incentive Frameworks in the Adriatic—Ionian Region. *Urban Sci.* **2025**, *9*, 319. https://doi.org/10.3390/urbansci9080319

1. Introduction

The Adriatic and Ionian (ADRION) area is characterized by high exposure to natural disasters, ranking among the most seismically vulnerable areas in Europe. Major recent seismic events include the 1963 Skopje earthquake (North Macedonia), the 1979 Montenegro and Northern Albania event, the 1999 Athens earthquake, the 2012 and 2016 earthquakes in North-Central Italy, and the 2020 Petrinja earthquake (Croatia). This vulnerability arises not only from the intensity of seismic activity but also from high population density and the concentration of valuable cultural and natural heritage assets.

Historical development and the catastrophic effects of past earthquakes have driven the introduction of legislation and incentive schemes aimed at reducing seismic vulnerability in the region. Individual countries have responded with distinct strategies tailored

to their specific contexts and vulnerabilities. In particular, ADRION countries adopt differentiated strategies for reducing the seismic vulnerability of the built environment, for the planning and management of emergency response following seismic events, and for the post-earthquake reconstruction and seismic retrofitting of structures. Moreover, a lack of systematic compilation and analysis of regulatory and policy documents addressing seismic risk reduction across the ADRION region is recognized. This gap highlights the pressing need for a coordinated and harmonized approach to understanding and managing seismic risk in the region. Comprehensive studies of this nature are scarce. Among the few available is a review of current practices in seismic risk mitigation, focusing on policies in the ten most earthquake-prone countries worldwide, including one ADRION country, Italy [1]. The aim of the review is to identify best practices that could be useful for national and local governments, with a particular focus on the United States, where seismic risk mitigation is primarily the responsibility of local authorities.

In recent decades, disaster risk reduction [2] has emerged as a fundamental pillar of sustainable urban development, with spatial and land use planning recognized as critical tools for reducing the exposure of built environments to natural hazards and enhancing urban resilience [3]. Although many European cities are located in seismically active zones, policies and interventions targeting seismic vulnerability reduction often lag behind other development priorities, such as energy efficiency and climate adaptation. Nevertheless, even simple initiatives can yield significant impacts, and enhancing community resilience depends strongly on effective risk mitigation and readiness measures, especially when embedded in broader disaster preparedness strategies. For example, the EU Civil Protection Mechanism [4] and Disaster Preparedness [5] initiatives facilitate cooperation among European countries in responding to natural disasters, including earthquakes. This mechanism supports preparedness, emergency response, and recovery, enhancing the region's capacity to manage seismic risks effectively. The inclusion of seismic risk reduction measures within these broader civil protection frameworks underscores the necessity for integrated and coordinated approaches. Furthermore, frameworks such as the Sendai Framework for Disaster Risk Reduction (2015–2030) [6] provide globally recognized priorities and targets to reduce disaster risk and losses. Integrating these priorities into regional and national policies is essential for effective seismic risk management and resilience building. The ADRION region's efforts align with these global goals, emphasizing the importance of multi-level governance and cross-border cooperation.

In the ADRION region, the EU Strategy for the Adriatic and Ionian Region (EUSAIR) [7], adopted by the European Council in 2014, provides a strategic framework to promote social, economic, and territorial cohesion, aiming to reduce disparities across the Adriatic–Ionian macro-region through enhanced cooperation. The strategy is operationalized through various mechanisms, notably the Interreg IPA ADRION program, which fosters transnational cooperation and co-finances projects with macro-regional impact. This program, aligned with the EUSAIR geographic scope, provides financial support for projects of macro-regional significance, including the funding of the Facility Point to assist in the governance and coordination of EUSAIR efforts.

The absence of uniform and comparable strategies for seismic risk prevention served as both a driving force and a key challenge addressed by the ADRISEISMIC project. Within this context, the project focused on aligning regulatory and incentive-based measures to create a shared framework that brings together legal, practical, and financial tools for reducing seismic vulnerability in the Adriatic and Ionian region. The aim was to coordinate diverse instruments and methodologies under a cohesive system. This common framework is grounded in existing European and national regulations, and further supported by relevant

guidelines, policy recommendations, and fiscal measures promoting the implementation of seismic mitigation actions.

This paper is an important step towards understanding the regulatory and incentive frameworks for seismic risk reduction in six ADRISEISMIC countries: Albania, Croatia, Greece, Italy, Serbia, and Slovenia. A comprehensive database was developed, compiling relevant documents from each country, selected through a defined methodology and analyzed using a set of predetermined parameters [8,9]. This database of documents serves as a foundation for assessing and systematizing the regulatory, policy, and planning framework, supporting knowledge transfer to countries lacking such documents. The applied methodology is also scalable and transferable, facilitating future updates and expansion across other regions. Ultimately, this work aims to provide actionable insights for policymakers to strengthen regulatory frameworks and reduce seismic vulnerability more effectively [10].

Following the introduction, which outlines the study's motivation, Section 2 describes the process of collecting regulatory and incentive-related documents, the main topics addressed, and the specific parameters used for analysis. Section 3 presents and discusses the findings of each topic in detail.

2. Methodology

To assess the current state of legislation concerning the reduction of seismic vulnerability in the ADRION area, a new methodology has been developed. The objective was to obtain all currently valid documents that address reducing the seismic vulnerability of the built environment in different domains. The collected documents include a wide range of types, such as laws, regulations, norms, incentive schemes, guidelines, manuals, and technical instructions, as well as practical applications and tools.

The methodology, consisting of three parts, is presented below. Firstly, the main topics that guided the collection of relevant regulatory and incentive measures related to enhancing the seismic resilience are introduced. Then, all the key parameters forming the basis for the document comparison are presented. In the last part, the entire data collection procedure is described step by step, from the initial phase of collection to the final result, a database of collected documents and a comparison matrix.

2.1. Topics

Seismic vulnerability refers to the inherent susceptibility of a given element to sustain damage during an earthquake. While it is closely linked to the structural characteristics, these features alone do not fully explain the complexity of the phenomenon. Urban characteristics—especially those of historic districts—must also be considered, as the interactions between various components of the built environment significantly influence the overall seismic-related risk in urban settings. Consequently, in order to gain a comprehensive insight into the existing legal framework in ADRISEISMIC countries, the collection of legal and technical documents must cover a broad spectrum of themes, reflecting conditions from single structures to wider urban contexts. Furthermore, while the mitigation stage plays a key role in minimizing seismic vulnerability, it is equally important to consider legislation and tools related to the post-earthquake phase of disaster risk management, as insights from recovery and response processes can also inform and improve preventive strategies.

To support the collection of relevant documentation, a set of specific thematic areas was defined to provide a comprehensive overview of the regulatory landscape addressing seismic vulnerability in the built environment across all ADRISEISMIC countries. Insights from prior research and practical experience in this field have helped identify the key

areas that can contribute meaningfully to this objective from different angles. Provided that suitable norms, regulations, incentives, or tools exist, each of these themes has the potential to significantly impact the reduction of seismic vulnerability. In addressing this task, the following categories were established: seismic norms, building regulations, urban planning regulations, seismic incentive frameworks, post-earthquake planning, and insurance against earthquakes. The latter represents a type of property insurance that provides financial compensation to policyholders in the event of earthquake-induced damage. While it does not directly reduce a building's seismic vulnerability, it significantly enhances the owner's financial capacity to implement post-event strengthening measures. Although this topic was analyzed as part of the ADRISEISMIC project, its full treatment exceeds the scope of this article, and it is therefore excluded for further analysis. In fact, due to its complexity and the extreme variability of insurance systems between countries and providers, a separate and more in-depth discussion would be required to adequately address its implications and relevance for seismic risk management. Therefore, the present paper focuses on the following five topics (see Figure 1).

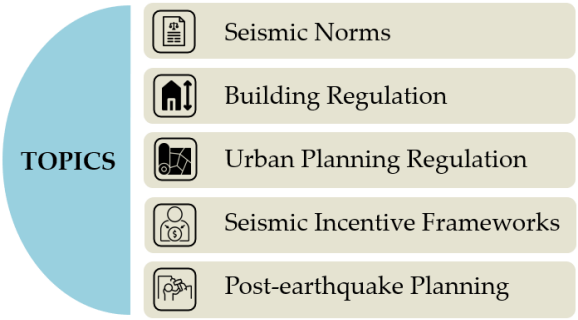

Figure 1. Main topics for the collection of regulatory and incentive instruments.

Seismic Norms (SN). Seismic norms include rules and guidelines for designing new structures and assessing existing ones to ensure seismic resistance. These documents aim to protect property and lives during earthquakes. Developed in response to past seismic events that caused significant damage, particularly in urban areas, these norms draw upon insights gained from past earthquakes. These insights are complemented by findings from experimental and on-site investigations. Their central objective is to avoid collapses and casualties, with a growing emphasis on ensuring structures remain usable after strong earthquakes. Seismic norms are crucial in areas with high seismic risk. The latter is determined by two parameters: seismic hazard (based on location) and seismic resistance (influenced by materials, geometry, construction details, technology, quality of construction, etc.). Seismic norms represent a subset of broader building regulations (see description below), as both aim to ensure the safety and performance of structures. However, seismic norms focus specifically on structural behavior under seismic loads, which is why the two topics are often closely linked in regulatory frameworks. In this analysis, they are addressed separately to highlight regulations that directly target seismic performance—an aspect essential to the reduction of seismic vulnerability.

Building Regulations (BR). The topic refers to a comprehensive set of standards and guidelines that govern the design, construction, and maintenance of structures, ensuring the safety, health, and welfare of occupants and the general public. These regulations cover various aspects of building construction, including structural integrity, fire safety, energy efficiency, accessibility, sanitation, electrical safety, and environmental impact. Building regulations are enforced by local, regional, or national authorities and are regularly updated to reflect advancements in technology, materials, and safety practices. Non-compliance with these regulations can lead to legal penalties, fines, or the obligation to undertake costly

modifications to bring a structure up to code. Nowadays, building regulations offer local governments a valuable tool to enhance the implementation of interventions on existing structures. These documents enable public authorities to define the methods and criteria for promoting improved structural performance in the face of seismic events. In fact, regulatory updates in the building sector have been made to support urban regeneration initiatives [11].

Urban Planning Regulation (UPR). This topic encompasses the legislation and tools currently implemented to regulate planning frameworks and promote environmentally responsible development of urban areas. These regulations are designed to ensure that cities and towns develop in an orderly, efficient, and sustainable manner, promoting the well-being of residents, supporting economic growth, and protecting the environment. Urban planning regulations are implemented by local governments, often through planning departments or commissions. Since urban planning regulations are in place to govern land use, including seismic vulnerability analysis, they can influence urban development strategies. In doing so, they help reduce the risk faced by assets and, as a result, lower their earthquake vulnerability.

Seismic Incentive Frameworks (SIF). Seismic incentives are financial or regulatory benefits offered by governments or other organizations to encourage property owners, builders, and investors to incorporate seismic-resistant features into built environment. These incentives aim to reduce the risk of damage and casualties in the event of an earthquake by promoting the adoption of seismic safety measures. In order for direct measures to also be cost-effective, several studies have examined the economic feasibility of such incentives from various perspectives [12]. In addition to financial and economic incentives—such as tax credits and deductions, grants and subsidies, low-interest loans, insurance premium discounts, and others—that have a direct impact on reducing the seismic vulnerability of the built environment, this topic also includes measures that contribute indirectly to the same goal. These indirect measures include publicly funded projects and their outcomes, educational materials, technical manuals, digital tools, and similar resources.

These materials primarily serve to enhance public understanding and awareness of seismic risks. To clarify the distinction between direct financial mechanisms and broader awareness-raising efforts, the topic has been divided into two subcategories: financial and economic incentives and awareness-raising initiatives. Seismic incentives are crucial for encouraging proactive measures to protect lives and property, especially in earthquake-prone regions. By offsetting some of the costs and challenges associated with seismic upgrades, these incentives help create safer, more resilient communities.

Post-Earthquake Planning (PEP). Post-earthquake planning encompasses all activities aimed at optimizing the earthquake response and informing stakeholders about the consequences of potential earthquake scenarios. Disaster preparedness involves measures taken by governments, organizations, communities, or individuals to effectively respond to and manage the immediate aftermath of both natural and man-made disasters. These measures aim to minimize loss of life and livelihoods. This topic spans a broad spectrum, including legislative frameworks related to civil protection responsibilities during earthquakes. Key documents in this field outline response strategies for various types of disasters, detailing specific actions for natural disasters such as earthquakes. Educational programs play a crucial role in enhancing earthquake response capabilities. Special emphasis is placed on protection and rescue plans, rapid structure assessments, and the stockpiling of equipment and supplies. Tools like applications and simulations contribute to awareness of seismic hazards and vulnerability assessments for structures. Additionally, the regulatory and incentive framework regulates response protocols in earthquake scenarios.

2.2. Parameters

Objective evaluation of the collected documents can only be achieved through detailed analysis and comparison. For this purpose, various parameters that serve as the basis for comparison have been defined. Some parameters are common to all document topics, while others are tailored to the specific content of each topic. All the parameters discussed in this article, intended for the analysis of the collected documents, are presented in Figure 2 and explained below.

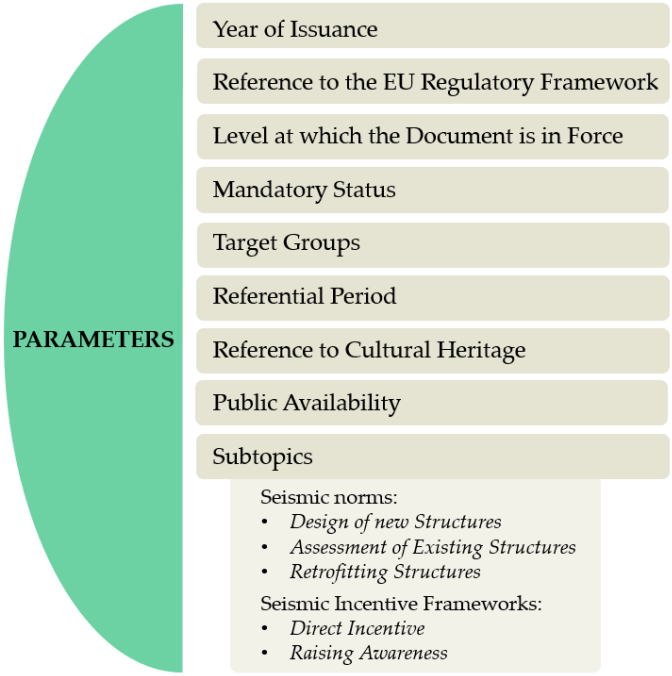

Figure 2. Parameters for the analysis of regulatory and incentive instruments.

(a) **Year of Issuance** refers to the year when the inserted document was initially accepted. It is important to note that the year reflects the first adoption of the document, rather than any subsequent amendments or revisions, including the year of its implementation. For this reason, the provided years are considered more informational and are not used in later comparisons, as in some cases, an older document may have been updated, while in other instances it was entirely re-adopted.

(b) **Reference to the EU Regulatory Framework**: indicates whether the norm or incentive is linked to existing European legislation that requires or encourages its implementation.

(c) **Level at which the Document is in Force:** specifies the administrative level at which the document is in force—national, regional, or municipal.

(d) **Mandatory Status:** clarifies whether the application of the document is obligatory or optional.

(e) **Target Groups:** for each identified regulatory and incentive instrument, one or more relevant target groups have been assigned, based on the intended users or beneficiaries: public authority (government ministries, local government authorities, regulatory bodies. . .), professional field (enterprise, SME, interest groups, and practitioners), general public, and education/training.

(f) **Referential Period:** the timeframe during which the norm or incentive is applicable, either pre- or post-earthquake period.

(g) **Reference to Cultural Heritage:** indicates whether the document clearly mentions cultural heritage or refers to it in any of its sections.

(h) **Public Availability**: indicates whether a particular document, norm, regulation, or incentive is accessible to the general public.

(i) For topics seismic norms and seismic incentive frameworks, subtopics to facilitate better classification have been defined.

Documents within **seismic norms** are divided into the following subtopics:

- **Design of new structures:** This area covers documents for designing structures that are resistant to seismic forces, ensuring their safety and stability during an earthquake.
- **Assessment of existing structures:** This involves the evaluation of the seismic performance of existing structures identifying potential vulnerabilities and assessing their ability to withstand seismic events.
- **Retrofitting structures:** This area focuses on documents for strengthening or upgrading existing structuresto improve their seismic resistance and reduce the risk of damage during an earthquake.

Documents related to **seismic incentive frameworks** are organized into the following subtopics:

- **Direct incentive:** This subtopic includes various incentives designed to encourage property owners, builders, and developers to incorporate seismic-resistant features into built environment. It is further divided into: financial (direct financial support, such as grants, subsidies, or tax benefits, to reduce the cost of implementing seismic improvements), economic (incentives such as reduced insurance premiums or other cost-saving measures that promote seismic risk reduction), and volumetric (incentives related to increasing the allowable volume or floor space of buildings if seismic-resistant features are incorporated into their design).
- **Raising awareness:** This subtopic focuses on initiatives aimed at increasing public and stakeholder awareness about the importance of seismic risk reduction and the available incentives to support seismic resilience in built environment.

2.3. Collection Procedure

To ensure optimal comparability across countries and include a broad range of existing documents while still gathering detailed information, the data collection was carried out through a structured survey.

The survey was aimed at each individual country involved in the ADRISEISMIC project. It was composed of the following essential contents:

- Forms for entering existing documents, which present a substantial part of the survey. A separate form was filled out for each new document. Each form included the determination of the topic and the determination of all the parameters presented in Section 2.2, as well as a short and concise description of the content of the document.
- A concise overview regarding the existing regulatory and incentive measures in the country for each of the topics, being useful for the upcoming comparative activities.
- Essential information on the partner country, with emphasis on its seismic context. Data regarding the country's size, population, administrative divisions, and significant past earthquakes have been gathered. This was crucial for the continuation of the activities, as the information mentioned helped to highlight key distinctions and commonalities within the regulatory and incentive frameworks of the various partner countries.

The development of the database on existing regulatory and incentive frameworks for reducing seismic vulnerability has been carried out in multiple phases. Data collection steps and their content are listed below step by step as well as illustrated in Figure 3:

- Defining the scope—determining the main topics for the collection of relevant documents;

- selection of key parameters for document description and comparison;
- survey preparation;
- preparation of detailed survey instructions;
- presentation and distribution of the survey and its instructions;
- collection of appropriate documents and completion of surveys by each country;
- review of survey contents and preparation of corrections and additions (in order to achieve consistency);
- preparation of corrections and additions by each country;
- preparation of the final database of the collected regulatory and incentive frameworks, which provides the knowledge base for further improvements (e.g., identification of good practices, etc.).

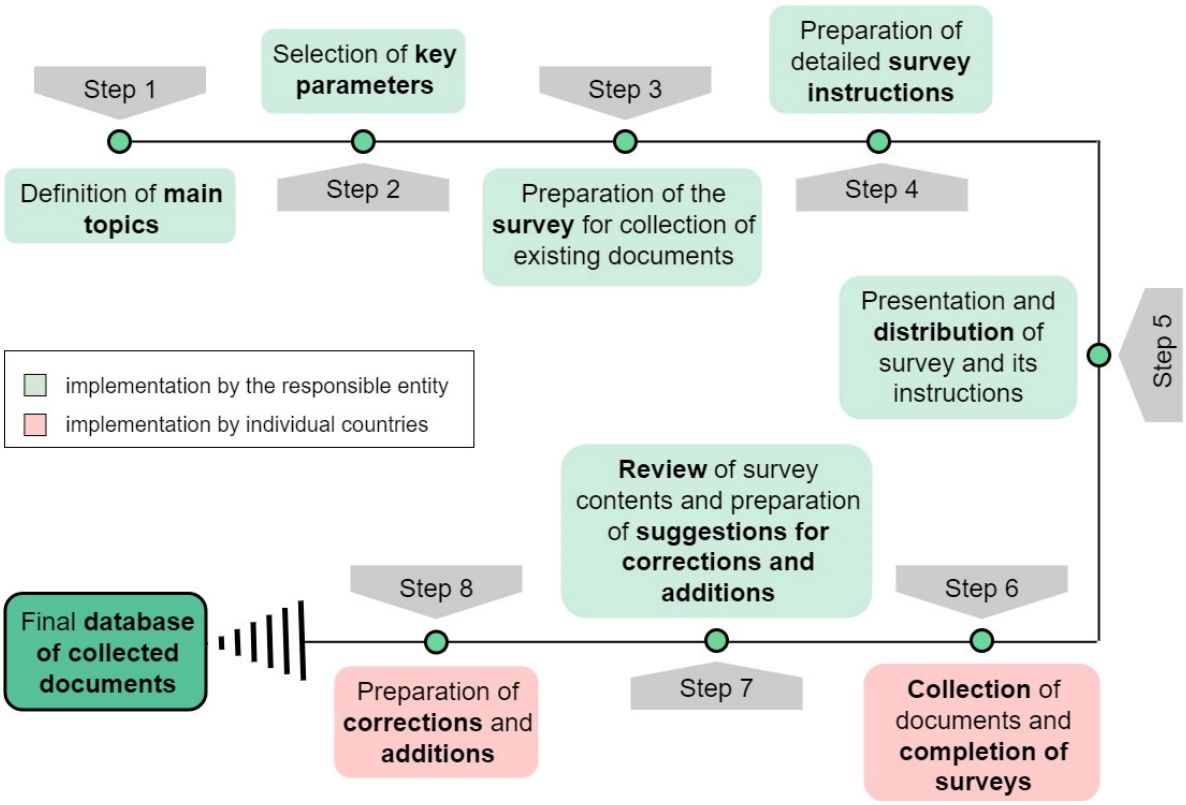

Figure 3. Collection procedure.

The collection of existing documents was conducted in 2020, encompassing those documents that were in force at that time or had at least reached the draft stage. The final compilation of documents varies by country, as each nation independently gathered its relevant materials, resulting in potential omissions. However, to mitigate this gap and validate the completeness of the collected regulatory and incentive frameworks, a workshop with local stakeholders was conducted in each country in December 2020. The compilation strategy ensures that all documents pertaining to the topic discussed at the national level are included for each country. To ensure consistency with the scope and implementation of the ADRISEISMIC project, the selection of sub-national documents was limited to regions and municipalities directly involved in project activities or to areas that have experienced significant earthquakes, given their relevance for understanding how seismic risk is addressed at the regional or municipal level. As the level of regulatory competence varies across countries, the inclusion of sub-national instruments was adapted to the specific territorial and administrative frameworks. In cases where competences are legislated or tools are developed at the regional or municipal level, only one representative

region or municipality was included, typically the one directly involved in the project. This approach ensures the contextual relevance of the selected documents and reflects the varying scales at which regulatory and incentive frameworks are adopted and implemented across partner countries.

3. Results and Discussion

In this section, the results of the survey for the ADRION region using the proposed methodology are presented. The results of the methodology are collected documents dealing with reduction of seismic vulnerability, separately for each topic—seismic norms, building regulation, urban planning regulation, seismic incentive framework, and post-earthquake planning (as described in Section 2.1). The analysis of the collected documents was executed regarding selected parameters, described in Section 2.2.

Firstly, the background of all the participating countries is described to enable a bigger picture, and then all the results of the collection are presented and discussed separately for each of the main topics. Moreover, graphical representations comparing the collected regulatory and incentive frameworks between the participating countries, based on particular parameters, are included. The main findings regarding the data are highlighted.

3.1. Background

When studying the collected documents, some attributes of the participating countries also play an important role in understanding the results. In the following, some basic statistics regarding territorial extension, population, economic situation in the country, and past seismic activity are shown.

The countries that form the ADRION region included in the survey (Albania, Croatia, Greece, Italy, Serbia, and Slovenia) have many similarities but also quite a few important differences. Table 1 presents general data for each country. Regarding land area, Italy is notably the largest, being more than twice the size of Greece—the second largest—and approximately 15 times bigger than Slovenia, the smallest participating country. When considering population, Italy's lead is even more pronounced: with over 60 million residents, it significantly surpasses the other partner countries, where the population ranges from five to thirty times fewer inhabitants. Table 1 also contains data on the maximum expected peak ground acceleration (PGA) in each country as well as the list of typical strongest earthquakes and the most recent major earthquakes in each country, as they influenced the implementation of advancements and the introduction of new regulatory and incentive instruments regarding seismic vulnerability reduction. The seismic hazard map of the ADRION region is also shown in Figure 4.

Table 1. Comparison between project partner countries.

Project Partner Country/Topic	Albania	Croatia	Greece	Italy	Serbia	Slovenia
Country area [km^2] [13]	28,748	56,594	131,957	301,340	77,474	20,273
Population [/] [14]	2,793,592	3,862,305	10,459,782	59,030,133	6,797,105	2,107,180
GDP per capita [eur] [1] [15]	6500	17,260	19,650	33,860	9530	26,980
Maximum expected peak ground acceleration (PGA) [/] [2]	0.36 g [16]	0.38 g [17]	0.56 g [18]	0.30 g [19]	0.25 g [20]	0.325 g [21]

Table 1. *Cont.*

Project Partner Country/Topic	Albania	Croatia	Greece	Italy	Serbia	Slovenia
One of the strongest earthquakes in history [3,4]	Salento 1743 M = 7.1 I_{max} = X [22]	Dubrovnik 1667 M = 6.4 I_{max} = IX [23]	Heraklion 1856 M = 8.9 I_{max} = XI [24]	Messina 1908 M = 7.1 I_{max} = XI [25]	Lazarevac 1922 M = 6.0 I_{max} = VIII [26]	Idrija 1511 M = 6.8 I_{max} = X [27]
Most recent major earthquake in the country [3,4]	Mamurras 2019 M = 6.4 I_{max} = VIII [22]	Petrinja 2020 M = 6.4 I_{max} = IX [23]	Samos 2020 M = 7.0 I_{max} = IX [24]	Umbria 2016 M = 6.6 I_{max} = XI [25]	Kraljevo 2010 M = 5.5 I_{max} = VIII [26]	Bovec 1998 M = 5.7 I_{max} = VIII [27]

[1] The data was collected for the year 2022, as no consistent data is available for all countries involved in the project for later years. [2] PGA with a return period of 475-years (10% exceedance probability in 50 years). [3] Earthquakes, whose epicenter is located in the country under consideration. [4] Earthquakes for which magnitude and intensity data are available, and which occurred during the second millennium are included in the analysis.

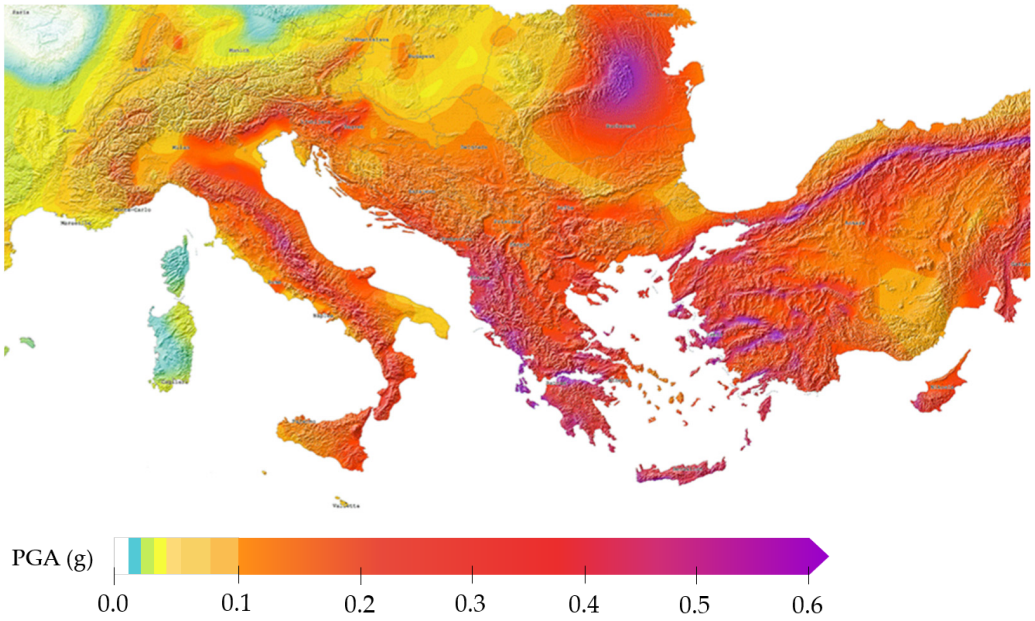

Figure 4. Seismic hazard map of the ADRION region. The expected peak ground acceleration (PGA) with a probability of exceedance of 10% in 50 years, which corresponds to a return period of 475 years. Adapted from EFEHR [28].

Different surface characteristics result in varying probabilities of earthquake occurrence. The number of inhabitants in a region also plays a significant role, influencing the level of damage and intensity of the impact. Areas with higher population densities tend to experience greater destruction due to the concentration of infrastructure and people. Additionally, the GDP per capita of a country reflects its economic capacity, which influences the quality of construction. Regions with higher GDP per capita generally have better-built structures that are more resilient to earthquakes, whereas lower-income areas may suffer more severe consequences due to poorer construction quality, leading to higher levels of intensity and damage.

3.2. Seismic Norms

The collected documents, presented in Table 2, provide a comprehensive overview of seismic rules and guidelines across various European countries, focusing on the implementation of Eurocodes [29] and national standards for earthquake-resistant construction. They outline mandatory adoption timelines for Eurocodes in different nations and present national provisions that complement these European regulations.

Table 2. List of documents collected under seismic norms.

Document ID	Document Name	Year of Issuance	Country
SN_1	Eurocode 8 [29]	2004	All [1]
SN_2	KTP-N2-89 [30]	1989	Albania
SN_3	Manual for Seismic Retrofitting of the Existing Masonry Buildings [31]	2020	Croatia
SN_4	Techniques for the Repair and Strengthening of the Masonry Buildings [32]	2020	Croatia
SN_5	EAK 2000—Greek seismic code [33]	2000	Greece
SN_6	KAN.EPE—Code of interventions [34]	2017	Greece
SN_7	Guidelines for Assessment and Structural Interventions on Masonry Buildings [35]	2021	Greece
SN_8	NTC 2018—Technical frameworks for construction [36]	2018	Italy
SN_9	Explanatory Circular for NTC 2018 [37]	2019	Italy
SN_10	DPCM 9/02/2011—Evaluation and reduction of seismic risk of cultural heritage [38]	2011	Italy
SN_11	Regional Law No. 19/2008 [39]	2008	Italy
SN_12	D.G.R. n. 2272/2016 [40]	2016	Italy
SN_13	Regional Law No. 16/2012 [41]	2012	Italy
SN_14	Legislative Decree No. 189/2016 [42]	2016	Italy
SN_15	OPCM n. 3519/2006 [43]	2006	Italy
SN_16	DGR n. 1164/2018 [44]	2018	Italy

[1] The timeline for the implementation and mandatory use of the Eurocodes varies from country to country (Albania 2018, Croatia 2013, Greece 2011, Italy 2009, Serbia 2017, Slovenia 2008).

National regulatory instruments, such as Albania's KTP-N2-89 [30], Greece's EAK 2000 [33] and KANEPE 2017 [34], and Italy's NTC 2018 [36], define seismic design requirements, classification of seismic zones, and intervention strategies for existing structures. These documents support engineers and policymakers in implementing effective earthquake mitigation measures, ensuring structural safety, and preserving historical buildings. Some documents specifically address Italy's regulatory framework, focusing on seismic risk assessment for cultural heritage and regional laws aimed at seismic risk reduction and post-earthquake reconstruction [39,41]. Updates to seismic classifications, particularly in regions such as Emilia–Romagna, are also covered, ensuring that hazard assessments align with evolving seismic data.

In addition, the collection includes technical manuals that provide practical guidance on the restoration and strengthening of masonry structures, offering methodologies for assessing damage, selecting appropriate retrofitting techniques, and improving the resilience of buildings in earthquake-prone areas.

The detailed characteristics of the 16 collected seismic norms are presented in Figures 5–7 and comprehensively cover key aspects, such as design, assessment, and retrofitting, with most documents addressing all three subsections. Nearly half of them have been issued in the last decade, reflecting continuous updates in seismic norms, while the oldest dates back to 1989. The majority of the documents are mandatory at the national level, except in Italy, where some are also developed at the regional level (documents collected for Emilia–Romagna Region).

The collected norms reflect a strong focus on comprehensive seismic risk mitigation, with a predominance of national-level policies. These norms are often referenced in connection with EU regulations, while some documents follow similar principles without direct reference. They are targeted at public authorities, professional responders, and engineers to ensure that structures can withstand seismic events.

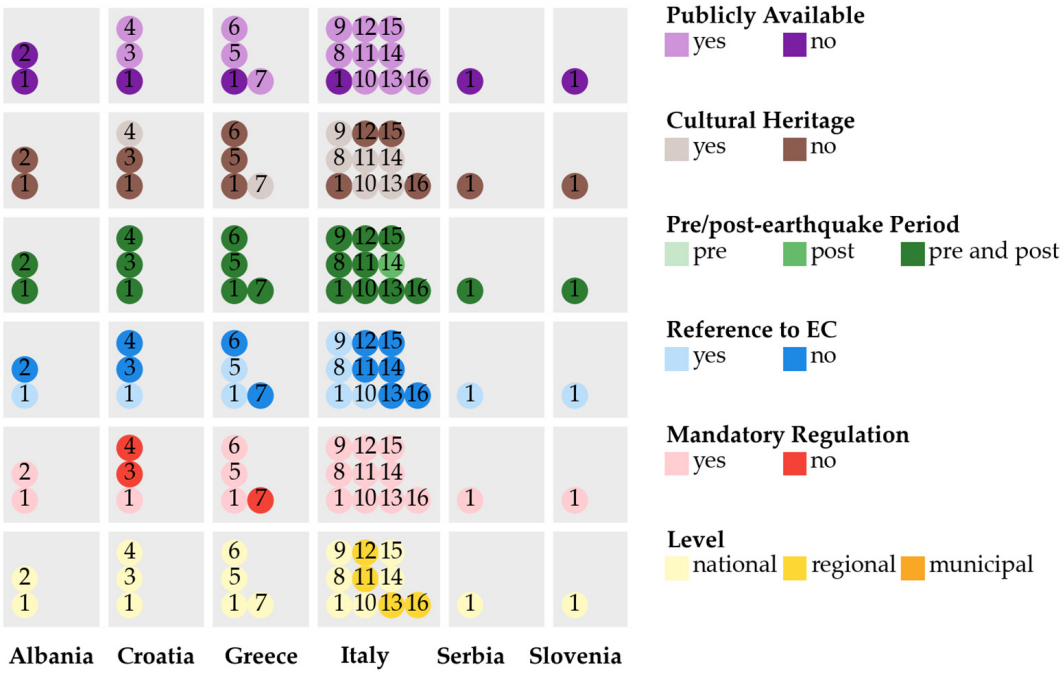

Figure 5. Schematic representation of the comparisons of the collected documents under seismic norms between the participating countries according to certain parameters considered. The numbers in the figure represent the document IDs from Table 2.

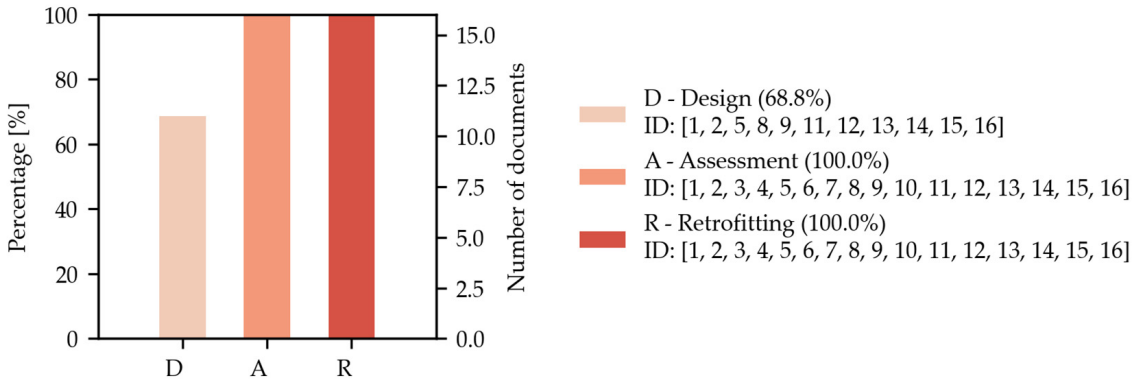

Figure 6. Overview of the subtopics of documents collected within seismic norms. The numbers in the figure represent the document IDs from Table 2.

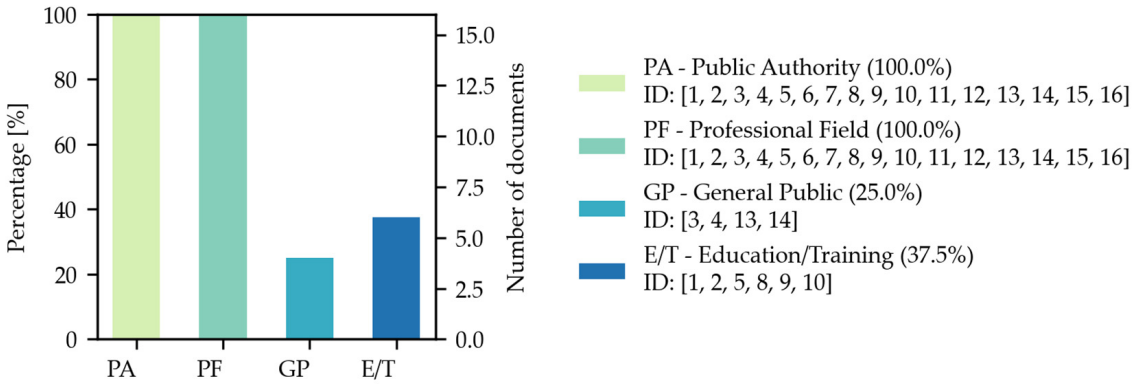

Figure 7. Overview of the target groups of documents collected within seismic norms. The numbers in the figure represent the document IDs from Table 2.

The pre- and post-earthquake periods are addressed in almost all of these norms, with an emphasis on the seismic retrofitting of existing structures. Specific instruments, like the DPCM 9/02/2011 [38] in Italy, provide particular frameworks for the seismic risk assessment of cultural heritage, highlighting the importance of safeguarding historical buildings in seismic zones.

While some norms primarily focus on technical guidelines for building design and construction, others, like Manual for Seismic Retrofitting [32] in Croatia, provide detailed guidance on strengthening existing structures. Half of the documents explicitly address cultural heritage, reflecting its growing importance in seismic safety planning, while others, including Eurocode 8 [29], do not. Notably, Italian instruments, such as the Legislative Decree No. 189/2016 [42], focus on preserving historic buildings through retrofitting and risk mitigation.

These seismic norms are largely publicly available, promoting transparency and access to critical information for all relevant stakeholders involved in disaster risk reduction and building safety.

3.3. Building Regulation

Table 3 presents an overview of 11 building regulations documents issued between 2001 and 2021. The building regulations across Albania, Croatia, Greece, Italy, Serbia, and Slovenia establish design standards, construction practices, and building codes to ensure structural integrity, particularly regarding seismic safety. These documents set technical and functional requirements for building design, construction, and maintenance, emphasizing safety, energy efficiency, accessibility, and sustainability. They ensure suitable conditions for living, education, and work while covering various building types, permit procedures, stakeholder responsibilities, supervision methods, and material guidelines. Aligning projects with European and national safety standards, they promote sustainable development and high-quality, safe living environments.

Table 3. List of documents collected under building regulation norms.

Document ID	Document Name	Year of Issuance	Country
BR_1	Decision No. 159 on Design Standards for Kindergartens [45]	2017	Albania
BR_2	Decision No. 319 on Design Standards for Schools [46]	2017	Albania
BR_3	Construction Act of the Republic of Croatia [47]	2013	Croatia
BR_4	N. 4067/2012—New Building Regulation [48]	2012	Greece
BR_5	Decision No. 3328—Reinforced Concrete Regulation [49]	2016	Greece
BR_6	YA D1492330/2008—Steel Regulation [50]	2008	Greece
BR_7	Building Regulations of the Municipality of Bologna [51]	2020	Italy
BR_8	D.P.R. n. 380/2001 and subsequent modifications and additions [52]	2001	Italy
BR_9	Planning and Building Act of the Republic of Serbia [53]	2009	Serbia
BR_10	Regulation on Building Structures [54]	2019	Serbia
BR_11	Building Act of the Republic of Slovenia [55]	2021	Slovenia

The detailed characteristics of the collected documents are shown in Figures 8 and 9. Most of these regulations are enforced at the national level; however, for Italy, where building codes are enacted at the municipal level, the survey includes one such document adopted by the Municipality of Bologna.

In terms of legal status, the vast majority of documents are legally binding and mandatory, while one serves as a technical manual. Overall, the regulations reflect a strong focus on ensuring compliance with national and EU standards, with a particular emphasis on safety and sustainability. They apply to public authorities and professional responders,

aiming to improve the resilience of structures to earthquakes. However, some regulations, like those in Albania, focus on specific building types, such as schools and kindergartens, without directly addressing the cultural heritage or historic buildings.

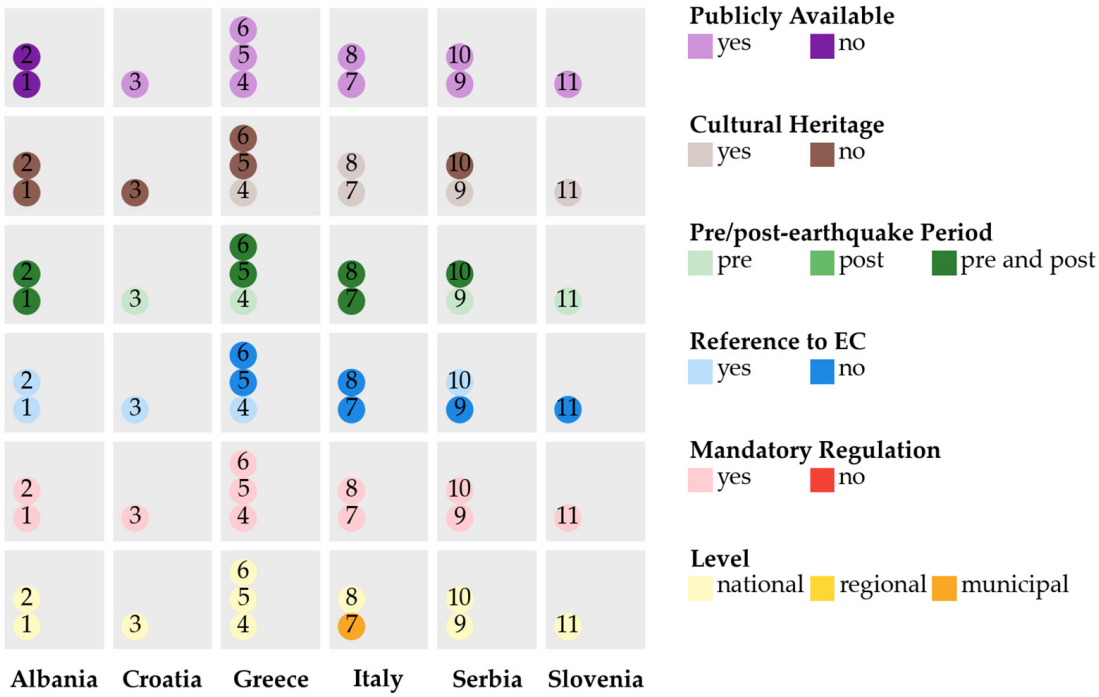

Figure 8. Schematic representation of the comparisons of the documents collected in the framework of the building regulations between the participating countries according to certain parameters considered. The numbers in the figure represent the document IDs from Table 3.

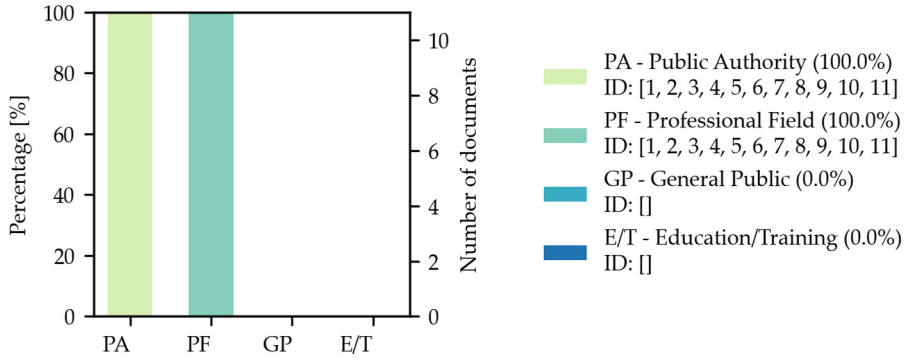

Figure 9. Overview of the target groups of documents collected within building regulations. The numbers in the figure represent the document IDs from Table 3.

While most of the documents cover both pre- and post-earthquake scenarios, a few focus exclusively on pre-earthquake periods, emphasizing the importance of resilient construction before the occurrence of seismic events. Cultural heritage is a consideration in a limited number of cases, indicating a potential area for further development in seismic safety planning. However, it is included especially in countries like Greece and Italy, where historical buildings require special protection measures.

In general, these regulations are publicly available, ensuring accessibility and transparency for all stakeholders involved.

3.4. Urban Planning Regulations

The collected urban planning regulations focus on the development and implementation of spatial and territorial planning, ensuring a structured approach to urban development and land use. They aim to ensure a balance between economic, social, and environmental needs, promoting efficient land use, environmental protection, and infrastructure development while considering cultural heritage and historical preservation. The documents regulate land use, zoning, and building construction, outlining procedures for permits, spatial planning, and urban development. They emphasize sustainable development by addressing issues such as energy efficiency, environmental impact, and the protection of natural resources.

Many of the documents focus on urban planning strategies, with specific attention to the integration of infrastructure development, protection of historical sites, and seismic risk mitigation. Seismic safety is particularly highlighted in several regulations, ensuring that land use and construction practices minimize the impact of earthquakes and enhance resilience to seismic hazards. These regulations provide frameworks for municipalities and regional authorities to guide planning decisions and coordinate efforts between national and local governments. They also establish guidelines for the preparation of urban and spatial plans, ensuring consistency and alignment with national and local policies. The overall goal is to foster sustainable growth, minimize urban sprawl, and promote resilience to environmental and natural hazards, including the critical consideration of earthquake risks. In most countries, urban planning regulations are adopted at the national level. However, in some countries, they are enacted at the regional level (e.g., Emilia–Romagna in Italy) or at the municipal level (e.g., Gjirokastër in Albania).

A total of 12 urban planning documents have been collected (see Table 4) and their detailed characteristics are shown in Figures 10 and 11.

Table 4. List of documents collected under urban planning regulation.

Document ID	Document Name	Year of Issuance	Country
UPR_1	Law No. 107/2014 on Territorial Planning and Development [56]	2014	Albania
UPR_2	General Local Plan of the Gjirokastër Municipality [57]	2015	Albania
UPR_3	The law on spatial planning Act No. 153/2013 [58]	2013	Croatia
UPR_4	Decision No. 42284/13.10.2017—Revised Regional Spatial Framework [59]	2017	Greece
UPR_5	General Urban Plans (Law No. 2508/1997) [60]	1997	Greece
UPR_6	Geological Suitability Studies—Ministries' Decision 37691/2007 [61]	2007	Greece
UPR_7	Regional Law No. 24/2017 [62]	2017	Italy
UPR_8	Planning and Building Act of the Republic of Serbia [53]	2009	Serbia
UPR_9	Rules on the Content, Method, and Procedure for Preparing Spatial and Urban Planning Documents [63]	2019	Serbia
UPR_10	Strategy for Sustainable Urban Development of the Republic of Serbia until 2030 [64]	2019	Serbia
UPR_11	Spatial Planning Act (ZUreP-3), No. 199/21 [65]	2021	Slovenia
UPR_12	Regulatory Elements of Spatial Planning Handbook [66]	2020	Slovenia

Most of the frameworks are mandatory, aligning with EU guidelines and covering both pre- and post-earthquake periods. They target public authorities and professional responders, emphasizing the integration of seismic risk considerations into urban planning and infrastructure development. Notably, some of the frameworks also address cultural heritage, ensuring that earthquake resilience measures consider the protection of historical sites.

While many of the regulations promote sustainable development, some documents, such as the Regulatory Elements of Spatial Planning Handbook in Slovenia [66], focus on procedural guidelines rather than direct seismic risk mitigation. These documents are typically publicly available, promoting transparency and involvement of various stakeholders in the planning process.

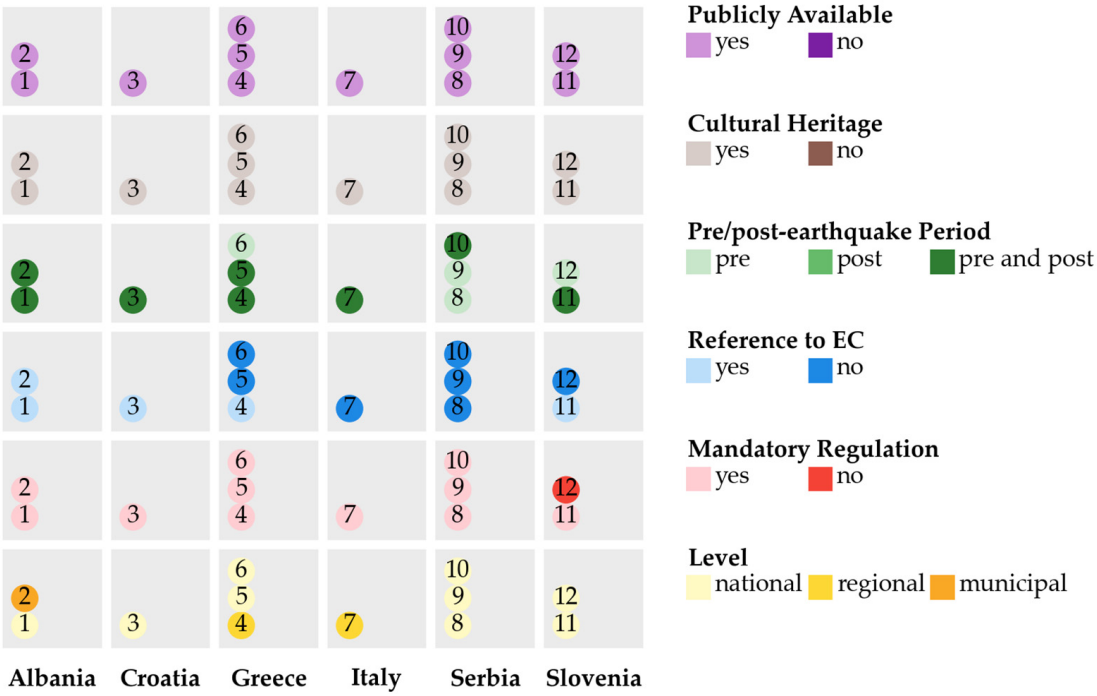

Figure 10. Schematic representation of the comparisons of the documents collected in the framework of the urban planning regulation between the participating countries according to certain parameters considered. The numbers in the figure represent the document IDs from Table 4.

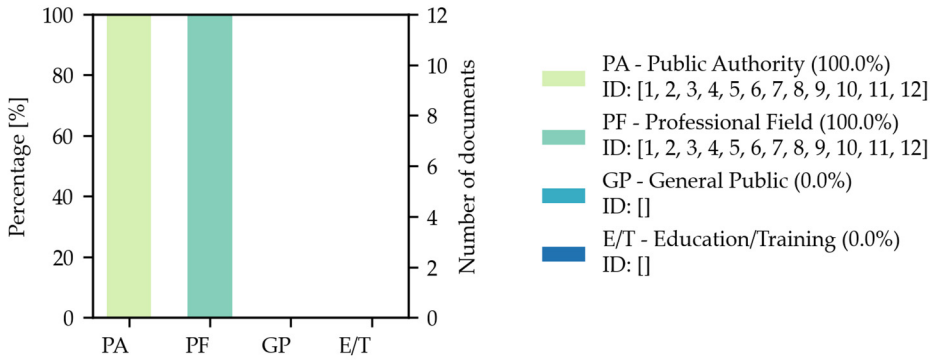

Figure 11. Overview of the target groups of documents collected within urban planning regulation. The numbers in the figure represent the document IDs from Table 4.

3.5. Seismic Incentive Frameworks

Several initiatives and frameworks have been established to improve the earthquake resilience of built environment and enhance disaster preparedness across different countries. These efforts focus on strengthening infrastructure, providing financial incentives, and raising public awareness to reduce risks and mitigate the impact of seismic events.

Among all partner countries, seismic incentive frameworks were identified only for Greece, Italy, and Slovenia, focusing on promoting safety through incentives and awareness programs for earthquake risk reduction. A total of eight seismic incentive documents have been collected (see Table 5), and their detailed characteristics are shown in Figures 12–14.

Table 5. List of documents collected under seismic incentive frameworks.

Document ID	Document Name	Year of Issuance	Country
SIF_1	FEK 2943/B-2023—Seismic Inspection of Public Buildings Framework for Pre-Earthquake Monitoring of Public Utility Buildings [67]	2001	Greece
SIF_2	Sismabonus—Law No. 77/2020 [68]	2020	Italy
SIF_3	D.M. No. 58/2017—Guidelines for the Evaluation of Seismic Vulnerability of Buildings [69]	2017	Italy
SIF_4	"I Don't Take Risks"—National Awareness Campaign for Risk Prevention and Preparedness [70]	2010	Italy
SIF_5	Volumetric Incentives for Seismic Retrofitting Interventions [71]	2017	Italy
SIF_6	"EDURISK"—Increasing Knowledge and Awareness of Seismic Risk in Schools [72]	2011	Italy
SIF_7	"Secure +"—Online Tool to Raise Awareness on Seismic Risk of Italian Municipalities [73]	2020	Italy
SIF_8	POTROG Applications [74]	2013	Slovenia

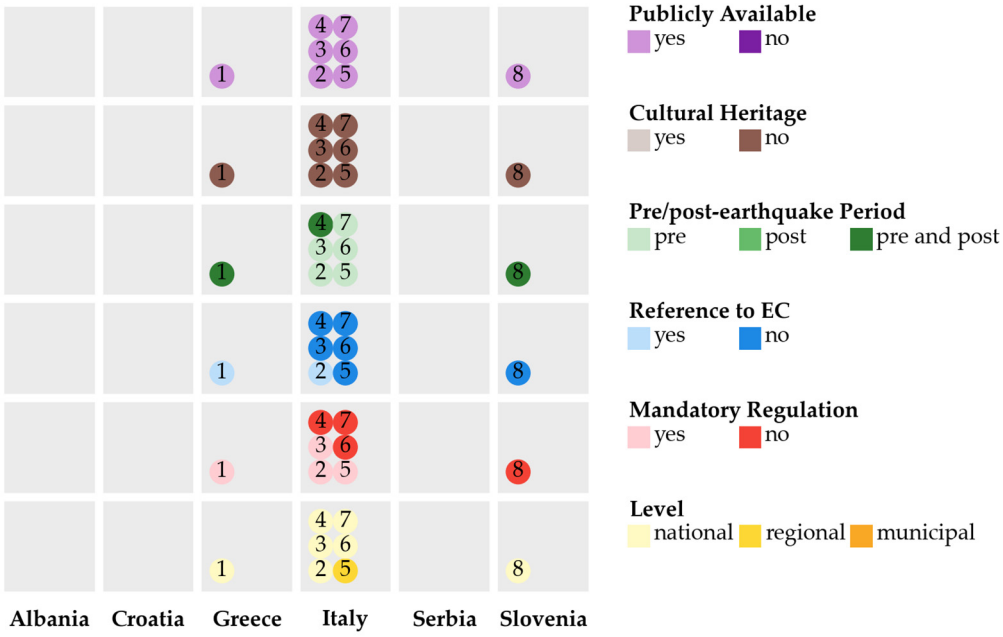

Figure 12. Schematic representation of the comparisons of the documents collected in the seismic incentive frameworks between the participating countries according to certain parameters considered. The numbers in the figure represent the document IDs from Table 5.

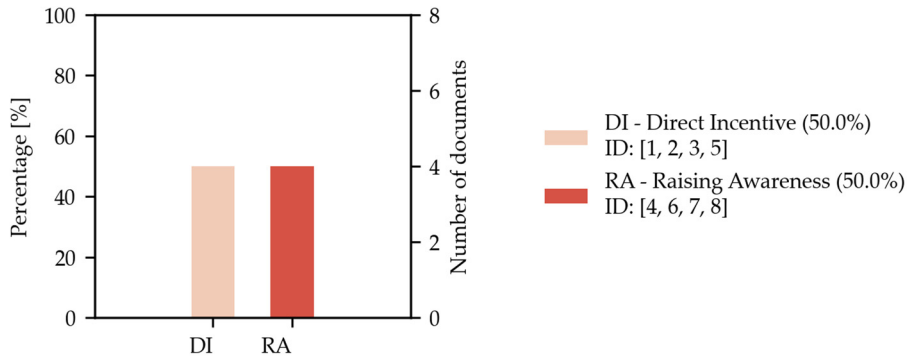

Figure 13. Overview of the subtopics of documents collected within seismic incentive frameworks. The numbers in the figure represent the document IDs from Table 5.

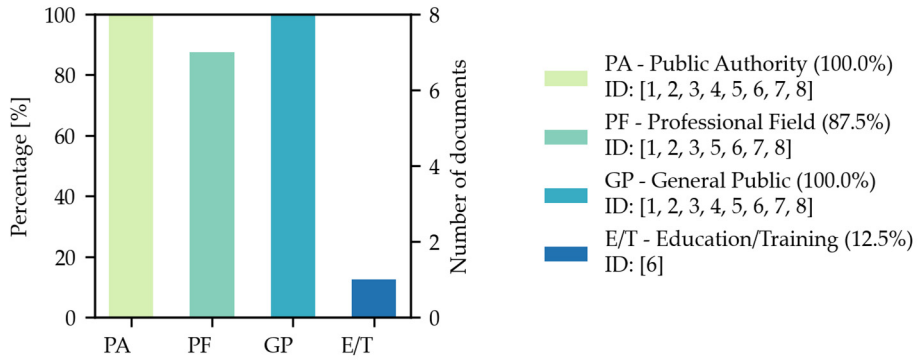

Figure 14. Overview of the target groups of documents collected within seismic incentive frameworks. The numbers in the figure represent the document IDs from Table 5.

In Greece, the Earthquake Planning and Protection Organization (EPPO) developed a framework for monitoring the structural integrity of public utility buildings, such as hospitals and schools, prior to seismic events [67]. This proactive approach aims to identify vulnerabilities and ensure these critical buildings can continue to operate effectively during and after earthquakes. In Italy, the Sismabonus law [68] offers tax incentives to property owners for reinforcing buildings to improve seismic resistance. Similarly, Guidelines for the evaluation of seismic vulnerability of buildings [69] help professionals plan appropriate reinforcement measures. Initiatives like the "I Don't Take Risks" campaign [70] promote risk awareness and preparedness among citizens, emphasizing the importance of personal responsibility in reducing seismic risks. In the Emilia–Romagna region, the "Volumetric Incentives for Seismic Retrofitting Interventions" policy [71] encourages property owners to invest in seismic strengthening by offering incentives such as additional building volume. The "EDURISK" project [72] focuses on educating schoolchildren about seismic risks, fostering a culture of preparedness in future generations. The "Secure +" project [73] is an online tool in Italy that helps local governments and citizens understand seismic vulnerabilities and mitigation measures. In Slovenia, the POTROG Applications [74] enhance disaster response capabilities by providing a digital platform for managing disaster data, coordinating rescue operations, improving communication among authorities, and estimating the probability of damage at specific earthquake intensities based on statistical analyses of seismic vulnerability assessments.

Most of the frameworks are established at the national level, with some regional incentives targeting specific local needs. These frameworks generally offer direct incentives for seismic inspections and retrofitting, such as in Greece's Seismic Inspection of Public Buildings Framework [67] and Italy's Sismabonus law [68]. They are mandatory instruments, in line with EU guidelines, where applicable. Target groups for these frameworks include public authorities, professional responders, and the general public, ensuring broad participation in seismic safety initiatives.

While the instruments primarily focus on the pre-earthquake period, some also provide for post-earthquake actions to ensure ongoing awareness and recovery. Notably, certain frameworks also aim to protect cultural heritage, especially in Italy, where seismic risks to heritage buildings are a significant concern. These instruments are typically publicly available, enabling transparency and public involvement, although some programs, like POTROG Applications [74] in Slovenia, focus more on raising awareness without direct financial incentives.

3.6. Post-Earthquake Planning

Legislation and strategic documents focused on earthquake protection and overall civil protection create a comprehensive framework for risk reduction, disaster management, and enhancing resilience to natural and other disasters. Key areas include disaster preparedness, emergency procedures, infrastructure reconstruction following earthquakes, risk assessment, and improving the safety of buildings, particularly critical infrastructure such as hospitals, schools, and government buildings.

A central role is played by protection plans, which include post-earthquake recovery measures coordinated drills and simulations to improve response capabilities. Core goals also include raising public awareness of risks, providing educational resources, and training citizens and professionals for appropriate actions during natural disasters.

The overall disaster protection framework is designed to ensure coordinated action between local authorities, civil protection, volunteers, and other stakeholders, aiming to protect lives, buildings, and environmental resources in the face of natural hazards such as earthquakes.

The regulatory and incentive frameworks related to post-earthquake planning across Albania, Croatia, Greece, Italy, Serbia, and Slovenia vary but share some common elements. A total of 28 post-earthquake planning documents have been collected (see Table 6), and their detailed characteristics are shown in Figures 15 and 16.

Table 6. List of documents collected under post-earthquake planning.

Document ID	Document Name	Year of Issuance	Country
PEP_1	Law No. 45/2019 on Civil Protection [75]	2019	Albania
PEP_2	National Civil Emergency Plan of Albania [76]	2004	Albania
PEP_3	Emergency Seismic Reconstruction Program [77]	2020	Croatia
PEP_4	Plan for the Development of the Civil Protection System in the City of Kaštela [78]	2016	Croatia
PEP_5	Plan for Protection and Rescue in the Republic of Croatia [79]	2010	Croatia
PEP_6	Civil Protection System Act [80]	2015	Croatia
PEP_7	Law on the Reconstruction of Buildings Damaged by the Earthquake in the City of Zagreb, Krapina-Zagorje County, and Zagreb County [81]	2020	Croatia
PEP_8	The Manual for Emergency Seismic Reconstruction Program [82]	2020	Croatia
PEP_9	Ministerial Decision No. 1299/2003—General Civil Protection Plan "Xenokrates" [83]	2003	Greece
PEP_10	Law 4662/2020—National Crisis Management and Risk Mitigation Framework [84]	2020	Greece
PEP_11	General Civil Protection Plan—"Engelados II" [85]	2023	Greece
PEP_12	Law 3013/2002 on the Upgrade of Civil Protection [86]	2002	Greece
PEP_13	Guidelines for Planning and Execution of Civil Protection Exercises [87]	2020	Greece
PEP_14	National Plan for the Prevention of Seismic Risk, Law No. 77 [88]	2014	Italy
PEP_15	National Seismic Risk Rescue Program DPCM 14/01/2014 [89]	2014	Italy
PEP_16	National Seismic Risk Rescue Program—Annex II (Emilia–Romagna) [90]	2019	Italy
PEP_17	Municipal Civil Protection Plan of Bologna [91]	2016	Italy
PEP_18	Seismic Microzonation (MS) studies [92]	2010	Italy
PEP_19	Analysis of the Emergency Limit Condition (CLE) [93]	2012	Italy
PEP_20	Law on Recovery Following Natural and Other Disasters [94]	2020	Serbia
PEP_21	Law on Disaster Risk Reduction and Emergency Management [95]	2018	Serbia
PEP_22	Catastrophe Risk Assessment in the Republic of Serbia [96]	2019	Serbia
PEP_23	Law on Protection Against Natural and Other Disasters [97]	2006	Slovenia

Table 6. *Cont.*

Document ID	Document Name	Year of Issuance	Country
PEP_24	Resolution on Strengthening Earthquake Resilience by 2050 "Beat the earthquake" (ReKPV50) [98]	2023	Slovenia
PEP_25	Decree on the Methodology for Damage Assessment [99]	2008	Slovenia
PEP_26	Decree on the Organization, Equipment, and Training of Protection and Aid Forces [100]	2016	Slovenia
PEP_27	National Plan for Civil Protection and Disaster Relief in Case of Earthquake [101]	2024	Slovenia
PEP_28	Municipal Earthquake Protection and Rescue Plan for the City of Ljubljana [102]	2024	Slovenia

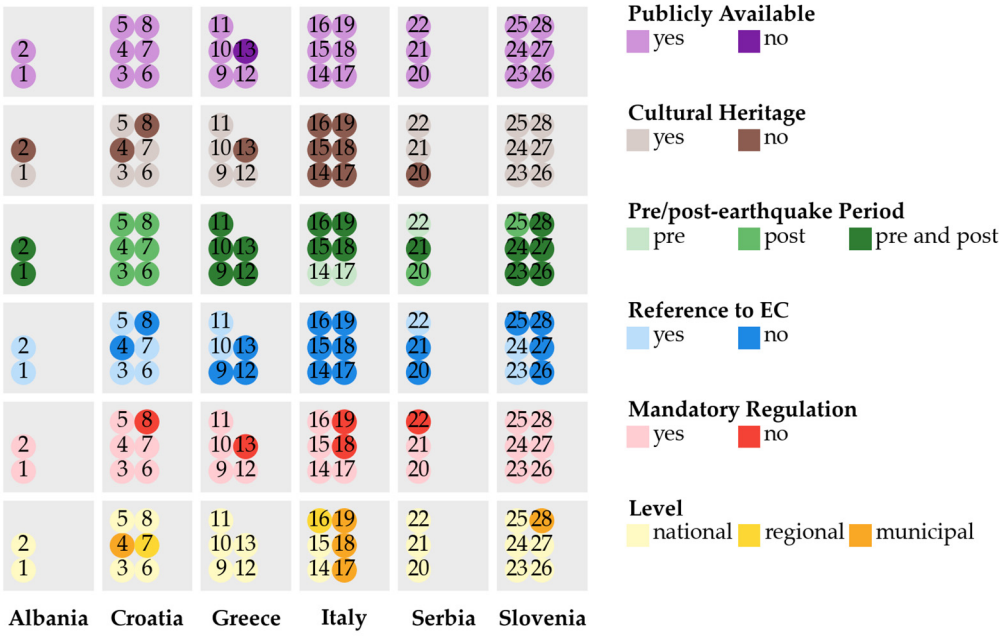

Figure 15. Schematic representation of the comparisons of the documents collected in the framework of post-earthquake planning between the participating countries according to certain parameters considered. The numbers in the figure represent the document IDs from Table 6.

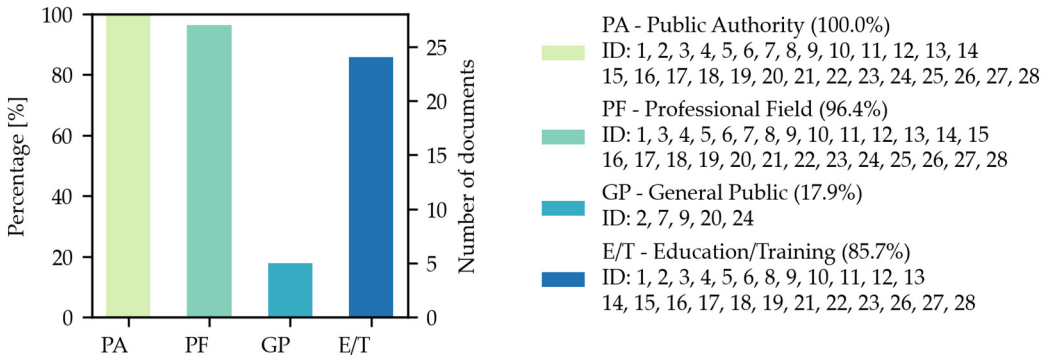

Figure 16. Overview of the target groups of documents collected within post-earthquake planning. The numbers in the figure represent the document IDs from Table 6.

Most regulatory and incentive instruments are in force at the national level, with some specific to regional (City of Zagreb, Krapina-Zagorje County, and Zagreb County in Croatia; Emilia–Romagna in Italy) and municipal (City of Kaštela, Croatia; City of Bologna, Italy; City of Ljubljana, Slovenia) areas, allowing for tailored responses to local needs.

These instruments are typically mandatory, ensuring consistent disaster management and recovery procedures, with many referring to EU regulations, especially in EU member states, aligning national efforts with broader European standards. The primary representatives of the target groups are public authorities, who are consistently featured across all documents due to their central role in the planning and implementation of civil protection measures and seismic recovery efforts. The professional public plays a vital role in the technical execution and regulatory aspects of the documents. The general public is addressed mostly in documents emphasizing awareness-raising and community involvement in earthquake preparedness and recovery, while the education sector is essential for training and educating both professionals and the broader public on civil protection measures and earthquake response strategies.

The regulatory and incentive instruments cover both the pre- and post-earthquake periods, ensuring preparedness before a disaster and effective recovery afterward. Some documents emphasize the protection of cultural heritage, especially in countries with rich historical sites, while most are publicly available, ensuring transparency and public involvement in disaster response efforts.

4. Conclusions

This article provides a comprehensive overview of the existing regulatory and incentive frameworks aimed at reducing seismic vulnerability in the Adriatic–Ionian region. Through a detailed and comparative analysis of 75 documents collected from six partner countries—Albania, Croatia, Greece, Italy, Serbia, and Slovenia—the ADRISEISMIC project has laid the foundation for a harmonized, cross-border approach to managing seismic risk.

The findings reveal that while all participating countries have developed some form of regulatory or incentive-based mechanisms, their scope, level of development, enforcement, and thematic focus vary significantly. Italy and Greece stand out with robust multi-tiered frameworks, incorporating national and regional instruments, targeted financial instruments and initiatives aimed at raising awareness and preserving cultural heritage. In contrast, other countries present more streamlined or emerging approaches, reflecting differences in administrative structure, economic capacity, seismic history, and national priorities.

An important contribution of this study is the creation of a comparative matrix that allows for an objective assessment of all collected documents based on a shared set of parameters, including the year of issuance, legal level, mandatory status, EU regulatory references, referential period (pre- or post-earthquake), target groups, and inclusion of cultural heritage considerations. This matrix provides a transparent and structured overview that supports cross-country learning, identification of good practices, and pinpointing of regulatory gaps or inconsistencies.

The study also emphasizes the importance of addressing seismic vulnerability not only through technical regulatory framework but also by embedding seismic safety in broader urban planning, spatial development, and disaster risk reduction policies. This is particularly crucial in areas with historic city cores, where dense populations and heritage buildings are especially vulnerable. Although cultural heritage is not consistently addressed across all national frameworks, its growing presence—particularly in Italian and Greek documents—suggests a positive trend that should be further supported and institutionalized.

The methodology used in this research—based on a uniform survey distributed across countries—has proven effective not only for gathering comparable data but also for promoting dialog among stakeholders and raising awareness of existing instruments and needs. The process itself helped partners recognize discrepancies, overlaps, and opportunities

for improvement within their national systems. However, it is important to note that the collection of documents at the sub-national level was limited to those regions and municipalities directly involved in ADRISEISMIC project activities. This focused selection reflects both the project's territorial scope and the administrative diversity among countries, where the level of adoption and implementation of regulatory and incentive instruments varies across governance layers. As such, while the study provides a representative cross-section of the normative and incentive landscape, it does not aim to offer an exhaustive inventory of all sub-national instruments in each country.

Looking ahead, this article forms the first step of a broader effort within the ADRISEISMIC project. A following study (presented in ref. [10]) exploited this wide collection of documents to identify practical examples of good practices that could be shared or adapted by other countries. These include financial incentives for seismic retrofitting, educational campaigns targeting schools and the general public, use of digital platforms for post-earthquake coordination, and early assessment tools for critical infrastructure. These practices serve as inspiration for further harmonization efforts and demonstrate the value of collaborative, multi-sectoral strategies for increasing resilience. From the analysis of good practices in greater detail, national roadmaps will be proposed, including policy recommendations for the harmonization of seismic vulnerability reduction strategies.

In conclusion, the comparative work presented here offers more than a snapshot of the current conditions—it serves as a strategic resource for policymakers, practitioners, and researchers working toward a safer and more resilient Adriatic–Ionian region. By bridging national differences and promoting common understanding, the project takes a significant step forward in building a harmonized and inclusive seismic risk reduction strategy. This strategy recognizes the shared vulnerabilities and interdependencies of the region, and that places human safety, cultural heritage, and long-term resilience at its core.

Author Contributions: Conceptualization, P.T., M.K., A.S. and G.M.; methodology, P.T., M.K., A.S. and G.M.; software, M.K. and P.T.; validation, P.T., M.K., A.S. and G.M.; formal analysis, P.T. and M.K.; investigation, P.T., M.K., A.S. and G.M.; resources, P.T., M.K., A.S. and G.M.; data curation, P.T. and M.K.; writing—original draft preparation, P.T. and M.K.; writing—review and editing, P.T., M.K., A.S., and G.M.; visualization, M.K. and P.T.; supervision, P.T., M.K., A.S. and G.M.; project administration, P.T., M.K., A.S. and G.M.; funding acquisition, P.T., M.K., A.S. and G.M. All authors have read and agreed to the published version of the manuscript.

Funding: This research was funded by the INTERREG V-B Adriatic–Ionian Program 2014–2020: ADRISEISMIC project, grant number 1019 and by the Slovenian Research and Innovation Agency, grant number P2-0273.

Data Availability Statement: Data is contained within the article.

Acknowledgments: The authors would like to express their sincere gratitude to all project partners who contributed to the collection of the regulatory and incentive framework: City of Kaštela (Croatia), Institute for Vocational Training of Construction Workers in the province of Bologna—I.I.P.L.E. (Italy), Municipality of Gjirokastër (Albania), Region of Crete (Greece), Regional Development Agency Backa (Serbia), and the University of Crete (Greece). Their contributions and active cooperation significantly supported the development of the work presented in this article. Furthermore, authors would like to thank all individuals and institutions who were involved in the project in any way and contributed to its successful realization.

Conflicts of Interest: The authors declare no conflicts of interest.

Abbreviations

The following abbreviations are used in this manuscript:

ADRION	Adriatic–Ionian (Region)
SN	Seismic Norms
BR	Building Regulation
UPR	Urban Planning Regulation
SIF	Seismic Incentive Frameworks
PEP	Post-Earthquake Planning

References

1. Zhang, Y.; Fung, J.F.; Johnson, K.J.; Sattar, S. Review of Seismic Risk Mitigation Policies in Earthquake-Prone Countries: Lessons for Earthquake Resilience in the United States. *J. Earthq. Eng.* **2022**, *26*, 6208–6235. [CrossRef] [PubMed]
2. Uitto, J.I.; Shaw, R. Sustainable Development and Disaster Risk Reduction: Introduction. In *Sustainable Development and Disaster Risk Reduction*; Uitto, J., Shaw, R., Eds.; Disaster Risk Reduction (Methods, Approaches and Practices); Springer: Tokyo, Japan, 2016. [CrossRef]
3. Sutanta, H.; Bishop, I.D.B.; Rajabifard, A.R. Integrating Spatial Planning and Disaster Risk Reduction at the Local Level in the Context of Spatially Enabled Government. In *Spatially Enabling Society Research, Emerging Trends and Critical Assessment*; Rajabifard, A., Crompvoets, J., Kalantari, M., Kok, B., Eds.; Leuven University Press: Leuven, Belgium, 2010; pp. 55–68.
4. European Civil Protection and Humanitarian Aid Operations. EU Civil Protection Mechanism. Available online: https://ec.europa.eu/echo/what/civil-protection/mechanism_en (accessed on 10 April 2025).
5. European Civil Protection and Humanitarian Aid Operations. Disaster Preparedness. Available online: https://ec.europa.eu/echo/what/humanitarian-aid/disaster_preparedness_en (accessed on 10 April 2025).
6. United Nations Office for Disaster Risk Reduction. Sendai Framework for Disaster Risk Reduction 2015–2030. 2015. Available online: https://www.undrr.org/publication/sendai-framework-disaster-risk-reduction-2015-2030 (accessed on 4 August 2025).
7. European Commission. EU Strategy for the Adriatic and Ionian Region (EUSAIR). 2014. Available online: https://ec.europa.eu/regional_policy/policy/cooperation/macro-regional-strategies/adriatic-ionian_en (accessed on 4 August 2025).
8. ADRISEISMIC Project. Deliverable T1.1.1: Report on Collected Norms and Incentives. 2021. Available online: https://adriseismic.adrioninterreg.eu/wp-content/uploads/2021/11/DT.1.1.1_Report-on-collected-norms-and-incentives_final-with-annexes.pdf (accessed on 12 March 2025).
9. ADRISEISMIC Project. Deliverable T1.1.2: Comparison Matrix. 2021. Available online: https://adriseismic.adrioninterreg.eu/wp-content/uploads/2021/11/DT.1.1.2_Comparison-matrix_final.pdf (accessed on 12 March 2025).
10. Marzani, G.; Cavalieri, B.; Santangelo, A.; Triller, P.; Kreslin, M.; Fassoulas, C.; Tondelli, S. Reducing Seismic Vulnerability of Historic Areas: Moving from Good Practices to Tailored Roadmaps. *Sustainability* **2025**, *17*, 5062. [CrossRef]
11. Conticelli, E.; Proli, S.; Tondelli, S. Integrating Energy Efficiency and Urban Densification Policies: Two Italian Case Studies. *Energy Build.* **2017**, *155*, 308–323. [CrossRef]
12. Artese, S.; De Ruggiero, M.; Salvo, F.; Zinno, R. Economic Convenience Judgments among Seismic Risk Mitigation Measures and Regulatory and Fiscal Provisions: The Italian Case. *Sustainability* **2021**, *13*, 3269. [CrossRef]
13. Central Intelligence Agency. The World Factbook. Available online: https://www.cia.gov/the-world-factbook/ (accessed on 7 April 2025).
14. Eurostat. Population on 1 January by Age and Sex. 2025. Available online: https://ec.europa.eu/eurostat/databrowser/view/demo_pjan/default/table?lang=en (accessed on 7 April 2025).
15. Eurostat. GDP and Main Components (Output, Expenditure and Income)—Per Capita. 2025. Available online: https://ec.europa.eu/eurostat/databrowser/view/NAMA_10_PC/default/table?lang=en (accessed on 7 April 2025).
16. Fundo, A.; Duni, L.; Kuka, S.; Begu, E.; Kuka, N. Probabilistic seismic hazard assessment of Albania. *Acta Geod. Geophys. Hung.* **2012**, *47*, 465–479. [CrossRef]
17. Herak, M. Eurocodes Third Balkan Workshop. Eurocodes 2022. Available online: https://eurocodes.jrc.ec.europa.eu/sites/default/files/2022-06/1530_Eurocodes_Third_Balkan_WS_MHerak.pdf (accessed on 4 April 2025).
18. Crowley, H.; Silva, V.; Martins, L. Seismic design code calibration based on individual and societal risk. In Proceedings of the 16th European Conference on Earthquake Engineering, Thessaloniki, Greece, 18–21 June 2018; Available online: https://www.researchgate.net/publication/327270542_Seismic_Design_Code_Calibration_Based_on_Individual_and_Societal_Risk (accessed on 4 April 2025).
19. INGV. Instituto Nazionale di Geofisica e Vulcanologia—Zone Sismiche, 2004. Available online: http://zonesismiche.mi.ingv.it/ (accessed on 4 April 2025).

20. SSS. Seismic Hazard Maps for Serbia. Seismological Survey of Serbia, 2018. Available online: https://www.seismo.gov.rs/Seizmicnost/Karte_hazarda_e.htm (accessed on 4 April 2025).
21. ARSO. Seismic Hazard Map 2021. Available online: https://potresi.arso.gov.si/doc/dokumenti/potresna_nevarnost/Karta_potresne_nevarnosti_2021.jpg (accessed on 4 April 2025).
22. List of Earthquakes in Albania. Available online: https://en.wikipedia.org/wiki/List_of_earthquakes_in_Albania (accessed on 4 April 2025).
23. List of Earthquakes in Croatia. Available online: https://en.wikipedia.org/wiki/List_of_earthquakes_in_Croatia (accessed on 4 April 2025).
24. List of Earthquakes in Greece. Available online: https://en.wikipedia.org/wiki/List_of_earthquakes_in_Greece (accessed on 4 April 2025).
25. List of Earthquakes in Italy. Available online: https://en.wikipedia.org/wiki/List_of_earthquakes_in_Italy (accessed on 4 April 2025).
26. Blagojević, N.; Brzev, S.; Petrović, M.; Borozan, J.; Bulajić, B.; Marinković, M.; Hadzima-Nyarko, M.; Koković, V.; Stojadinović, B. Residential building stock in Serbia: Classification and vulnerability for seismic risk studies. *Bull. Earthq. Eng.* **2023**, *21*, 1–69. [CrossRef]
27. ARSO. Močni Potresi v Preteklosti. Environmental Agency of the Republic of Slovenia. Available online: https://potresi.arso.gov.si/doc/dokumenti/potresna_aktivnost/mocni_potresi_v_preteklosti.pdf (accessed on 4 April 2025).
28. European Federation of Earthquake Engineering. Earthquake Hazard Map. Available online: http://www.efehr.org/earthquake-hazard/hazard-map/ (accessed on 25 March 2025).
29. *EN 1998-1:2004*; Eurocode 8: Design of Structures for Earthquake Resistance. European Committee for Standardization: Brussels, Belgium, 2004.
30. Albanian Institute of Construction. *Earthquake Resistant Design Regulations, KTP-N.2-89*; Seismic Center, Academy of Science of Albania; Department of Design, Ministry of Construction: Tirana, Albania, 1989.
31. Galić, J.; Vukić, H.; Andrić, D.; Stepinac, L. *Manual for Earthquake Restoration of Existing Masonry Buildings, 2020*; University of Zagreb, Faculty of Architecture: Zagreb, Croatia, 2020; Available online: https://www.arhitekt.hr/files/radovi/privitak/347/ZA%20DIGITALNU%20OBJAVU%20_%2020200707%20_%20PRIRU%C4%8CNIK0.pdf (accessed on 14 February 2025).
32. Galić, J.; Vukić, H.; Andrić, D.; Stepinac, L. *Manual—Techniques for the Repair and Strengthening of Masonry Buildings, 2020*; University of Zagreb, Faculty of Architecture: Zagreb, Croatia, 2020; Available online: https://www.arhitekt.hr/files/radovi/privitak/348/ZA%20DIGITALNU%20OBJAVU%20_%2020200706%20_%20TEHNIKE0.pdf (accessed on 14 February 2025).
33. Ministry of Environment, Physical Planning and Public Works. *Greek Seismic Code (EAK 2000), 2000*; Organization for Seismic Protection (OASP): Athens, Greece, 2000; Available online: https://oasp.gr/userfiles/EAK2000.pdf (accessed on 24 March 2025).
34. Earthquake Planning and Protection Organization of Greece (EPPO). *KAN.EPE—Code of Structural Interventions, 2017*; Earthquake Planning and Protection Organization of Greece: Athens, Greece, 2017; Available online: https://ecpfe.oasp.gr/sites/default/files/files/full.pdf (accessed on 12 February 2025).
35. Organization for the Seismic Planning and Protection (OASP). *Guidelines for Assessment and Structural Interventions on Masonry Buildings, 2021*; OASP: Athens, Greece, 2021; Available online: https://oasp.gr/sites/default/files/KADET_%CE%91%CE%B3%CE%B3%CE%BB%CE%B9%CE%BA%CE%AE%20%CE%AD%CE%BA%CE%B4%CE%BF%CF%83%CE%B7.pdf (accessed on 14 February 2025).
36. Ministry of Infrastructure and Transport. *NTC 2018—Technical Frameworks for Construction, Official Gazette of the Italian Republic, No. 73, 27 March 2018*; Ministry of Infrastructure and Transport: Rome, Italy, 2018; Available online: https://www.gazzettaufficiale.it/eli/gu/2018/02/20/42/so/8/sg/pdf (accessed on 12 February 2025).
37. Ministry of Infrastructure and Transport. *Explanatory Circular for NTC 2018, Official Gazette of the Republic of Italy, No. 35, Supplement No. 5, 11 February 2019*; Ministry of Infrastructure and Transport: Rome, Italy, 2019; Available online: https://www.gazzettaufficiale.it/eli/gu/2019/02/11/35/so/5/sg/pdf (accessed on 12 February 2025).
38. Presidency of the Council of Ministers. *DPCM 9/02/2011—Evaluation and Reduction of Seismic Risk of Cultural Heritage in Accordance with NTC 2008, Official Gazette of the Republic of Italy, No. 47, Supplement No. 54, 26 February 2011*; Presidency of the Council of Ministers: Rome, Italy, 2011; Available online: https://www.gazzettaufficiale.it/eli/gu/2011/02/26/47/so/54/sg/pdf (accessed on 12 February 2025).
39. Regional Government of Emilia-Romagna. *Regional Law No. 19/2008—Norms for the Reduction of Seismic Risk, Official Gazette of the Region of Emilia-Romagna, No. 19, 2008*; Regional Government of Emilia-Romagna: Bologna, Italy, 2008; Available online: https://demetra.regione.emilia-romagna.it/al/articolo?urn=er:assemblealegislativa:legge:2008;19&dl_t=text/xml&dl_a=y&dl_id=10&pr=idx,0;artic,1;articparziale,0&ev=1 (accessed on 12 February 2025).

40. Emilia-Romagna Regional Government. *D.G.R. n. 2272/2016—List of Interventions Without Relevance for Public Safety and Non-Substantial Variants, Official Gazette of the Emilia-Romagna Region, No. 2272, 2016*; Emilia-Romagna Regional Government: Bologna, Italy, 2016; Available online: https://bur.regione.emilia-romagna.it/dettaglio-inserzione?i=d1ac761a60af49bdb4b2f76c8aa9560c (accessed on 12 February 2025).
41. Emilia-Romagna Regional Government. *Regional Law No. 16/2012—Norms for the Reconstruction in Areas Affected by the Earthquake of May 20 and 29, 2012, Official Gazette of the Emilia-Romagna Region, No. 16, 21 December 2012*; Emilia-Romagna Regional Government: Bologna, Italy, 2012; Available online: https://www.gazzettaufficiale.it/eli/gu/2013/01/26/4/s3/pdf (accessed on 12 February 2025).
42. Italian Government. *Legislative Decree No. 189/2016—Provisions for the Declaration of a State of Emergency and Management of Interventions Following Natural Disasters, Official Gazette of the Italian Republic, No. 194, 24 August 2016*; Italian Government: Rome, Italy, 2016; Available online: https://www.gazzettaufficiale.it/eli/gu/2016/12/17/294/sg/pdf (accessed on 12 February 2025).
43. Italian Government. *OPCM n. 3519/2006—Update of the Seismic Classification of the Italian Territory, Official Gazette of the Italian Republic, No. 108, 11 May 2006*; Italian Government: Rome, Italy, 2006; Available online: https://www.gazzettaufficiale.it/eli/id/2006/05/11/06A04427/sg (accessed on 12 February 2025).
44. Emilia-Romagna Regional Government. *DGR n. 1164/2018—Update of the Seismic Classification of Municipalities in Emilia-Romagna, Official Gazette of the Emilia-Romagna Region, No. 263, 8 August 2018*; Emilia-Romagna Regional Government: Bologna, Italy, 2018; Available online: https://bur.regione.emilia-romagna.it/dettaglio-inserzione?i=4aa04946b4fc4dcd8cc4ef742dea83ad (accessed on 12 February 2025).
45. Council of Ministers, Albania. *Decision No. 159, Dated March 1, 2017, Approving the Design Standards for Kindergartens, 2017*; Council of Ministers: Tirana, Albania, 2017.
46. Council of Ministers, Albania. *Decision No. 319, Dated April 12, 2017, Approving the Design Standards for Schools, 2017*; Council of Ministers: Tirana, Albania, 2017.
47. Republic of Croatia. Building Act (Official Gazette No. 153/13), Amended by the Act on the State Inspectorate (Official Gazette No. 115/18 and 117/21), 2013. Available online: https://narodne-novine.nn.hr/clanci/sluzbeni/2013_12_153_3221.html (accessed on 13 March 2025).
48. Greece. New Building Regulation—Law 4067/2012, Official Gazette of the Hellenic Republic: Athens, Greece, 2012; No. 79/A, 9 April 2012. Available online: https://www.elinyae.gr/ethniki-nomothesia/n-40672012-fek-79a-942012 (accessed on 19 March 2025).
49. Greece. Decision No. 3328—Reinforced Concrete Regulation, Official Government Gazette ΦΕΚ 1561B/2-6-2016. Available online: https://www.e-nomothesia.gr/inner.php/kat-periballon/oikodomes/upourgike-apophase-gdtu-oik-3328-2016.html?print=1 (accessed on 19 March 2025).
50. Greece. YA D1492330/2008—Steel Regulation, Official Government Gazette ΦΕΚ 1416/B/17-7-2008, Athens, Greece, 2008. Available online: https://www.elinyae.gr/ethniki-nomothesia/ya-d14923302008-fek-1416b-1772008 (accessed on 12 March 2025).
51. Comune di Bologna. Building Regulations of the Municipality of Bologna, 2020Italy, 2020. Available online: http://sit.comune.bologna.it/alfresco/d/d/workspace/SpacesStore/4dbbe351-b42b-429f-b052-288455390fa5/RegolamentoEdilizio.pdf (accessed on 12 February 2025).
52. Presidency of the Republic of Italy. Republication of the Decree of the President of the Republic No. 380 of June 6, 2001—Consolidated Text of Legislative and Regulatory Provisions in Construction Matters (Text A), with Related Notes, Official Gazette of the Italian Republic, No. 266—Ordinary Supplement No. 246, 15 November 2001. Presidency of the Republic of Italy: Rome, Italy, 2001. Available online: https://www.gazzettaufficiale.it/eli/gu/2001/11/15/266/so/246/sg/pdf (accessed on 12 February 2025).
53. Republic of Serbia. Planning and Building Act (Official Gazette No. 72/09, 81/09, 64/10, 24/11, 121/12, 42/13, 50/13, 98/13, 132/14, 145/14, 9/16, 113/17, 32/18), 2009. Available online: https://www.paragraf.rs/propisi/planning-and-building-act-serbia.html (accessed on 13 March 2025).
54. Republic of Serbia. Regulation on Building Structures (Official Gazette No. 23/19), 2019. Available online: https://www.paragraf.rs/propisi/pravilnik-za-gradjevinske-konstrukcije.html (accessed on 13 March 2025).
55. Republic of Slovenia. Construction Act (Official Gazette No. 61/17, as Amended by Official Gazette No. 199/21), 2017. Available online: https://pisrs.si/pregledPredpisa?id=ZAKO8244 (accessed on 13 March 2025).
56. Republic of Albania. Law No. 107/2014 on Territorial Planning and Development, 2014. Available online: http://planifikimi.gov.al/index.php?eID=dumpFile&t=f&f=4762&token=4cc99e01cad52e01a037e7080035a2dc749f03f5 (accessed on 4 March 2025).
57. Ministry of Urban Development, Albania. General Local Plan of the Gjirokastër Municipality, 2015. Available online: http://planifikimi.gov.al/index.php?eID=dumpFile&t=f&f=1733&token=360d1727adfc6805ad4100f7525d667f20bb663f (accessed on 4 March 2025).
58. Government of Croatia. Physical Planning Act No. 153/2013 (NN 153/13, 65/17, 114/18, 39/19, 98/19, 67/23), 2013. Available online: https://www.zakon.hr/z/689/Zakon-o-prostornom-ure%C4%91enju (accessed on 4 March 2025).

59. Ministry of Environment, Energy and Climate Change, Greece. Decision No. 42284/13.10.2017—Revised Regional Spatial Framework, 2017. Available online: https://ypen.gov.gr/wp-content/uploads/2020/11/20200728_Krhth_FEK.pdf (accessed on 4 March 2025).
60. Greek Ministry of Environment. General Urban Plans (Law No. 2508/1997), Official Government Gazette, FEK A 124/13.06.1997. Available online: https://www.kodiko.gr/nomothesia/document/207014/nomos-2508-1997 (accessed on 20 March 2025).
61. Greek Ministry of Environment, Energy and Climate Change. Ministry Decision No. 37691/2007: Geological Suitability Studies of Rocks for the Implementation of General Town Plans, 2007. Available online: https://www.nomoskopio.gr/a_37691_07.php?toc=0 (accessed on 20 March 2025).
62. Regional Government of Emilia-Romagna, Italy. Regional Law No. 24/2017—Regional Regulation on Land Protection and Use, 2017. Available online: https://demetra.regione.emilia-romagna.it/al/articolo?urn=er:assemblealegislativa:legge:2017;24 (accessed on 4 March 2025).
63. Ministry of Construction, Transport, and Infrastructure, Republic of Serbia. Rules on the Content, Method, and Procedure for Preparing Spatial and Urban Planning Documents, Official Gazette of the Republic of Serbia, No. 32/2019, 2019. Available online: http://www.pravno-informacioni-sistem.rs/SlGlasnikPortal/eli/rep/sgrs/ministarstva/pravilnik/2019/32/2/reg/ (accessed on 4 March 2025).
64. Government of Serbia. Strategy for Sustainable Urban Development of the Republic of Serbia until 2030, Official Gazette of the Republic of Serbia, No. 47/2019, 2019. Available online: https://pravno-informacioni-sistem.rs/eli/rep/sgrs/vlada/strategija/2019/47/1/reg (accessed on 4 March 2025).
65. Republic of Slovenia. Spatial Planning Act (ZUreP-3), Official Gazette of the Republic of Slovenia, No. 199/21, 2021. Available online: https://pisrs.si/pregledPredpisa?id=ZAKO8249 (accessed on 4 March 2025).
66. Ministry of Environment and Spatial Planning, Slovenia. Regulatory Elements of Spatial Planning Handbook, 2020. Available online: https://www.gov.si/assets/ministrstva/MOP/Dokumenti/Prostorski-red/regulacijski_elementi.pdf (accessed on 4 March 2025).
67. Greece. FEK 2943/B-2023: Seismic Inspection of Public Buildings and Critical Infrastructure. Official Gazette, Government of Greece, 2023. Available online: https://oasp.gr/sites/default/files/inline-files/%CE%A6%CE%95%CE%9A_2943-%CE%92-2023.pdf (accessed on 20 March 2025).
68. Italian Parliament. Law No. 77/2020—Conversion of Decree-Law No. 34/2020 (Relaunch Decree), Including the Introduction of Superbonus 110% for Energy Efficiency and Seismic Risk Reduction. Official Gazette of the Italian Republic, General Series No. 181, 19 July 2020. Available online: https://www.normattiva.it/atto/caricaDettaglioAtto?atto.dataPubblicazioneGazzetta=2020-07-18&atto.codiceRedazionale=20G00095&atto.articolo.numero=0&atto.articolo.sottoArticolo=1&atto.articolo.sottoArticolo1=0&qId=b06fd8ec-3295-48b4-8cfe-1544a7507821&tabID=0.0234317932249819&title=lbl.dettaglioAtto (accessed on 20 March 2025).
69. Ministry of Infrastructure and Transport, Italy. Decree No. 58/2017—Guidelines for the Evaluation of Seismic Vulnerability of Buildings, Official Gazette No. 173, 2017. Available online: https://www.mit.gov.it/sites/default/files/media/normativa/2020-01/Testo%20coordinato%20del%20DM%20n%2058%20del%2028-02-2017.pdf (accessed on 4 March 2025).
70. Department of Civil Protection, Italy. "I Don't Take Risks"—National Awareness Campaign for Risk Prevention and Preparedness, 2010. Available online: https://eventi.protezionecivile.gov.it/en/i-dontt-take-risks/ (accessed on 4 March 2025).
71. Emilia-Romagna Region, Italy. Volumetric Incentives for Seismic Retrofitting Interventions, Building Regulations of Bologna Municipality, 2017. Available online: http://sit.comune.bologna.it/alfresco/d/d/workspace/SpacesStore/4dbbe351-b42b-429f-b052-288455390fa5/RegolamentoEdilizio.pdf%20art.30 (accessed on 4 March 2025).
72. National Institute of Geophysics and Volcanology & National Department of Civil Protection, Italy. EDURISK—Increasing Knowledge and Awareness of Seismic Risk in Schools, 2011. Available online: http://www.edurisk.it/ (accessed on 4 March 2025).
73. Civil Protection Department, EUCENTRE Foundation, & ReLUIS, Italy. "Secure +"—Online Tool to Raise Awareness on Seismic Risk of Italian Municipalities, 2020. Available online: https://www.sicuropiu.it/index.xhtml (accessed on 4 March 2025).
74. Administration of the Republic of Slovenia for Civil Protection and Disaster Relief. POTROG Applications. Available online: http://potrog2.vokas.si/ (accessed on 4 March 2025).
75. Law No. 45/2019 on Civil Protection, Official Gazette of Albania, 2019. Available online: https://www.qbz.gov.al/eli/fz/2019/113/837b2b34-2833-4add-8635-994462b57cc5;q=45%2F2019 (accessed on 20 March 2025).
76. National Civil Emergency Plan, Official Gazette of the Republic of Albania, No. 113, 2023. Available online: https://www.undp.org/albania/publications/national-civil-emergency-plan (accessed on 13 March 2025).
77. Emergency Seismic Reconstruction Program, Faculty of Civil Engineering, University of Zagreb, Croatian Chamber of Civil Engineers, 2020. Available online: https://www.hkig.hr/fdsak3jnFsk1Kfa/strucna_izdanja/UPPO-Urgentni_program_potresne_obnove-Prirucnik_HKIG.pdf (accessed on 4 March 2025).
78. Plan for the Development of the Civil Protection System in the Area of the City of Kaštela, Official Gazette of the City of Kaštela, No. 12/2016, page 64. Available online: https://kastela.hr/wp-content/uploads/datoteke/dokumenti/sluzbeni-glasnici/2016/sluzbeni-glasnik-broj-12.pdf (accessed on 11 March 2025).

79. Plan for Protection and Rescue in the Republic of Croatia, Official Gazette of the Republic of Croatia, No. 96/2010, 2010. Available online: https://narodne-novine.nn.hr/clanci/sluzbeni/full/2010_08_96_2707.html (accessed on 6 March 2025).
80. Law on the Civil Protection System, Official Gazette of the Republic of Croatia, Nos. 82/15 and 118/2018, 2015. Available online: https://www.zakon.hr/z/809/Zakon-o-sustavu-civilne-za%C5%A1tite (accessed on 6 March 2025).
81. Law on the Reconstruction of Buildings Damaged by the Earthquake in the City of Zagreb, Krapina-Zagorje County, and Zagreb County, Official Gazette of the Republic of Croatia, No. 102/2020, 2020. Available online: https://narodne-novine.nn.hr/clanci/sluzbeni/2020_09_102_1915.html (accessed on 13 March 2025).
82. The Manual for Emergency Seismic Reconstruction Program, Faculty of Civil Engineering, University of Zagreb & Croatian Chamber of Civil Engineers, 2020. Available online: http://www.grad.unizg.hr/_download/repository/UPPO_Prirucnik_GF_HKIG.pdf (accessed on 13 March 2025).
83. Ministerial Decision No. 1299/2003—General Civil Protection Plan "Xenokrates", Ministry of the Interior, Greece, 2003. Available online: https://www.e-nomothesia.gr/kat-politike-prostasia-psea-pallaike-amyna/ya-1299-2003.html (accessed on 13 March 2025).
84. Law No. 4662/2020—National Policy for Civil Protection and Risk Management, Published in the Government Gazette, Issue 27, 2020. Available online: https://www.e-nomothesia.gr/kat-politike-prostasia-psea-pallaike-amyna/nomos-4662-2020-phek-27a-7-2-2020-1.html (accessed on 13 March 2025).
85. Greece. *2nd Edition of the General Civil Protection Plan for Earthquake Emergency Response and Impact Management "ENGELADOS II"*; Ministry of Climate Crisis and Civil Protection: Athens, Greece, 2023. Available online: https://civilprotection.gov.gr/sxedia-politikis-prostasias/2i-ekdosi-genikoy-shedioy-antimetopisis-ektakton-anagkon-kai (accessed on 20 March 2025).
86. Greece. Law 3013/2002, Greek Government Gazette (ΦΕΚ) 3A, 2002. Available online: https://www.e-nomothesia.gr/kat-politike-prostasia-psea-pallaike-amyna/n-3013-2002.html (accessed on 20 March 2025).
87. General Secretariat for Civil Protection. *Guidelines for the Planning and Implementation of Civil Protection Exercises*; Prot. No. 532/23-01-2020; General Secretariat for Civil Protection: Athens, Greece, 2020.
88. National Plan for the Prevention of Seismic Risk (Piano Nazionale per la Prevenzione del Rischio Sismico), Law No. 77 of June 24, 2009. Available online: https://www.parlamento.it/parlam/leggi/090771.htm (accessed on 25 March 2025).
89. National Seismic Risk Rescue Program—DPCM 14/01/2014. Official Gazette No. 41, 2014. Available online: https://www.gazzettaufficiale.it/eli/gu/2009/06/27/147/so/99/sg/pdf (accessed on 4 March 2025).
90. Annex II of the National Seismic Risk Rescue Program, Emilia-Romagna Regional Government Resolution No. 1669, 2019. Available online: https://servizissiir.regione.emilia-romagna.it/deliberegiunta/servlet/AdapterHTTP?action_name=ACTIONRICERCADELIBERE&operation=leggi&cod_protocollo=GPG/2019/1687&ENTE=1 (accessed on 20 March 2025).
91. Municipal Civil Protection Plan of Bologna, Municipality of Bologna, 2016. Available online: http://www.comune.bologna.it/sites/default/files/documenti/2016-04-15%20Piano%20Comunale%20ProtCiv.pdf (accessed on 4 March 2025).
92. Seismic Microzonation (MS) Studies under OPCM 3907/2010, Italian Civil Protection Department, 2010. Available online: https://www.protezionecivile.gov.it/it/normativa/opcm-n-3907-del-13-novembre-2010-0/ (accessed on 25 March 2025).
93. Analysis of the Emergency Limit Condition (CLE) under OPCM 4007/12, Contributions for Seismic Risk Prevention Interventions for 2011, 2012. Available online: https://www.protezionecivile.gov.it/it/normativa/opcm-n-4007-del-29-febbraio-2012-0/ (accessed on 24 March 2025).
94. Law on Recovery Following Natural and Other Disasters, Official Gazette of the Republic of Serbia, No. 102, Belgrade, 2020. Available online: https://www.obnova.gov.rs/uploads/useruploads/Documents/Zakon_o_obnovi%20nakon%20el%20i%20druge%20nepogode_engl.pdf (accessed on 13 March 2025).
95. Law on Disaster Risk Reduction and Emergency Management, Official Gazette of the Republic of Serbia, No. 87, Belgrade, 2018. Available online: https://www.paragraf.rs/propisi/zakon-o-smanjenju-rizika-od-katastrofa-i-upravljanju-vanrednim-situacijama.html (accessed on 13 March 2025).
96. Catastrophe Risk Assessment in the Republic of Serbia, Ministry of the Interior, 2019. Available online: http://prezentacije.mup.gov.rs/svs/HTML/licence/Procena%20rizika%20od%20katastrofa%20u%20RS.pdf (accessed on 13 March 2025).
97. Republic of Slovenia. Law on Protection Against Natural and Other Disasters. Official Gazette of the Republic of Slovenia, No. 64/2006. 2006. Available online: http://pisrs.si/Pis.web/pregledPredpisa?id=ZAKO364 (accessed on 13 March 2025).
98. Republic of Slovenia. Resolution on Strengthening Earthquake Resilience by 2050 "BEAT THE EARTHQUAKE" (ReKPV50). Official Gazette of the Republic of Slovenia, No. 3592. 2023. Available online: https://www.uradni-list.si/_pdf/2023/Ur/u2023122.pdf (accessed on 13 March 2025).
99. Decree on the Methodology for Damage Assessment. Official Gazette of the Republic of Slovenia, No. 68/2008. Available online: http://www.pisrs.si/Pis.web/pregledPredpisa?id=URED2969 (accessed on 13 March 2025).
100. Decree on the Organization, Equipment, and Training of Protection and Aid Forces. Official Gazette of the Republic of Slovenia, No. 87/2016. Available online: https://pisrs.si/pregledPredpisa?id=URED3994 (accessed on 13 March 2025).

101. National Earthquake Protection and Rescue Plan, Version 3.2. Updated 2024. Ministry of Defence of the Republic of Slovenia. Official Gazette of the Republic of Slovenia, No. 15/2024. Available online: https://www.gov.si/assets/organi-v-sestavi/URSZR/Datoteke/Drzavni-nacrti/dn_potres_azuriran_2024.pdf (accessed on 13 March 2025).
102. Municipal Earthquake Protection and Rescue Plan for the City of Ljubljana. City of Ljubljana, 2024. Available online: https://www.ljubljana.si/assets/Uploads/Nacrt-MOL-za-zascito-in-resevanje-ob-potresu-2024.pdf (accessed on 12 February 2025).