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Article

Urban Heritage Rehabilitation: Institutional Stakeholders' Contributions to Improve Implementation of Urban and Building Regulations

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Abstract
Climate change, natural hazards, and human actions are threatening cultural heritage in urban areas. More than ever, building regulations' procedures and criteria are essential to guarantee the protection and safeguarding of urban areas and their buildings. These procedures and criteria are crucial to assist stakeholders in decision-making, especially when facing rapid transitions and transformative changes in urban heritage areas. Several institutional stakeholders in charge of urban heritage protection strengthen the need for a better implementation of building regulations through flexible criteria to support intervention procedures in buildings with different features and in different contexts. Under this topic, the present study uses a twofold method. Firstly, the authors analyze and compare the urban and building regulations of three Southern European countries, Italy, Spain, and Portugal, concerning procedures and criteria directed to the built heritage; secondly, they highlight and compare the views of different institutional stakeholders from the same three countries, at different levels (national, regional, and municipal), to understand the impact of the implementation of the regulations on the ground. The findings show the relevance of the institutional stakeholders' views to improve the regulations and their practice. They highlight the need to promote inventory and cataloging procedures, as well as flexible criteria when dealing with urban heritage buildings.

Keywords
building regulations; flexible criteria; institutional stakeholders; Southern European countries; urban heritage

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1. Introduction

Nowadays, more than ever, urban heritage is exposed to change (e.g., buildings decay, climate changes, human actions, and tourism pressure by uncontrolled urban planning, among other menaces) that jeopardize their safeguarding. These factors reinforce the need for a broader study of the legal framework, namely, to analyze and understand the urban and building regulations' procedures and criteria, especially in urban areas whose integrity and authenticity need to be protected (Hedieh Arfa et al., 2022; Sesana et al., 2020; Silva, 2017).

Technical studies have mostly been focused on the building regulations' criteria concerned with new constructions, disregarding criteria and procedures for existing buildings (Casals-Tres et al., 2009; Nypan, 2010). Besides, the reuse of existing buildings in urban areas is a crucial issue that demands a more flexible application of the building regulations' criteria (Arcas-Abella et al., 2011; Casals-Tres et al., 2013). Regulations should be

able to adapt themselves to different realities, i.e., to local built heritage characteristics and residents' needs. These studies also consider that the buildings' rehabilitation does not need to satisfy all residents' needs, given that some of their needs can be fulfilled at the urban scale (Casals-Tres et al., 2013; Mària & Salvadó, 2017).

The criteria for building regulations are driven by European Community guidelines and regulations (European Union, 2022). However, they are implemented according to each country's legal framework, considering their geographical, historical, and cultural context (Allard et al., 2021; Ornelas et al., 2016a). Recent studies underline that the new building regulations are focused on new materials and techniques, being concerned with specific criteria for new constructions (Brambilla & Sangiorgio, 2021; Nugroho et al., 2022; O'Brien et al., 2020; Wang & van de Lindt, 2022). Other studies focus on the reuse of buildings and their materials; they criticize the waste of local materials (Foster, 2020; Hedieh Arfa et al., 2022), which occurs because the new regulations are concerned with modern materials and techniques. To meet energy efficiency demands, the regulations discard buildings' particular geometry, systems, traditional materials, and construction techniques (Allard et al., 2021; Ascione et al., 2022; Borrallo-Jiménez et al., 2022), and they are disconnected from urban heritage protection. The need for energy efficiency follows the Urban Agenda for the European Union (European Commission, 2022), which highlights the need to reduce energy consumption and provide affordable housing (Ascione et al., 2022; Casquero-Modrego & Goñi-Modrego, 2019). Some studies criticize the fact that the stakeholders in charge of decision-making lack knowledge of the environmental (e.g., reuse the materials), economic, social, and cultural benefits of the reuse of cultural heritage buildings (Foster, 2020; Fuertes, 2017; Giuliani et al., 2021; Mària & Salvadó, 2017), neglecting the protection of urban heritage areas and their landscape, as recommended by UNESCO guidelines (UNESCO, 1972, 2011).

However, these studies are fragmented and do not promote a holistic discussion on urban-built heritage intervention and safeguarding, a gap this article aims to fill. This study analyzes and compares the building regulations' criteria and procedures from three Southern European countries: Italy, Spain, and Portugal (Ornelas et al., 2016a, 2016b), considering the views of different institutional stakeholders, namely the way they manage and understand the implementation of the urban and building regulations' procedures and criteria. These contributions are the result of semi-structured interviews that are part of a research investigation (Ornelas, 2016), updated to reach the aims of this study. Therefore, it aims to answer the research questions: Can the stakeholders contribute to promoting a more efficient implementation of the building regulations' procedures and criteria? Can they contribute to more sustainable intervention actions?

The article is organized into five parts. Section 2 shows the context and the methodology used in this study. Section 3 compares the most representative actual building regulations of Italy, Spain, and Portugal, and different institutional stakeholders' views (considering their expert knowledge, experience, and studies) on the procedures and criteria they consider crucial in the context of the urban heritage rehabilitation of these three countries. Moreover, it interconnects the existing building regulations' procedures and criteria with the different international stakeholders' contributions. Section 4 discusses the outcomes, and Section 5 presents the authors' final considerations concerning the most important findings related to the urban and building regulations and their practice, in the context of the rehabilitation of urban areas.

2. Context and Methodology

2.1. Scale of the Analyses: Southern European Countries

The article involves three Southern European countries—Italy, Spain, and Portugal—selected because of their geographical localization and similar cultural and construction systems. Their rules and regulations are embedded in European Union Guidelines (European Union, 2022) and European Urban Agenda (European Commission, 2022), though different adjustments and implementations occur in each country (Petti et al., 2019). The analysis is carried out at different levels: national (governmental), regional (regional directions), and local (municipalities; see Figure1).

The analysis uses semi-structured interviews with a range of stakeholders (senior technicians, experts, academics) from 18 different institutions (public and academic) from different cities in Italy, Spain, and Portugal. These stakeholders have studied, overseen, and managed the implementation of the urban and building regulations related to cultural and urban heritage. In Italy, stakeholders from Milan, Monza, Verona, Padua, and Siena were interviewed; in Spain, stakeholders from Madrid and Barcelona; and in Portugal, stakeholders from Lisbon and Porto. The institutional stakeholders were contacted previously with the topics and aims of the research, and the meetings/interviews were conducted at their institutions in person (see Table 1).

That we selected and interviewed a wide variety of institutions and stakeholders with a range of roles is crucial to have a broader view of how they manage and understand the implementation of the urban and building regulations' procedures and criteria.

2.2. Analysis: Urban and Building Regulations and Institutional Stakeholders' Contributions

The methodological approach applied in this study was twofold. Firstly, the authors examine the legal framework comprising the most representative and actual

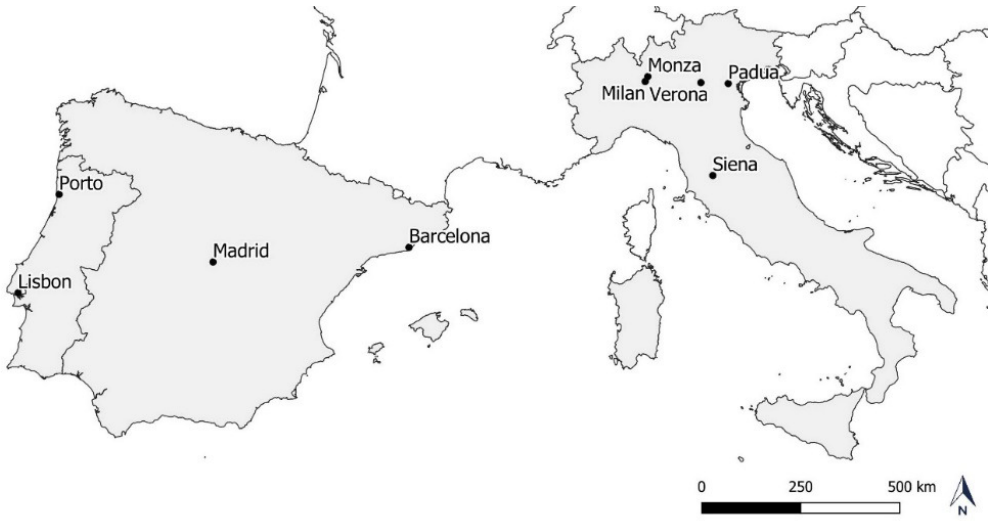

Figure 1. Case studies: Southern European countries and respective cities.

urban and building regulations related to cultural heritage in urban areas of the three selected countries: Italy, Spain, and Portugal. Beyond the national rules, regulations related to the regions and municipalities where the institutional stakeholders carry out their duties were selected. The main procedures and criteria corresponding to the different levels of safeguarding and intervention in urban heritage were identified. Hence, the article presents the most representative rules and regulations of the three countries at the national level as well

Table 1. Interviewed public institutions involved in urban and building regulations' development and implementation.

Countries	Institutions	Name of the Institutions
Italy	National	• Superintendency for Architectural and Landscape Heritage for the Municipality of Siena and Grosseto (Superintendency of Siena and Grosseto)
	Regional	• Office of the Province of Management and Spatial Planning of the Tuscany Region, Siena, and Grosseto (Tuscany's Office of the Province)
	Municipal	• Municipality of Siena • Municipality of Verona • Municipality of Padua • Municipality of Monza
	Academic	• Polytechnic of Milan: Department of Architecture and Urban Studies, and Department of Civil and Environmental Engineering • University of Siena: Cultural Heritage Conservation of the Department of Environmental Sciences • University of Padua: Department of Civil, Environmental, and Architectural Engineering
Spain	National	• Ministry of Development and Housing (Madrid) • Spanish National Research Council—Eduardo Torroja Institute for Construction Sciences
	Regional	• Commission for the Protection of the Historic Heritage of Madrid Region
	Municipal	• Municipality of Madrid
	Academic	• Faculty of Architecture of the Polytechnic University of Catalonia (UPC) in Sant Cugat del Vallès, Barcelona: Department of Architectural Constructions I and Department of • Architectural Projects' HABITAR—Research Group
Portugal	National	• National Laboratory of Civil Engineering
	Regional	• Regional Directorate of Culture of the North
	Municipal	• Municipality of Porto
	Academic	• Faculty of Architecture of the University of Porto • Faculty of Engineering of the University of Porto: Civil Engineering Department

as the regional and municipal levels. It includes the legislation of two regions in Italy (Tuscany and Veneto), two regions in Spain (Madrid and Catalonia), and one region in Portugal (northern region), and the legislation of the municipalities of Padua, Verona, and Siena in Italy, of Madrid in Spain, and of Porto in Portugal.

Secondly, the authors analyze the summarised views of the stakeholders' expert knowledge on the urban and building regulations concerning urban heritage safeguarding procedures (protection categories, inventory, and cataloging), measures and levels of intervention regarding safety and housing conditions (e.g., structural, fire, accessibility, and housing conditions; energy efficiency; protection against noise), and social issues. This data was obtained from semi-structured interviews that are part of a research investigation (Ornelas, 2016), updated to reach the aims of this study. The review includes 42 institutional stakeholders (multidisciplinary senior technicians, experts, and academics) with various roles and activities (see Table 2).

The interviews' data treatment was conducted using the Bardin method (Bardin, 1977), a methodology that helps compare qualitative data. This analysis highlighted the most representative contributions of the stakeholders regarding urban and building regulations' procedures and criteria, which may be used to improve the implementation of the regulations and, at the same time, to promote sustainable interventions and maximize the protection of urban heritage.

3. Building and Urban Regulations Vs. Stakeholders' Contributions to Improve Criteria and Procedures Implementation

3.1. Comparison of Urban and Building Regulations in Italy, Spain, and Portugal

The first step's analysis shows that there are different procedures and distinct criteria for building regulations in the three Southern European countries (Italy, Spain, and Portugal). In Italy, the national level of building regulation associated with the protection categories and inventory and cataloging procedures—Codice dei Beni Culturali e del Paesaggio (President of the Republic, 2004)—has clear and uniform criteria to classify the cultural heritage in all the territorial scales; it is adopted at the regional and municipal regulations. The measures and levels of intervention are inserted in the building regulations: Norme in Materia di Controllo dell'Attività Urbanistico-Edilizia (Chamber of Deputies & Senate of the Republic, 1985), Norme per l'Edilizia Residenziale (President of the Republic, 1978), and Testo Unico delle Disposizioni Legislative e Regolamentari in Materia Edilizia (President of the Republic, 2001), which support the regional and municipal procedures. Besides, there are building regulations regarding the technical aspects of urban heritage buildings, such as Norme Tecniche per le Costruzioni (Ministry of Infrastructure and Transport, 2018), which establish different levels of intervention on existing urban buildings (adequacy, improvement, and local repairs), especially for structural interventions on urban heritage buildings. Additionally, there are building regulations that should be applied to urban heritage buildings regarding fire safety, accessibility, comfort, and acoustic conditions, respectively: Decreto Minesteriale 25.01.2019 (Ministry of the Interior, 2019), Legge 13 (Chamber of Deputies & Senate of the Republic, 1989), Decreto Legislativo 115 (President of the Republic, 2008), and Decreto del Presidente del Consiglio dei Ministri (President of the Council of Ministers, 1997). The regions have urban plans that give guidelines to the provinces and municipalities; for example, Tuscany region: Piani di Indirizzo Territoriale (Ministry of Cultural Heritage and Activities and Tourism & Region of Tuscany, 2014) and Piani Territoriale di Coordinamento Provinciale (Province of Siena, 2020); Venice region: Legge Regionale 14 (Regional Council of Veneto, 2019) and Legge Regionale 21 (Region of Veneto, 1999). At the municipal level, there are building regulations—e.g., Regolamento Urbanistico (Municipality of Siena, 2016) and Regolamento d'Igiene di Verona (Municipality of Verona, 2010)—that introduce the technical criteria to the municipality. For instance, the Norme Tecniche di Attuazione del Piano Regolatore Generale (Municipality of Padua, 2015) includes the cultural heritage and technical criteria, as well as the procedures from national, regional, and municipal building regulations to be applied to the municipality of Padua. Other regulations, with similar or different criteria and procedures, are applied to the urban heritage of other Italian municipalities.

In Spain, the building and urban regulations at the national level related to cultural and urban heritage have

Table 2. Number and distribution of the stakeholders per institution level.

	Stakeholders' Country			
Institutions	Italy	Spain	Portugal	Total of Stakeholders
National	3	6	3	12
Regional	1	2	1	4
Municipal	3	3	2	8
Academics	7	4	7	18
Total	14	15	13	42

criteria and procedures (protection categories, inventory, cataloging) that concern all Spanish cultural heritage: Património Histórico Español (Head of State, 1985) and Ley de Rehabilitación, Regeneración y Renovación Urbanas (Head of State, 2013). The Plan Estatal de Fomento del Alquiler de Viviendas, la Rehabilitación Edificatoria, y la Regeneración y Renovación Urbanas (Ministry of Development, 2013) aims to improve the quality of the buildings and their energy efficiency, accessibility, and conservation. However, each region has the autonomy to consider different criteria to classify, inventory, and catalog the cultural and built heritage, and their own laws for the protection of built and urban heritage—e.g., Ley do Patrimonio Histórico de la Comunidad de Madrid (Community of Madrid, 1998). Consequently, the measures and levels of intervention are also different for each region and municipality. In the municipality of Madrid, for instance, the Protocolo de Condiciones de Protección del Patrimonio Histórico, Artístico y Cultural (City Council of Madrid, 2011b) determines the cataloging of single elements and defines three levels for cataloging for buildings: singular or integral value, structural or volumetric value, partial or environmental value. The intervention on catalogued buildings should consider the criteria imposed by the regional entity (Criterios Generales de la Comisión para la Protección del Patrimonio Histórico, Artístico y Natural [CIPHAN], a Aplicar en las Solicitudes de Licencias Urbanísticas en Edificios Catalogados; City Council of Madrid, 2012). Also, in the municipality of Madrid, the Ordenanza de Conservación, Rehabilitación y Estado Ruinoso de las Edificaciones (City Council of Madrid, 2011a) defines measures and levels of intervention, looking at what needs to be preserved and rehabilitated. This regulation appeals to the duty of maintenance and regular inspections, especially in buildings over 30 years old, to verify their state of conservation. On the other hand, the national building code—Código Técnico de la Edificación (CTE; Ministry of Development, 2019; Ministry of Housing, 2006)—establishes criteria for structural safety, fire safety, and housing conditions for new constructions. The application to existing buildings is made through the consideration of proportionality and flexibility criteria, allowing the decision to depend on the heritage value of the building and the technical and economic aspects of each demanded intervention. It should be noted that the minimum housing conditions requirements related to dimensions, ventilation, lighting, and hygiene are established at the municipal level, according to the particularities of the construction system and architecture of the region (e.g., Catalonia Region's Condicions Mínimes d'Habitabilitat dels Habitatges i la Cèdula d'Habitabilitat; Agència de l'Habitatge de Catalunya, 2012).

In Portugal, the national protection laws are Regime e Proteção e Valorização do Património Cultural (Assembly of the Republic, 2001) and Procedimento de Classificação dos Bens Imóveis de Interesse Cultural, Regime das Zonas de Proteção e do Plano de Pormenor de Salvaguarda (Ministry of Culture, 2009). These building and urban regulations defend inventorying and cataloging procedures of built heritage to update and identify cultural property and, simultaneously, as a measure of legal protection to prevent their disappearance or degradation. However, it promotes the creation of these procedures only for classified assets, such as monuments or other constructions with national or public interest. In Portugal there are two main regulations that support and control the interventions on urban built heritage at the municipal level: Regime Jurídico da Reabilitação Urbana (RJRU; Assembly of the Republic, 2012), complemented by the Resolution of the Council of Ministers related to the improvement of the quality of the life of the citizens in urban areas (Presidency of the Council of Ministers, 2018); and Regime Jurídico da Urbanização e da Edificação (RJUE; Ministry of Equipment, Planning, and Territorial Administration, 1999). However, these building regulations do not refer to inventorying and classification procedures. Recently, the Projeto Reabilitar Como Regra (Presidency of the Council of Ministers, 2017) allows a gradual implementation of the building regulations' demands on the existing buildings. In addition, the Regime Aplicável à Reabilitação de Edifícios e Frações Autónomas (Presidency of the Council of Ministers, 2019) introduces concessions when intervening in existing buildings. Besides, this regulation includes amendments on fire safety (Ministry of Internal Administration, 2015), energy efficiency (Ministry of the Environment, Spatial Planning, and Energy, 2015), acoustic requirements (Ministry of the Environment, Spatial Planning, and Regional Development, 2008), accessibility requirements (Ministry of Labour, Solidarity, and Social Security, 2017), electronic communications networks (Ministry of Planning and Infrastructure, 2017), and the general regime of urban buildings, concerned with housing conditions (Ministry of Social Equipment, 1975). In addition, the building regulation (Presidency of the Council of Ministers, 2019) establishes the need not to worsen safety conditions and introduces seismic vulnerability analysis as mandatory for all buildings in Portugal (European Committee for Standartization, 2005), considering the structural impact of the intervention works on the buildings. The Decreto-Lei 95 (Presidency of the Council of Ministers, 2019) allows the structural and seismic analysis, as well as the level of intervention, to be under the responsibility of the technicians (architect and engineer) through a descriptive memory, to be approved by the competent authorities. Moreover, it introduces measures and criteria of flexibility and proportionality, considering progressive improvement to the existing buildings through the possible articulation between the performance of buildings concerning current expectations of comfort, safety, protection, and environmental sustainability. These building regulations exist at the national level and are applied at the municipal level directly and with the support of the national regulations

(RJUE and RJRU). Therefore, in Portugal, and at the regional level, there are very diffuse criteria and procedures to safeguard built heritage (e.g., Plano Regional de Ordenamento do Território Para a Região do Norte; Presidency of the Council of Ministers, 2021b). At the municipality level, and taking the city of Porto as an example, the Regulamento do Plano Diretor Municipal do Porto (Presidency of the Council of Ministers, 2021a) includes a wider cataloging of urban, architectural, natural, and archeologic heritage. Also, there are recent studies (Pinho & Freitas, 2022) that support the technicians when intervening in built heritage.

3.2. The Institutional Stakeholders' Contributions to Improve Building Regulations' Criteria and Procedures Implementation

The second step's analysis shows the contributions that the different institutional stakeholders from Italy, Spain, and Portugal have on the urban and building regulations. The contributions of each of the institutions' stakeholders were summarized (Bardin, 1977) to point out the most significant outcomes related to the article's aims (see Table 3).

The previous analysis shows how the stakeholders for the three countries view the regulations' procedures and criteria. The Italian stakeholders, in line with the legislation, consider the existence of exhaustive inventory procedures crucial (President of the Republic, 2004), giving each municipality the necessary mechanisms (procedures and criteria) and data to intervene in urban heritage systematically. The Spanish stakeholders appeal to a wider application of the flexibility criteria of CTE (Ministry of Housing, 2006), using a matrix of general criteria with red limits defined. The protection categories between regions are diverse, but the municipal stakeholders defend that the cataloging procedures should have homogenous criteria throughout the

Table 3. Institutional stakeholders' contributions to building regulations concerning urban rehabilitation.

Countries	Institutions	Contributions
Italy	National	Superintendency of Siena and Grosseto: The urban areas are inside the landscape assets, having values to be preserved (e.g., historical, cultural, material, morphological, and aesthetic of the territory). The criteria expressed in the national legislation and regulations are uniform for the territory. Each superintendency (national/regional entity responsible for safeguarding cultural heritage) adopts the necessary procedures to declare an asset of cultural interest.
	Regional	Tuscany's Office of the Province: There is a broader definition of a historic center and a territory; urban areas are seen as living organisms. The open territory is safeguarded, including the structure of the provincial territory articulated with the historic centers, small clusters of housing, and historical architectural heritage, for greater control of the plans and procedures. Each region has the autonomy to create tools to support urban rehabilitation with private and public entities (e.g., recovery plans).
	Municipal	Municipalities of Siena, Verona, Padua, and Monza: The Piano Generale Regulatore contains all mechanisms to systematically assess urban heritage and produces the measures and levels of intervention. The municipalities have technicians specialized in assessing and diagnosing buildings and urban heritage. Each municipality creates intervention measures according to the data assessed from the inventory and cataloging procedures stipulated by the corresponding regions.
	Academic	Polytechnic of Milan: It is crucial to protect the existences and small settlements through a broader view, in a close relationship between territory, landscape, and local culture, considering the territory conditions (e.g., seismic areas), as well as the contemporary ways of living and the socio-economic aspects of the inhabitants.
Spain	National	Ministry of Development and Housing: Regarding CTE, it defends the need for a regulatory line to implement the building regulations in a stratified, structured, and clear way. It states that the technical criteria of CTE related to safety, housing, and comfort conditions are not still stratified on different demanding levels to facilitate the establishment of flexibility criteria in urban rehabilitation areas. Moreover, it stresses that municipal technicians are not yet prepared to approve and implement the flexibility criteria. It should be the responsibility of the technicians (architects or engineers) to justify, through a descriptive memory, the level of the CTE attained, considering the level of requirements achieved in each regulation of the CTE, and that should guarantee the safety conditions of buildings, as well as not worsening their actual conditions. It points out the need for trained project teams to control the criteria and procedures for implementing the CTE building regulations.

Table 3. (Cont.) Institutional stakeholders' contributions to building regulations concerning urban rehabilitation.

Countries	Institutions	Contributions
Spain	National	In Spain, the quality of urban heritage rehabilitation has improved with urban rules concerned with urban rehabilitation. These rules are coordinated with European funds for energy efficiency as a starting point to promote the refurbishment of buildings in urban areas. Spanish National Research Council—Eduardo Torroja Institute for Construction Sciences: Since 2006, several changes have been made to the CTE, boosting the rehabilitation of urban areas with criteria that stimulate interventions on built heritage. A guide was prepared to help regional and municipal technicians implement the criteria of proportionality and flexibility in each basic CTE document related to safety and housing conditions through a matrix of general criteria with red limits defined. In particular, it expresses (a) the criterion that the existing conditions of the buildings not be worsened, (b) that interventions should reach a minimum level of performance, (c) the compensatory measures when the overall level of performance required by the building regulations cannot be achieved, and (d) qualitative assessments, allowing alternative solutions with minimum safety criteria. In addition, an analysis of urban areas with a socioeconomically vulnerable population was made to implement criteria that promote opportunities for all citizens to access affordable and comfortable housing.
	Regional	Commission for the Protection of the Historic Heritage of Madrid Region: The classification of cultural heritage depends on each region's criteria; the building regulations have extensive criteria for conserving historical heritage and protected buildings. In particular, the cataloging procedures have criteria that sustain different protection categories for each region, which technicians must apply following predefined procedures. The buildings under the jurisdiction of the Municipality of Madrid are subject to intervention restrictions according to their degree of protection.
	Municipal	Municipality of Madrid: All building regulations at the local level must have clear criteria for the intervention measures and be supported by appropriate documentation. The procedures of protection should be standardized and convergent throughout the Spanish territory (i.e., be more in agreement with the national regulations), though respecting the particularities of each autonomous community (regions), to improve the quality of the urban heritage protection. Likewise, the cataloging procedure should also be supported by uniform inspection and inventory criteria throughout the country.
	Academic	UPC Department of Architectural Constructions I: The greatest energy expenditure of a building is in its construction and demolition. The rehabilitation of the buildings should have an urban perspective and be a social resource for all citizens, mixing cohabitation (older and younger people in the same building) and promoting new social dynamics. It is necessary to redefine new building regulations criteria to integrate new ways of living that are not submitted just to the technical criteria but also to social and urban criteria. UPC HABITAR: In agreement with the cities, the academic stakeholders are studying the urban and building regulations and their constant transformation. Apart from technical problems, there is a need to develop regulations focusing on how to use buildings. This focus should go to preserving buildings, verifying their functions, promoting the safeguard of their function/use, or providing similar uses, to maintain their original structure and materials. The regulations criteria should promote flexibility to provide alternatives to address these buildings' limitations, promoting their reuse. The citizens must reuse buildings in the best possible way to prolong their life, underlining that users must "accept" their characteristics to keep urban heritage alive.
Portugal	National	National Laboratory of Civil Engineering: Although the methodologies implemented at the national level do not yet reflect the heritage attributes of buildings in urban areas, it is important to carry out studies to assess and evaluate these issues. The "principle of protection of the existing" is established in the RJUE and RJRU. These building regulations determine how the general criteria should be applied to existing buildings in urban areas. The intervention procedures must at least meet requirements that guarantee specific criteria for safety and minimum housing conditions, being also relevant to the criteria of suitability for use, appearance, economy, and sustainability. The building regulations are under analysis, and progressive improvements are being made, endorsing the articulation between the performance of comfort and safety, and the protection and environmental sustainability of the buildings.

Table 3. (Cont.) Institutional stakeholders' contributions to building regulations concerning urban rehabilitation.

Countries	Institutions	Contributions
Portugal	Regional	Regional Directorate of Culture of the North: The classification of urban areas and properties is seen as a legal instrument, given that the heritage value is attributed through a law. The criteria for the protection of the built/urban heritage are often based on the criteria that assess the outstanding universal values stipulated in the UNESCO Convention of 1972. The cataloging of urban heritage must include the identification of the state of conservation of the buildings and how they are managed as a social fabric. The knowledge of the traditional techniques and materials used is required, and any intervention should be sustained by a legal report, aiming to avoid unnecessary and unjustified loss of heritage value of buildings and urban areas. The management of urban heritage requires trained technicians for decision-making.
	Municipal	Municipality of Porto: The legal framework at the municipal level imposes that intervention procedures maintain the original design of the buildings, as well as guarantee their safety and minimum housing conditions, especially when the buildings represent a risk to public health, are degraded, or in a state of disrepair. Many efforts have been made to include more information in the Municipal Master Plan.
	Academic	Faculty of Architecture of the University of Porto: It underlines the need for an integrated and methodological vision in conserving urban heritage. Architecture is seen as an integrator of the various specialties, which should promote the maintenance of the integrity, authenticity, and value of the buildings, as well as the quality of life of residents in urban areas. The inspection and assessment of built heritage should follow rigorous procedures to ensure that corrective interventions are effective. There should be multidisciplinary teams to survey the built heritage and traditional construction techniques, and technicians should be well-qualified. Faculty of Engineering of the University of Porto's Civil Engineering Department: The procedures of inventory and cataloging are necessary to assess their physical characteristics and state of conservation to find sustained solutions. The technical building regulations are not flexible and do not address rehabilitation. Specific and flexible regulation is necessary to support the rehabilitation of urban heritage. Currently, experts are discussing and preparing manuals to support the rehabilitation of built heritage, considering the applicable legislation.

Spanish territory. The Portuguese stakeholders consider that inventorying and cataloging procedures should not be restricted to the national monuments and their values (Assembly of the Republic, 2001). They acknowledge the importance of establishing minimum requirement levels. Although new legislation introduces flexible and proportional criteria to the interventions in the existing buildings (Presidency of the Council of Ministers, 2019), they ask for a wider application of these criteria.

4. Discussion

The results from the twofold analysis show that the three Southern European countries under analysis—Italy, Spain, and Portugal—have different criteria and practices regarding the protection and intervention of urban heritage. Italy is the country that has the most homogeneous criteria in terms of protection and intervention in urban heritage, which are interconnected at the national, regional, and municipal levels, aiming to protect all categories of cultural heritage at the territory scale (President of the Republic, 2004). The Italian institutional stakeholders point out that national and regional regulations are organized to allow a more flexible adjustment of the procedures (Ministry of Cultural Heritage and Activities and Tourism & Region of Tuscany, 2014; Province of Siena, 2020; Regional Council of Veneto, 2019; Region of Veneto, 1999), especially at the municipal level (Municipality of Siena, 2016). They ensure that inventory and cataloging procedures are the first and main step for a weight-oriented construction of the technical building regulations, in agreement with the local plans (Municipality of Padua, 2015), and aligned with the measures and levels of intervention. However, academic stakeholders consider it important to include socioeconomic aspects in these plans, especially in historical areas under reconstruction due to catastrophic events (Giuliani et al., 2021).

In Spain, the institutional stakeholders consider the proportional and, especially, the flexible criteria within the CTE crucial (Ministry of Development, 2019) to guarantee adequate interventions on urban heritage. They recognize the need for more uniform criteria and procedures for cataloging and classifying urban heritage in the whole country (Head of State, 1985). They claim that they carefully assess the built heritage (City Council of Madrid, 2012). Both national and regional stakeholders are making efforts to create teams of technicians able to incorporate the CTE flexible criteria at the municipal level. On the other hand, academics understand that specific criteria

from regulations can be an obstacle to the intervention in urban areas, which require improvements in the living conditions of a diverse range of inhabitants (Casals-Tres et al., 2013). They apply for the existing buildings' preservation instead of their demolition for the preservation of their features, materials, use, and function (Mària & Salvadó, 2017), as well as for adequate energy efficiency demands (Fuertes, 2017).

Finally, in Portugal, the institutional stakeholders now understand that inventory and cataloging urban heritage is important to guarantee sustained interventions. Efforts have been made to introduce flexible criteria in the national building regulations (Presidency of the Council of Ministers, 2019) involving intervention in urban heritage (Assembly of the Republic, 2012). Moreover, they underline the importance of urban heritage criteria to support the protection of urban areas and acknowledge the need to improve the citizens' quality of life in urban areas (Presidency of the Council of Ministers, 2018). The municipal stakeholders' practice still does not follow these dynamics. However, the municipalities have recently been engaged in a transformative process to improve their plans and databases, involving municipal technicians. The academic stakeholders argue that the assessment and management of urban areas should meet social, economic, and sustainability criteria, highlighting the need to establish inventory and cataloging processes; they highlight the need for a multidisciplinary assessment of built heritage (Pinho & Freitas, 2022).

5. Conclusions

This study shows that the institutional stakeholders from the three Southern European countries (Italy, Spain, and Portugal) have similar views on urban and building regulations, although they express them differently, according to their own particular experiences and practices. The different countries' realities and stakeholders' roles lie behind this variation. Those in the governmental and regional institutions have a macro vision of the procedures and criteria and establish different levels of connection to the municipal levels. In Italy, this interconnection is more homogenous than in Spain and Portugal. At the municipal level, the stakeholders from Italy and Spain benefit from better tools for urban heritage safeguarding (e.g., inventorying and cataloging procedures with robust criteria), although the Spanish stakeholders refer to the lack of technician training. The Portuguese municipal stakeholders are subjugated to comply with national regulations that are diffuse and discretionary, even when amended. The academic stakeholders from the three countries converge on the importance of the flexible criteria to guarantee the environmental, economic, social, and cultural benefits of urban heritage interventions, considering the different social vulnerabilities of the citizens (Ascione et al., 2022; Borrallo-Jiménez et al., 2022; Casals-Tres et al., 2013; Casquero-Modrego & Goñi-Modrego, 2019; Fuertes, 2017; Giuliani et al., 2021; Mària & Salvadó, 2017; Pinho & Freitas, 2022; UNESCO, 1972, 2011).

The results highlight that the stakeholders' knowledge, experience, and studies are key elements to improve and promote the efficient implementation of the building regulations with more flexible and inclusive criteria. Italian and Spanish stakeholders are moving faster than Portuguese stakeholders towards this aim, reflecting the different countries' backgrounds. The convergency of stakeholders' views on these subjects (procedures and criteria) contributes to the development of sustainable intervention actions that could be a path to support the current and future patterns of change when facing rapid transitions and transformative changes in urban heritage.

This analysis also underlines that the intervention procedures within the urban and building regulations should be sustained by proportional and flexible criteria/measures which are adaptable to the different urban contexts to guarantee their effective implementation. Flexible and proportional criteria also allow progressive improvements in urban heritage buildings over time. Furthermore, systematic inventory and cataloging procedures should be mandatory and clarified in building and urban regulations. These processes make it possible to monitor the evolution of urban areas and identify problems, especially in areas under threat from climate change and uncontrolled urban development. Additionally, the inventory and cataloging procedures are essential for decision-making, allowing more sustainable and sustained intervention actions, as well as for supporting the fast-changing patterns in urban areas under diverse pressures. However, these inventory and cataloging procedures are not yet clear; the municipal technicians do not have training on these matters or on applying the proportional and flexible criteria related to intervention actions, especially in Spain and Portugal. Moreover, multidisciplinary teams are not in the field working together on these issues. Therefore, the municipalities should invest more in training technicians and provide clear monitoring and inventorying procedures. This will improve the quality of data concerning urban heritage in general (classified or not) and will promote its sustainable protection through oriented urban planning management tools.

Future research will be focused on the different contexts at the municipal level. It will be studied how local and inter-municipal institutions and stakeholders introduce the inspection and diagnosis techniques to inventory and catalog urban heritage. Finally, the authors believe this systematic assessment is the key to supporting environmental sustainability and the digital transition of urban tools.

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Conflict of Interests

The authors declare no conflict of interests.

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