

Planning for Landscape and Heritage. A Community Perspective to Overcome Risks and Vulnerabilities in the Italian Case Study.

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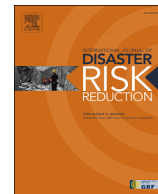
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# Planning for landscape and heritage. A community perspective to overcome risks and vulnerabilities in the Italian case study

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## ABSTRACT

Current times of uncertainty call for a renovated reasoning and approach to natural hazards, resilience, and sustainability. Studies on cultural heritage and urban planning play a crucial role in providing a broader research perspective. In these fields, the concept of landscape acts as a bridge. In cultural heritage studies, the landscape allows for integrating the contextual value of territorial and landscape assets. In planning studies, landscape planning has gained importance since the promotion of the European Landscape Convention in 2000. This is particularly relevant in the case of Italy, which has approved six Regional Landscape Plans. The theoretical research we propose aims to provide an overview of the Italian landscape planning situation, focusing on the topics of risk and community involvement. The research findings highlight various approaches to hazards and risks in Regional Landscape Plans and show that the results were more diverse and varied where the population was most involved.

## 1. Introduction

The term “heritage” is an umbrella concept in spatial planning studies, encompassing both cultural and natural heritage, as well as landscape [1]. It can have various components, such as tangible or intangible, ancient or new, common or private [2]. Since heritage plays a fundamental role in “contributing to social cohesion and sustainable development” [3], knowing its components is essential to appreciate its value and legacy and properly address its conservation and enhancement. Moreover, this knowledge enables guiding all valorisation projects aimed at protecting collective memory and promoting prevention actions against irreversible damage and losses caused by natural and human-induced hazards, as well as long-term phenomena of abandonment or oblivion [4]. Likewise, the conceptualisation of the term “landscape” has been a critical issue for both institutional bodies and scholars as it varies depending on the field of study (aesthetical, historical, geographical, cartographic, ecological, and anthropological). In recent years, the landscape has acquired an increasingly central role in spatial planning as it enables the implementation of sustainable territorial strategies. This polysemic nature [5] has made finding a common and internationally recognised definition necessary. The definition given by the European Landscape Convention (ELC – renamed Council of Europe Landscape Convention in 2016), approved in 2000 by the Council of Europe [6], p. 17, provided strong elements of discussion: “an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors” [7]. Indeed, this definition marks a significant shift in landscape studies since it offers a widened meaning to the landscape, including not only what is directly visible (such as territorial, natural, and cultural assets and economic features) but also how people perceive it. The inhabitants’ perception and public participation [8] allow for identifying the social value of the landscape. Inhabitants and stakeholders become contributors to the entire process of territorial development

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and heritage and landscape preservation, as defined by the Faro Convention [9], enabling them to fulfil their aspirations for better well-being and implement effective territorial strategies. For the first time, the landscape is interpreted as a determining factor in the daily lives of people.

Furthermore, this renewed interpretation outlines the importance of landscape in planning as it “has the potential to 1) integrate scientific disciplines and 2) to advance cooperation between planning actors” [10]. Starting from these assumptions, we approached the topics of cultural heritage and landscape in relation to risks and vulnerability in planning studies [11]. This relationship has not been thoroughly researched, and there is a shortage of literature references, especially when it comes to landscape. In recent times, some international strategies have emphasised the need to implement adequate prevention strategies for cultural and landscape heritage, with a focus on the role of communities. This is because such heritage and landscape can cause not only physical damage to buildings but can also have complex consequences on communities that cannot be immediately quantifiable. From this perspective, what emerges is the loss of community memory and identity, the destruction of the sense of belonging, and economic damage concerning, for example, tourism or other productive activities. In light of this, planners and historians are called upon to propose actions that can prevent damage by reducing risks while considering the role of communities and social dynamics. This can be achieved by activating virtuous processes that can combine territorial assets, urban cultural heritage and population needs [12]. In this perspective, culture, cultural heritage and landscape are crucial in helping to tackle global changes, including climate change, and in particular, the risks posed by sudden social transformations (such as the COVID-19 pandemic and wars) [13].

Our study is focused on the Italian case, which has managed to preserve its outstanding cultural and landscape heritage despite the damages caused by World War II, some of the disastrous reconstruction programs and the growing possibility of natural hazards [14]. This management has been greatly supported by landscape planning, which is mandatory for all Italian Regions. Even though the number of approved plans is still limited [15], after a brief description of landscape and landscape planning in the Italian planning system, we aim to provide a methodological framework that attempts to integrate risk prevention and community involvement to strengthen the protection of culturally significant landscapes. In particular, the paper reflects on the following questions.

- Is landscape planning involved in prevention strategies?
- What is the role of communities in landscape policies and prevention strategies? What effectiveness can a participatory process have in the landscape planning framework?
- How do Italian regional landscape plans integrate the topic of vulnerability and risks?
- In the Italian planning system, can landscape plans be the proper tool to communicate risks and prevent damage on a larger scale?

The results of this research can support planners, practitioners, and decision-makers in raising awareness on the topic of risk and vulnerability when drafting a landscape plan [16].

## 2. Materials and methods

This research stems from a multidisciplinary activity on the Italian ecclesiastical cultural heritage in relation to risks, developed in collaboration with architectural historians, sociologists, and seismic engineers [4]. In this context, planners contributed to understanding how planning, particularly landscape planning, could address the issues of risks and vulnerabilities in heritage studies. The research adopted the definition promoted by the Italian Civil Protection:  $R = H * V * E$ , where hazard (H) represents the probability of a phenomenon of a given intensity occurring in a specific area within a given period of time. Vulnerability (V) refers to the propensity of an element (such as people, buildings, infrastructures, or economic activities) to suffer damage due to the stresses induced by an event of a certain intensity. Exposure (E) is the number of at-risk units (or “value”) of each element present in a given area, such as human lives or settlements.

The research presented here represents a step forward. First, we discuss how the topic of landscape has entered the national debate of Italian planning policies, both in terms of norms and projects. Additionally, since the ELC is the main reference for landscape policies in Europe, we compare its indications with those given by the Italian National Code of Cultural Heritage and Landscape. The Code is the reference point for cultural heritage and landscape policies in Italy and the first legislative document that considers risks and vulnerabilities related to the landscape.

The second step of our study involves analysing the approved Italian regional landscape plans to identify their key characteristics. Through this analysis, we have summarised the primary data and objectives. Currently, there are six approved regional landscape plans, but Sardinia's plan was just briefly explained in section 3.2. We excluded it from our study on hazards as its regulatory framework applies only to coastal areas. Finally, we characterise each plan on the basis of risk and landscape vulnerability, as these are some of the key assets to be defined in each plan according to the Code. The plans encompass the different landscapes of Italy, including mountains, hills, lowlands, coastlines, urban areas, inner areas, archaeological zones, protected sites, etc. Each type of landscape has its own specific risks and challenges when it comes to preserving and enhancing everyday and exceptional landscapes. In the attempt to define a common background, we have decided to systematise and compare the approved plans following four criteria: 1) the type of risks identified, if present; 2) which part or document of the plan includes them; 3) the presence of operational indications; 4) the degree of population involvement in the decision-making process. To do this, we retrieved qualitative data from the official documents of landscape plans, including reports, regulations, maps, and policy documents that are publicly available on the website of each Region. We conducted a comparative qualitative analysis to determine whether these documents define the concepts of risk and vulnerability and promote preserving actions to address these topics. This was necessary due to the lack of quantitative data on these subjects and because the documents differ by Region in terms of number, methodological approach, and content structure. This absence is also related to the fact that the data used to construct the plan is mainly retrieved from external databases, such as the na-

tional databases provided by the *Istituto Superiore per la Protezione e la Ricerca Ambientale* (ISPRA). The external point of view and the critical perspective we provide result in a first framework of the current situation that can become the basis for future analysis and implementation.

### 3. Case study

#### 3.1. Landscape planning in the Italian legislative framework

As previously stated, the ELC played a significant role in shaping landscape policies. Indeed, the new role given to the landscape, both in institutional policies and in public debates, introduced a shift from “policies stressing conservation to policies stressing a management approach to planning new landscapes” [17], p. 71. This change in perspective allowed to activate innovation processes and foster sustainable territorial policies through an active and dynamic interpretation and approach. Additionally, the ELC recognises that everyday and degraded areas are also part of the landscape, not just the outstanding ones [18]. In this perspective, this document emphasises the importance of preserving and valorising all landscapes. Following the ELC approval, many European countries acknowledged its value and ratified it in their national legislative apparatus. Nevertheless, not all countries took this path, resulting in an incomplete process that weakens the effectiveness of landscape policies, above all in fragile, sensitive, and degraded territories.

In Italy, landscape and cultural heritage have been managed through ad-hoc national legislation since 1939. The relevance of these topics can also be seen in the National Constitution, which states that the Italian Republic preserves the national landscape, historical and artistic heritage, environment, biodiversity and ecosystems for the benefit of future generations (Article 9, as modified in 2022). Currently, the regulation of landscape and cultural heritage issues falls under the National Code of Cultural Heritage and Landscape, which was approved by Legislative Decree No. 42 of 2004 (“*Decreto Legislativo 22 gennaio 2004, n. 42. Codice dei beni culturali e del paesaggio, ai sensi dell’articolo 10 della legge 6 luglio 2002, n. 137*”<sup>1</sup>) and amended in 2006 and 2008. The Code “combines some innovations of the ELC with the well-established Italian legislative framework of landscape protection” [19]. Subsequent changes to the Code, in accordance with the ELC, strengthen the focus on historic centres, UNESCO territories, and the rural landscape. Additionally, the Code relaunches the landscape plan by giving the landscape a fertile role [20] in helping communities make informed decisions about how to use the land to protect natural and cultural resources.

The aforementioned landscape plan must be drafted by each Region in accordance with the Code. Regions can accomplish this task in two ways. They can either draft a landscape plan that is separate from the regional territorial plan or create an integrated plan. So far, Regions have chosen different paths for elaboration and approval. Generally speaking, the Regional Landscape Plan is a descriptive, cognitive and regulatory document which provides proactive and strategic guidelines for responsibly controlling the transformation of landscapes in the long term. It also offers appropriate indications for transforming both high-quality and degraded landscapes.

To safeguard all landscape values more effectively, the Code recommends subdividing the territory into representative areas characterised by homogeneous features, known normatively as “*ambiti di paesaggio*”. This subdivision helps identify degraded zones where it is more urgent to act carefully to achieve specific objectives of landscape quality. By doing so, it becomes possible to valorise and create new and integrated landscape values and steer design in local plans. Such a guided action in planning and design can also help to create new territorial and community values.

In our research, highly compromised or degraded zones represent the key areas to shape land transformation dynamics in a careful, sustainable and resilient way. Indeed, the Regional Landscape Plan is in charge of specifying the most appropriate recovery interventions for these areas and identifying risk factors and elements of landscape vulnerability in accordance with the Code (article 143). While the Code requires Regions to determine these aspects in the Regional Landscape Plan, it does not provide exhaustive information for interpreting these elements unambiguously. Moreover, it mentions explicitly (article 29) the vulnerability and risk associated with cultural heritage in a territorial context, but it fails to provide clear definitions of risk factors and elements of landscape vulnerability.

The absence of a clear definition and a common framework makes it necessary to establish how Regions should interpret the possible impacts of natural (such as floods, landslides, earthquakes, volcanic eruptions, and avalanches) and anthropic hazards (such as critical infrastructure). Additionally, in the Italian context, it is essential to consider the social significance of landscape and cultural heritage. This includes the absence of a shared sense of responsibility and appreciation for the landscape, leading to a loss of community value and identity over time. This shared interpretation could help identify risk factors and elements of landscape vulnerability from a broader perspective.

As we can deduce from Table 1, although the ELC and the Code share some similarities, they also have some notable differences. The topic of risk is not mentioned in the original version of the ELC. However, the 2008 text emphasises the importance of examining the “developmental processes and highlighting the past, present and foreseeable time-related forces due to either human or natural factors and the possible pressures and risks facing landscapes” [21]. Furthermore, this recommendation strengthens the need for active public involvement in this process, including community engagement, to provide multi-scale action for the landscape, with a focus on “active conservation” [22]. This approach is intended to be an evolutionary process for conserving natural and cultural values and enhancing landscape quality when making choices related to landscape protection, management and planning [21]. Since its preamble, management has been highly emphasised in the ELC, while it remains an underestimated issue in the Code. Furthermore, the ELC acknowledges the importance of balancing social and environmental needs with economic activities.

<sup>1</sup> The text of the law can be found at this link: [https://www.gazzettaufficiale.it/atto/serie\\_generale/caricaDettaglioAtto/originario?atto.dataPubblicazioneGazzetta=2004-02-24&atto.codiceRedazionale=004G0066](https://www.gazzettaufficiale.it/atto/serie_generale/caricaDettaglioAtto/originario?atto.dataPubblicazioneGazzetta=2004-02-24&atto.codiceRedazionale=004G0066).

**Table 1**  
Comparison between the European Landscape Convention and the National Code of Cultural Heritage and Landscape.

	European Landscape Convention	National Code of Cultural Heritage and Landscape
Landscape	Article 1, letter a “Landscape” means an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors.	Article 131, comma 1 Landscape is understood as the territory expressing identity, whose character derives from the action of natural and human factors and their interrelationships. Article 131, comma 2 This Code protects the landscape with regard to those aspects and characteristics that constitute a material and visible representation of national identity, as an expression of cultural values
Landscape areas		Article 135, comma 2 “Landscape plans, with reference to the territory in question, recognise its special aspects and features, as well as its landscape characteristics, and delimit its areas. Article 135, comma 4 For each area the landscape plan defines specific prescriptions, in particular: a) the conservation of the constituent elements and morphologies of the landscape assets subject to protection, also taking into account architectural types, construction techniques and materials, as well as the need to restore landscape values; b) the redevelopment of compromised or degraded areas; c) the safeguarding of the landscape characteristics of other territorial areas, while at the same time ensuring minimum land consumption; d) the identification of urban and building development lines, according to their compatibility with the different landscape values recognised and protected, with particular attention to the safeguard of rural landscapes and sites included in the UNESCO World Heritage List.”
Landscape quality objective	Article 1, letter c “Landscape quality objective” means, for a specific landscape, the formulation by the competent public authorities of the aspirations of the public with regard to the landscape features of their surroundings	Article 135, comma 3 “With reference to each area, the plan prepares specific regulations for use [...] and assigns appropriate quality objectives.”
Landscape planning	Article 5, letter d “Each Party undertakes: [...] to integrate landscape into its regional and town planning policies and in its cultural, environmental, agricultural, social and economic policies, as well as in any other policies with possible direct or indirect impact on landscape.”	Article 135 “The State and the Regions ensure that the whole territory is adequately known, safeguarded, planned and managed according to the values expressed by its different contexts. To this end, the Regions subject the territory to specific regulations for its use through landscape plans, i.e., urban-territorial plans with specific consideration of landscape values [...]. The drafting of landscape plans takes place jointly between the Ministry and the regions, limited to the landscape assets referred to in Article 143, paragraph 1, letters b), c) and d), in the forms provided for by the same Article 143.”
Participation	Article 5, letter c “Each Party undertakes: [...] to establish procedures for the participation of the general public, local and regional authorities, and other parties with an interest in the definition and implementation of the landscape policies [...]”	Article 144 “In the procedures for the approval of landscape plans, institutional concertation, the participation of interested subjects and associations bearing diffuse interests, identified pursuant to the provisions in force concerning the environment and environmental damage, and broad forms of publicity are ensured. To this end, Regions regulate the landscape planning procedures with specific laws, also with reference to further forms of participation, information and communication.”
Risk and vulnerability		Article 143, comma 1, letter f) “The elaboration of the landscape plan includes at least: [...] Analysis of the dynamics of land transformation to identify risk factors and elements of landscape vulnerability, as well as comparison with other programming, planning and soil protection acts”

### 3.2. The current situation of Italian regional landscape plans

Currently, out of 20 Regions, only six have completed the approval procedure for their Regional Landscape Plan (Fig. 1) in accordance with the Code. These Regions are Sardinia, Apulia, Tuscany, Piedmont, Friuli-Venezia Giulia and Lazio. The other Regions have started the drafting process but are facing bureaucratic obstacles during the approval phase due to the separation of preservation (which is under the State's responsibility) and valorisation (which is under the Regions' responsibility). This separation, combined with the compulsory continuous comparison between the Ministry and the Region concerning landscape assets, which slows down the approval phase, has caused a stagnant situation and many bureaucratic conflicts. Another challenge that lengthens the time of construction of the plan is related to the agreement between the Ministry and each Region for the definition of the modality of a joint elaboration of the landscape plan.

The first to be approved is Sardinia's, which was approved in 2006. It represents a unique case in the Italian landscape planning framework as it applies only to coast strips, which are considered to be valuable landscape assets of high environmental value, with strong human pressure [23]. Coastlines are subdivided into 27 homogeneous areas. The plan sets specific landscape quality objectives for each area, including general rules for preserving peculiar features and managing urban development. The plan also aims to recover and requalify the most degraded areas. Currently, the plan is being revised to include historical centres, gardens, and parks and to extend its rules to the inner areas, characterised by wilder landscapes and depopulation dynamics.

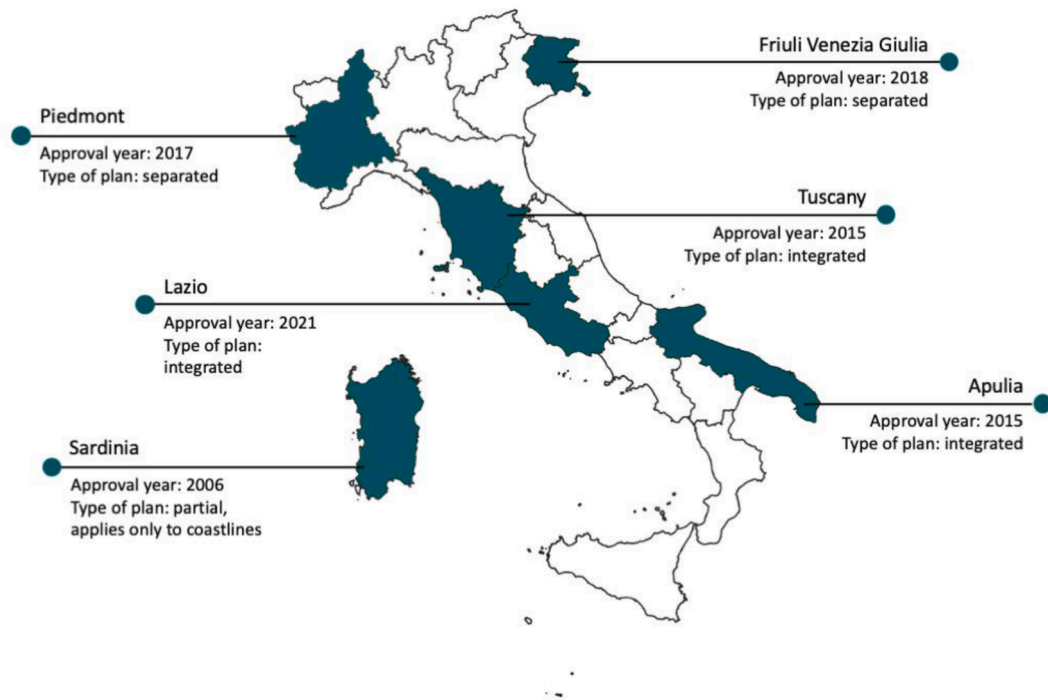


Fig. 1. The current situation of approved Italian regional landscape plans. Source: elaboration by the authors.

The Regional Landscape Plan of Apulia, approved in 2015, integrates both territorial and landscape characters.<sup>2</sup> This plan considers the landscape as the lever for urban planning, preserving both its material and immaterial dimensions while taking into account its strategic and design implications. Stakeholders and inhabitants act as creators of dynamic processes for the “social production of landscape”. Indeed, they have been continuously involved and consulted to build a stimulating cognitive apparatus that relates nature and culture, recognising potential resources for the design of the future territory. This apparatus was used to build the strategic scenario that transforms territorial assets into general and specific objectives to contrast decay and create the preconditions for a different socioeconomic development. In the attempt to increase operability, the plan identifies five territorial projects for landscape, including ecological network, city-countryside pact, infrastructural scenario, valorisation and integrated requalification of coastal zones and territorial systems for the fruition of cultural assets.

The Tuscany Region adopted a similar process, approving in 2015 an integrated Regional Landscape Plan.<sup>3</sup> The plan comprises several operational elements known as “structural invariants”. These “structural invariants identify the specific characteristics, generative principles and reference rules to define the transformability conditions of the territorial heritage in order to ensure its permanence” (art. 6 of the Statutory part). They include hydro-geomorphological features, ecosystemic features, polycentric and reticular features of settlements, and morpho-typological features of rural landscapes. They constitute the framework for conceiving policy scenarios to guide territorial transformations and define landscape projects. They allow to overcome the way of thinking about the landscape as a constraint and instead see it as a valuable perspective that can activate a different planning process. Landscape projects are divided between regional and local projects. Regional projects aim to promote the implementation of the general objectives of the “structural invariants” (an example is the project of slow fruition), while local projects intend to implement quality objectives. Both these projects include long-term norms that help enhance neglected resources, recover degraded situations, and ensure the best possible integration of new interventions in the landscape to produce new quality landscapes.

The Regional Landscape Plan of Piedmont was approved in 2017 after a long process of elaboration and approval.<sup>4</sup> Unlike Apulia and Tuscany, the Piedmont Region opted for two separate planning documents [24]. Despite this, the preliminary cognitive process was the same, and they followed a similar strategic framework. Its main goal is to safeguard and enhance the natural and cultural heritage, not only to enhance the quality of life of local communities and preserve their cultural identity but also to increase the region's appeal and competitiveness in the global network of relations. This plan has a complex regulatory apparatus that comprises five strategies from which 26 general objectives are derived. There are two noteworthy aspects of this plan: the identification of a network of landscape connection that gathers ecological, historical, cultural, and recreational values and the relevance given to landscape sensitivity that enables discussions on scenic features.

<sup>2</sup> The documents can be retrieved from <https://pugliacon.regione.puglia.it/web/sit-puglia-sit/documenti2#mains> and <https://pugliacon.regione.puglia.it/web/sit-puglia-sit/cartografia-template-web-gis#mains>. Accessed 15 May 2024.

<sup>3</sup> The documents can be retrieved from <https://www.regione.toscana.it/-/piano-di-indirizzo-territoriale-con-valenza-di-piano-paesaggistico>. Accessed 15 May 2024.

<sup>4</sup> The documents can be retrieved from <https://www.regione.piemonte.it/web/temi/ambiente-territorio/paesaggio/piano-paesaggistico-regionale-ppr>. Accessed 15 May 2024.

Also, the Friuli-Venezia Giulia Region decided to have two separate tools and approved the Regional Landscape Plan in 2018.<sup>5</sup> This plan identifies seven objectives that clearly explain its relevance and provide indications for territorial development. These objectives are 1) the landscape within the life context of communities that consider their cultural and natural heritage as the foundation of their identity; 2) the protection and conservation of natural, environmental, historical and archaeological heritage, settlements and rural areas to promote the regional sustainable development; 3) enhancing biodiversity and ecosystem services; 4) zero net land take; 5) avoiding landscape trivialisation; 6) the protection and valorisation of networks and structural connections; 7) the involvement of stakeholders in landscape planning, project and management decisions.

In 2021, the Lazio Region finally approved its Regional Landscape Plan after facing a setback due to an appeal by the State.<sup>6</sup> The plan consists of a statutory part and three specific guidelines concerning the 1) evaluation of interventions related to the exploitation of renewable energies, 2) views and 3) landscape valorisation. In particular, the third guideline, characterised by a propositional and guiding nature, contains the identification of priority areas for the implementation of projects aimed at conserving, recovering, redeveloping, valorising and managing the landscape.

### 3.3. Results of the systematisation of regional landscape plans in the perspective of risk and vulnerability

According to the Code, one of the tasks of each Regional Landscape Plan is to identify “risk factors and elements of landscape vulnerability”. However, a quick search through the different documents of each plan shows that these two concepts are not commonly mentioned, particularly if we strictly adhere to the terms used in the Code.

This lack makes it challenging to characterise each plan on the basis of risk and landscape vulnerability. In an attempt to understand how each plan addressed these issues, we have decided to systematise and compare the plans following four criteria (see Table 2): 1) identification of risks and their type, if present; 2) in which documents they are included; 3) the presence of practical indications; 4) involvement of the population in the decision-making process.

A reasoned reading of Table 2 allows for an understanding of how the topic of risk has been faced. The Regional Landscape Plan of Apulia does not have a specific section on this issue. Although the term “risk” is mentioned in some documents, such as the strategic scenario, it is used in a narrative way to describe the regional landscape. Nevertheless, the involvement of the population in the decision-making process was crucial in defining the overall structure of the plan, starting with identifying values and leading to potential actions. The community was invited to express their opinions through an interactive website and the creation of community maps. The final output of this process is a map that highlights degraded cultural goods and landscape practices through the use of diagrams and photos. These recommendations have supported the construction of the plan, helping to define the proper actions to address landscape deterioration and improve the overall quality of the regional landscape. Additionally, the plan identifies a list of actions and projects for each of the specific objectives defined in the strategic scenario. For instance, the objective concerning the enhancement and regeneration of Apulia's coastal landscapes foresees afforestation projects next to productive platforms at high environmental risk as a compensation measure. It also involves projects to regenerate coastal waterfronts, particularly those mostly used for housing and tourism, which are threatened by erosion or subsidence, as well as wetlands, river estuaries, and vital areas for the regional ecological network. This will be achieved through setbacks, merging areas, and densification projects, as well as employing naturalistic engineering and landscape design techniques. The overall goal of these actions is to acknowledge and communicate the identity values of the landscape in various forms of representation and to achieve the social production of the landscape, which is one of the plan's cornerstones.

The Regional Landscape Plan of Tuscany recalls the topic of risk, which is referred to as “criticality”, in the abacus of the “structural invariants” and the single description of each homogeneous area (“*scheda d'ambito*”). The abacus provides a detailed description of each component, including its transformation dynamics and criticalities, and suggests appropriate indications for action. The identified risks include natural and social domains, which result from inefficient practices or social processes. For instance, poorly managed agriculture can increase the risk of flooding or landslides and reduce the enjoyment of citizens. Similarly, the abandonment of inner areas that are hardly accessible can lead to social risks. Even though a dedicated website was created to facilitate communication and interaction between the inhabitants and the plan's construction, the participation process was less vivid and compelling than in the Apulia region. Recommendations and alerts on landscape assets, qualities and values, good landscape practices and detrimental elements have then been collected in the Guarantor report. Additionally, this plan provides practical guidelines for improving the quality and security of the landscape, as well as for creating new ones. From this perspective, the “Guidelines for Landscape Redevelopment of Urbanised Fabric in the Contemporary City” compare the current state of each landscape with two transformation scenarios: one that would have a negative impact and one that would be in line with local characteristics. These indications are accompanied by sketches that help to visualise possible actions to be integrated into local land use plans [27]. Indeed, sketches also aid in downscaling as they show the relationships among qualifying landscape elements and how they relate to objectives and norms (Fig. 2).

It is pretty hard to find any clear discussion about the topic of risk in the Regional Landscape Plan of Piedmont. Indeed, there are just a few references to it. The map of landscape components only identifies elements that cause visual subtraction. The plan prioritises the recovery and regeneration of these elements, especially if they concern valuable sites, assets and components. Punctual verifications of real situations of the landscape's critical or vulnerable factors are then transferred to the local scale. Indeed, the local scale is identified as the most appropriate for interpreting the alteration of the relevance, integrity or eligibility of the structural or qualify-

<sup>5</sup> The documents can be retrieved from <https://www.regione.fvg.it/rafv/cms/RAVFG/ambiente-territorio/pianificazione-gestione-territorio/FOGLIA21/>. Accessed 15 May 2024.

<sup>6</sup> The documents can be retrieved from <https://www.regione.lazio.it/cittadini/urbanistica/pianificazione-paesaggistica/ptpr>. Accessed 15 May 2024.

**Table 2**  
Italian regional landscape plans.

Regions	Identified risk	Title of the document	Operational indications	Involvement of population
<b>Apulia</b>	Hydrogeological, erosion, desertification, tourist exploitation, species extinction Degraded landscapes of contemporary urbanisation	Strategic scenario	Actions and projects to fulfil the objectives defined in the strategic scenario	Public consultations open to all stakeholders cooperating in landscape production, community maps, and an interactive website. Atlas of reports
<b>Tuscany</b>	Hydraulic; geomorphologic; fire; eutrophication; merging with neighbouring centres; building saturation; progressive abandonment of agricultural practices; abandonment due to the difficult accessibility of land and the lack of adequate infrastructure links; simplification and trivialisation of the historical agrarian network; erosion and slope instability; air, soil and groundwater pollution; soil sealing; introduction of alien species.	Abacus of invariants Description of homogeneous areas	Local landscape projects Figurative norms "Guidelines for Landscape Redevelopment of Urbanised Fabric in the Contemporary City"	Promotion of participation tools, such as River Contracts Report by the Guarantor on the communication process
<b>Piedmont</b>	Areas characterised by critical landscape elements and exposed to risks of visual detractation, resulting from urbanisation and infrastructure processes.	Catalogue of landscape assets Description of homogeneous areas	Strategic Guidelines and Orientations	Communication and sensibilisation Pilot project activated by Fondazione Compagnia di San Paolo [25,26] in two areas
<b>Friuli-Venezia Giulia</b>	Natural causes: coastal erosion; areas of environmental/hydrogeological vulnerability. Anthropic causes: axes of major historical roads altered by commercial and productive settlements; photovoltaic fields; power lines; military and border demining; unused or underused industrial buildings; quarries; buildings of historical, cultural and scenic significance in a serious state of decay; landfills; unused, incongruous or incomplete settlements generated by executive planning; underused and disused infrastructures.	Abacus of compromised and degraded areas	Guidelines for each type of degradation	Yes, technical and public meetings and seminars addressed to ecomuseums, local associations, and schools. Identification of a desired future scenario, through the definition of a SWOT analysis Main output: participation map
<b>Lazio</b>	Risk factors and vulnerability elements are identified per each type of landscape: urban sprawl; illegal development; erosion; flooding; water pollution; destruction of forest areas; disruption of ecological and environmental processes; intensity of agricultural exploitation; progressive elimination of visual, historical, cultural, symbolic relations; modifications to the typological, material, colour and construction characteristics of modern settlements of architectural quality	Statutory part	For each type of landscape, the plan identifies the types of permitted transformation interventions and some general regulations and guidelines for the correct insertion of interventions	Institutional participation, as expected by law. Communication Sensibilisation

ing factors. It also helps maintain the functionality of the environmental networks and conserve the historical-cultural heritage. Another reference to the topic of risk can be found in the description of each homogeneous area (the so-called "*scheda d'ambito*"), where a specific entry is dedicated to the ongoing economic, social, environmental and transformational situation of the territory. The participatory activities are currently underway and are defined by Fondazione Compagnia di San Paolo [25,26] as an experimentation of the plan following its approval. These activities are intended to support the implementation and create the necessary conditions for the plan to be effective.

The Regional Landscape Plan of Friuli-Venezia Giulia includes an abacus in the normative apparatus that identifies compromised and degraded areas. This document distinguishes between natural and human causes of transformation (see Table 2). The Regional Landscape Plan requires each municipality to incorporate in their land use plan and delimit the degraded zones listed in this abacus. Moreover, the Regional Landscape Plan identifies the level (high, medium or low) of degradation, which is correlated to loss or debasement of the landscape quality or the scenic role of the asset in its context. Lastly, the abacus provides specific guidelines for each type of degradation to help address the issue. Guidelines include, for example, facilitating the restoration of hydraulic works, studying visual cones to enhance landscape perception, introducing mitigation interventions, and converting areas into compatible uses.

Since the beginning of the first phase of the planning activity, the Region has established a process for including institutional and social actors to interpret values and criticalities. To achieve this, the Region encouraged participation by using a WebGIS tool to report warnings, organising discussion tables with inhabitants, and thematic workshops with schools. Warnings submitted by the participants were gathered in a final SWOT analysis, considering endogenous factors (strengths/values, weaknesses/criticalities) and exogenous factors (opportunities/potentialities, threats/risks). The main outcomes are summarised in the participation map (Fig. 3). This map represents a synoptic picture of all the contributions received from citizens, highlighting the elements of value and criticality of the regional landscape as perceived by the citizens. Ecological issues, aspects of housing, economy, production, history, culture, and quality of life are considered elements of value. Criticalities, instead, include abandonment, depopulation, landscape deterioration, and intensive agriculture. Based on the participatory process, these aspects constitute the framework for interpreting the re-



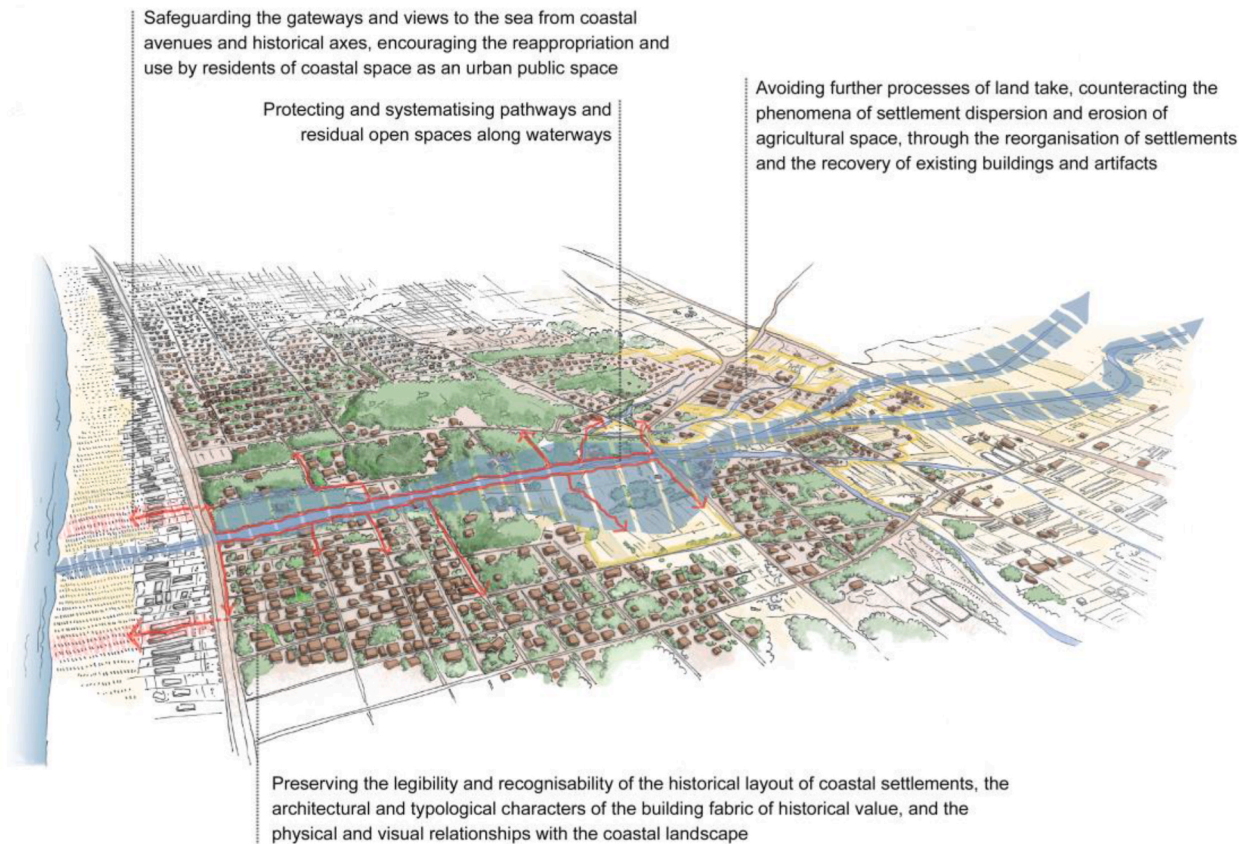


Fig. 2. An example of a sketch of a figurative norm. Source: adapted from the Regional Landscape Plan of Tuscany.

gional landscape. Nevertheless, further steps will be needed to evaluate the effectiveness of the participatory process in designing projects and supporting the implementation.

Finally, the Regional Landscape Plan of Lazio discusses the topic of risk and vulnerability in relation to each type of landscape: 1) the system of the natural landscape, 2) the system of the rural landscape, and 3) the settlement system (including, for example, historical centres, parks, villas, and infrastructural networks). The plan also identifies compatible uses that align with landscape values and transformation activities. Priority areas are explicitly identified for implementing projects that focus on preserving, recovering, redeveloping, enhancing, and managing the landscape for each zone with a specific landscape risk (such as land fragmentation, landfills, deposits, and quarries). Furthermore, the plan provides special dispositions for territories that have been affected by catastrophic events. This plan lacks an effective participatory process.

#### 4. Discussion

The widened interpretation of landscape and its multiscale action can be highly relevant when dealing with risk and degraded areas. The comparative analysis of the approved Regional Landscape Plans shows a common cultural foundation rooted in original laws on landscape planning aimed at enhancing the quality of life and promoting well-being. Moreover, their cognitive apparatus can trigger reflections for overcoming vulnerabilities, preventing disasters or, at least, minimising damage to urban cultural heritage and population. Nevertheless, the discussion is inevitably limited because, even though the Code was approved 20 years ago, only six out of 20 regions have approved their plan.

The renovated idea of landscape, as proposed by the ELC and the Code, challenged the conservative nature of previous landscape plans by introducing new paradigms that are now a part of the planning discourse. These paradigms include environmental, territorial and landscape heritage (as defined by [28]), land take containment, green infrastructure and ecological networks, agriculture, slow mobility, and integrated conservation and management of landscape and heritage. Some plans promote “a radical discontinuity in the regional planning culture and practice by changing the established relationship between territory-landscape protection and spatial planning” [29]. In this perspective, the research reveals a shift from a binding conception of the plan to defining strategic criteria to guide interventions consciously.

In this sense, the active involvement of inhabitants is crucial in providing valuable insights from an internal perspective that enable the transmission of the values of landscape and cultural heritage to future generations [9,30,31]. Encouraging civic dialogue and engagement [13] becomes fundamental when defining landscape criticalities and degradation elements. Furthermore, this shared

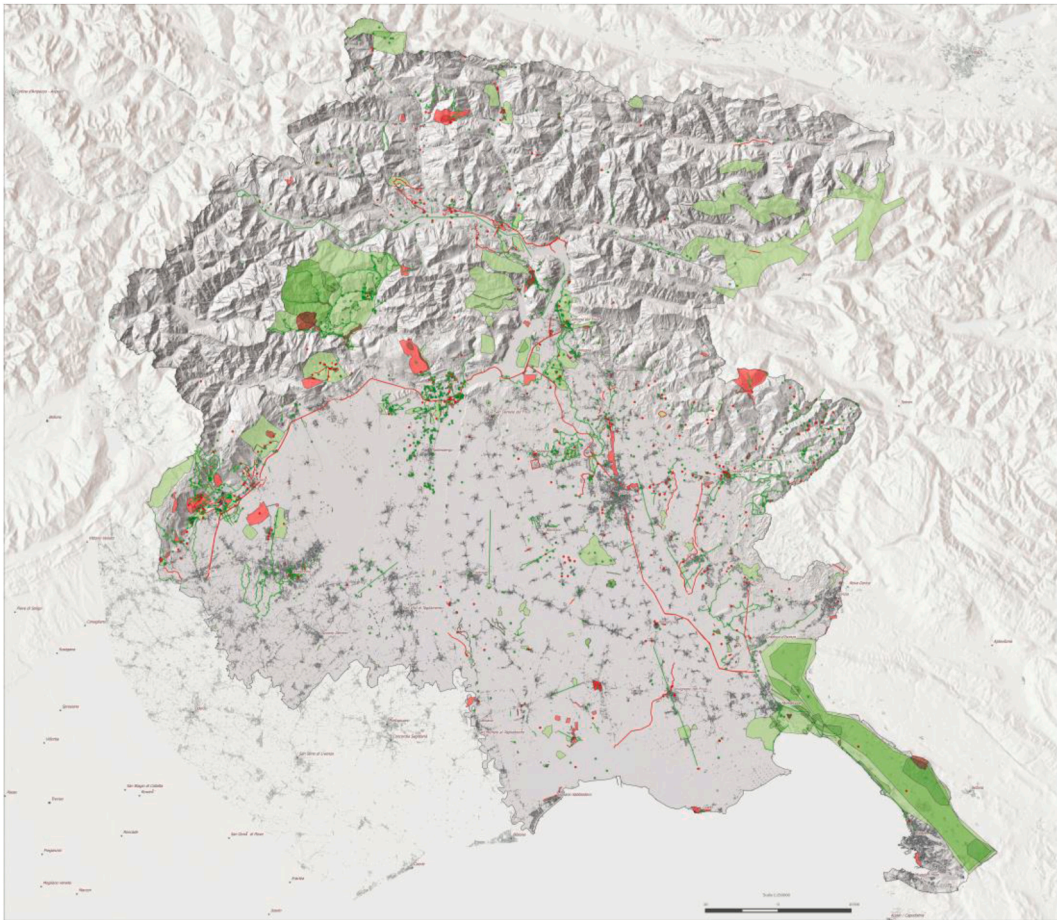


Fig. 3. The participation map, in red degradation elements and green value elements, divided into punctual, linear and areal. Source: Regional Landscape Plan of Friuli-Venezia Giulia. (For interpretation of the references to colour in this figure legend, the reader is referred to the Web version of this article.)

landscape action opens the path to new conceptualisations, like the common good [32,33] and the democratisation of landscape [19,34].

Concerning risks, without clear indications to follow, each Region has opted for different paths. However, most plans fail to specify their own approach to risks and landscape vulnerability. Furthermore, there is also significant confusion regarding terminology, as plans refer to “risks”, “vulnerabilities”, “criticalities”, and “fragilities” interchangeably. They mainly identify the operative actions to be undertaken in the description of each homogeneous area. Choosing a more local scale than the regional one can support and strengthen the operative asset needed to address risks. However, in most cases, it seems that the topic is simply a bureaucratic or normative duty, often mentioned only briefly. As an example, local landscape projects of Tuscany aim to go beyond the rigid view of landscape as a normative constraint. Additionally, by identifying specific documents, the Regional Landscape Plan of Friuli-Venezia Giulia defines compromised and degraded areas and considers inhabitants’ perceptions as a criterion for identifying them. On this issue, the ELC emphasises that the landscape plan should prioritise perception. Nevertheless, only the activities carried out by Apulia and the recent ones in Piedmont by Fondazione Compagnia di San Paolo can ensure the effectiveness of the planning actions. Tuscany can be innovative in communicating the planning actions through the sketches mentioned above to support implementation.

Plans principally identify risks associated with natural hazards, such as hydrogeological and erosion risks. However, some regions, such as Apulia and Tuscany, have attempted to incorporate social issues that are central to the Italian national discourse. This integration is requested from the ongoing national debate on inner areas [35], which seeks to revitalise peripheral territories [36] to contrast depopulation, population ageing, limited accessibility, abandonment, and economic marginalisation. These considerations align with some emerging concepts that connect population involvement and resilience.

In such a perspective based on community involvement and risk prevention, further considerations stem from the emerging concept of landscape resilience as defined by Voghera & Aimar [37]. This concept can be used to determine a diverse management model for each ordinary and outstanding landscape value “to limit and reverse pressure factors such as fragility and uncertain conditions in the landscape” ([37]:117). This approach emphasises engaging and empowering communities through place-related and people-centred strategies [38]. Landscape resilience opens up the broad concept of resilience, which has received increasing attention in spatial planning studies [39,40], but its application is still limited.

## 5. Conclusion

When it comes to prevention strategies, the concept of landscape and the tool of landscape plan become fundamental. They allow us to interpret urban cultural heritage as a whole social-ecological system and not as an isolated element. Indeed, they can contribute to supporting synergies between nature and culture, as well as tangible and intangible values. In Italy, at the time of its approval, the Code represented the necessary starting point for reorganising powers and tools in Italian spatial planning. Nevertheless, 20 years later, many exciting perspectives have been disregarded. For instance, the Code failed to introduce risk and vulnerability as essential factors. The absence of a common understanding of these topics can hinder the effectiveness of prevention strategies and disaster risk reduction. These issues are even more critical in the present times of uncertainty, marked by climate change, pandemics, and economic crises. Therefore, enhancing the resilience of landscape can be the first step towards increasing overall societal resilience to natural disasters and crises. According to Romão et al. [41], focusing on cultural heritage and landscape can significantly improve overall resilience.

In the Italian context, landscape planning involves integrating people, nature, and cultural heritage. However, it can be challenging to implement due to strict regulations. To make it more effective, it is essential to introduce clear and concise guidelines, such as the figurative norms of Tuscany. Alternatively, putting inhabitants at the centre of the decision-making process, as done in Friuli-Venezia Giulia, can also be helpful. Additionally, choosing joint regional plans that integrate norms and strategic guidelines can provide a broader perspective of all the critical issues of landscape, cultural heritage, risks, and society. Consequently, it is crucial to tackle also social issues that adversely affect Italy.

## CRedit authorship contribution statement

**Benedetta Giudice:** Writing – original draft, Methodology, Conceptualization, Writing – review & editing. **Angioletta Voghera:** Writing – review & editing, Supervision, Methodology.

## Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## Data availability

Data will be made available on request.

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