

The Post-Landslide Collapse in Small Italian Villages: New Utilisation Paradigms

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ABSTRACT

This work focuses on small towns and the need for post-disaster planning. While it is widely acknowledged that a shift from 'emergency planning' to 'aware spatial planning' is advisable, this simple concept often remains inapplicable, as we too often find ourselves having to intervene in an area only after a disaster has occurred. Small villages in Italy are a treasure of cultural heritage. The topic has been the subject of research by the "Borghi Group" of the Italian Ministry of Culture, in which the first author participated. It moves from emergency planning to project design, from knowledge of historical and artistic heritage to territorial security, including the important issue of landscape conservation. This paper aims to develop a methodology for interpreting territory that considers its various components, presenting a case study in southern Italy, specifically in the Municipality of Monacilioni, which in the 1960s was subject to repeated landslides that destroyed much of the historic centre. The project described here aims to improve the landscape quality of the urban centre, guided by a methodology that can be replicated in other similar contexts.

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1. Introduction

In recent decades, urban planning has been addressing the 'fragility' of cities and regions. Transcending national borders, vulnerability affects the state of heritage – both natural and built – which suffers the consequences of natural disasters linked to seismic and hydrogeological risks, with watercourses increasingly at the mercy of extreme weather events. Furthermore, in the context of historic cities – which, particularly in Europe, date back many centuries – the age of the built heritage and its often poor state of maintenance exacerbate the aforementioned natural phenomena. Italian urban planning may not yet have found effective solutions, but it is addressing the issues of deterioration and structural defects, viewing them as a strategic opportunity for the regeneration of the contemporary city, going far beyond the mere physical reconstruction of the urban fabric.

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This research is based on a combination of two sets of studies and research: on the one hand, those concerning the definition of a place's identity (which encompass key aspects of historical culture and environmental and landscape characteristics) with a view to achieving a sense of social well-being; on the other hand, those concerning the challenges faced by local areas (which encompass key aspects of the geomorphological nature of places) with a view to achieving a sense of physical well-being characterised by 'safety'.

1.1. The Main Aim

The primary aim of the research endeavour was to formulate a methodological framework that would serve as a guide for the conscious design process, incorporating the historical and cultural nuances of the locale into the design. The application of the principles of spatial and landscape planning has the potential to provide a framework for such research. For a considerable period, the working group of the L.a.co.s.t.a. Laboratory (Laboratory for Activities Related to Territorial and Environmental Development) founded at the University of Molise in 2005 has been addressing these issues. The focus of the research is on territorial analysis, landscape planning and environmental regeneration, adopting an integrated approach combining environmental, natural, agricultural-productive and historical-cultural issues.

Work is currently under way on the "Drafting of the new Molise Regional Landscape Plan" to focus on the landscape features that characterise the region – an area of focus that has not yet been developed to the same extent as in other regions. Both in the preparatory studies for the Plan (commissioned in 2011) and in the analyses carried out for the drafting of the Plan itself (commissioned in 2019), attention has consistently been paid to areas at risk from natural disasters, and the methodology adopted here was tested during the drafting of the aforementioned plan.

Furthermore, as part of the 'Allocation of the Territorial Planning Fund' (as per the Decree of the President of the Council of Ministers of 17 December 2021), the Laboratory was entrusted with the Feasibility Study for the 'Regeneration Plan for the southern historic centre: "Case spallate e non solo..." (Ruined Houses and more...) and, subsequently, the Executive Regeneration Plan "Borghi in frana" (Landslide Villages), funded under Measure "M1C3 2.1 Attractiveness of Villages" of the National Recovery and Resilience Plan. Consequently, in drawing up the Monacilioni Regeneration Plan – the results of which are presented in this article – the previously tested criteria are used; these will be briefly described in the section on methodology.

As regards the structure of the paper, the Introduction is followed by Section 2, regarding the international debate, then by Section 3, Materials and Methods (which outlines the research methodology employed and describes the Study Area). The subsequent Section 4 presents the results and discussion and reflects on the potential scope of the research, followed by Section 5, Conclusions, which summarises the key points of this article.

2. The International Debate

The global and local debate regarding cities and towns is currently very active. The establishment of the 2030 Agenda with its 17 Sustainable Development Goals has confirmed the existence of a specific urban dimension within the discussion on the future of the planet: within this, Goal 11 calls for "inclusive, safe, resilient and sustainable cities and human settlements" (United Nations, 2015, 2019; Cialdea et al., 2022).

The relationship with nature also plays an important role, and this must be increasingly fostered within urban centres. In particular, Italy is the country most exposed to the effects of climate change, with significant economic losses resulting from these effects: there is clear evidence of the substantial funds increasingly required to restore areas affected by extreme weather events (European Commission, 2018). The restoration of nature and attention to degraded ecosystems are emphasised in all European Union documents stemming from the Biodiversity Strategy for 2030 (European Commission, 2020).

The proximity of areas of natural value to major urban centres, or their closer coexistence within small villages, is, in fact, a central theme for sustainability policies. The literature on the subject highlights the need for greater precision in urban policies in order for natural areas to be able to act as a driving force for improving quality of life, even within urban settlements (Nadin & Stead, 2008; Vizzari & Sigura, 2015; Zasada et al., 2017; Cialdea, 2020; Cialdea & Privitera, 2021). Spatial planning alone is not sufficient to ensure this synergy; it must be complemented by landscape planning and the aspirations of local communities interested in their own economic development (Council of Europe, 2009; Sandströma & Hedforsb, 2018).

In particular, the international debate on small villages focuses on their regeneration as a response to the crisis in urban centres, transforming them into hubs of sustainability and slow tourism, with a strong emphasis on the enhancement of the wider heritage and the fight against depopulation. There is discussion of the role of villages as 'heritage communities' capable of generating new vitality, going beyond mere conservation. It should also be noted that the post-lockdown context has accelerated interest in more balanced lifestyles, making small villages attractive not only to tourists but also for potential repopulation through remote working.

In Italy, 'villages' are understood as small urban settlements, characterised by ancient architecture, often dating from the medieval period. They are often seen as synonymous with authenticity, capable of attracting, above all, the curiosity of tourists. The fundamental problem is that for far too many years now, they have been subject to depopulation. The debate, particularly in Italy, invariably centres on a wide range of issues, some positive (such as a strong sense of identity and a rich landscape and cultural heritage), others negative (such as neglect and marginalisation).

Small villages are rich in cultural heritage in historical and architectural terms, but they are also centres of traditional production, particularly in the food sector: 90% of Italian food products classified as Protected Designation of Origin (PDO) and Protected Geographical Indication (PGI) being produced in such sites. It seems appropriate to define, in line with other authors, how small villages, predominantly situated in the country's inland areas, serve as a 'local repository' of knowledge, referred to as a 'cultural ecosystem', which is, however, difficult to access precisely due to physical barriers and topographical challenges (De Rossi, 2019; Barbera et al., 2022; Colaprice, 2023). In order to allocate funding, The Italian Ministry of Culture (MIC) has formulated a precise definition of 'village', identifying as such those municipalities with a population not exceeding 5,000 inhabitants and which possess a significant artistic and architectural heritage. In fact, there are a great many of them: they cover more than half of the country's total land area and account for around 70% of all Italian municipalities. They are mainly located in mountainous areas (along the Apennine range and the Alps) and are suffering from depopulation, as they are home to less than one-sixth of the entire national population. For these small municipalities, the MIC has recently issued a call for proposals with total funding of one billion euros, comprising two strands of support: Line A (known as Pilot Projects) to support 21 projects (one per region and for the autonomous provinces of Trento and Bolzano) to promote the 'cultural, social and economic regeneration of villages at risk of abandonment or already abandoned'; Line B (known as Local Projects) provided for the selection of 229 projects aimed at the cultural regeneration of historic villages (MIC, 2022). The National Plan for Small Towns fits well within a path towards sustainability, drawing on Goals 8 and 11 of the 2030 Agenda for Sustainable Development and going beyond the mere promotion of tourism to also aim for residential appeal. Having compared similar situations in European countries, therefore, the case study focuses on Italy, characterised by a predominantly mountainous and hilly terrain within a context that also boasts significant landscape values. Certainly, this work has the underlying aim of applying territorial knowledge to enhance its usability, safeguarding landscape values and enabling citizen participation in its enhancement (in this sense, it is essential that local authorities promote the safety of places and increasingly guarantee the opportunity to enjoy open spaces, especially in the post-pandemic era).

3. Materials and Methods

The methodology seeks to combine the two systems of information and their relevant spatial data. The review of the international scientific literature is based on the principle that a place's history is the main driving force behind the research: every country has its own distinctive features (and therefore the relevant scientific literature will also have different characteristics), and Italy (which is most comparable to European contexts) is certainly characterised by a rich historical stratification spanning many centuries, albeit with significant regional differences.

The model will not merely consist of producing 'territorial knowledge' and 'social knowledge', but must itself serve to build a shared body of practices and know-how. This, therefore, is the most important phase: that of deepening the analytical understanding, which underpins the design process and from which all future proposals for transformation can be derived. The Recovery Plan aims to foster close relationships with the area's natural and landscape features. The project was therefore conceived in close connection with the local context, which informs the area's action plans and development. Although the area itself is currently abandoned and considered a negative feature, the project's vision aims to regenerate it as a key hub for the town, becoming a hub for information on enhancing the area's landscape and cultural network.

3.1. General Asset

The Recovery Plan's main aim is to improve the landscape quality of the urban centre. The new area will serve as a memorial to the history of the city centre before the landslide that completely altered its character. The project intends to unite the community through nature and memory, respecting nature as an integral element in limiting landslide risk. The new arrangements highlight important landmarks of the urban centre and simultaneously offer new opportunities that connect the urban centre to the rest of the municipal territory and also to the historical and landscape surroundings of the municipality itself (Getimis, 2012; Rudolf et al., 2017; Melzer et al., 2019).

The methodology employed in this study to emphasise significant elements is predicated on the selection of indicators derived from the extant literature, as specified below for each category of landscape elements. Despite the extensive body of literature addressing indicators related to natural resources, the innovative element of this methodology lies in the introduction and comparison of parameters related to planning tool forecasts. The present paper employs the methodology that has been previously tested, developed, and utilised by the L.a.co.s.t.a. Laboratory during the research period on the projects cited in the introduction (Cialdea, 2007; 2017; 2018; 2021).

The collected data relating to resource system indicators were entered into a database. This followed a previous experimental application in territorial research in other regions, including Molise (Regione Molise, 2011; 2019). The aim of this was to refine landscape value assessments, implement heritage protection, and enhance sustainable development compatible with the territory's characteristics (Repubblica Italiana, 2019). A substantial corpus of literature exists on the subject of assessing landscape character, which is defined as the arrangement of landscape elements that imbue a landscape with a distinct identity and differentiate it from adjacent landscapes (Jellema et al., 2009; Butler & Berglund, 2014; Bartletta et al., 2017; Tudor, 2014; Vogiatzakis, 2011; Griffiths, 2018). The development of this information commenced with elementary data, which was then subjected to classification according to the evaluation of the identified resource systems. The System of Environmental Values includes:

- The Water System: This includes watercourses, springs, wells, water sources and fountains.
- Wooded Areas and SAC/SPA Zones: These are areas of woodland which are subject to special protection under European law.
- Wind Potential: This includes windmills and wind parks.

The System of Restrictions is comprised of the following:

- Landscape restrictions
- Hydrogeological restrictions
- Architectural and Archaeological sites of special interest

The Planning System finally involves:

- Provincial Territorial Plan
- Regional Landscape Plan
- Extract from the Basin Plan for Hydrogeological Structure
- Seismic Microzonation Study of the Settlements in the Municipality of Monacilioni
- Urban Masterplan

These systems were categorised as follows (Figure 1):

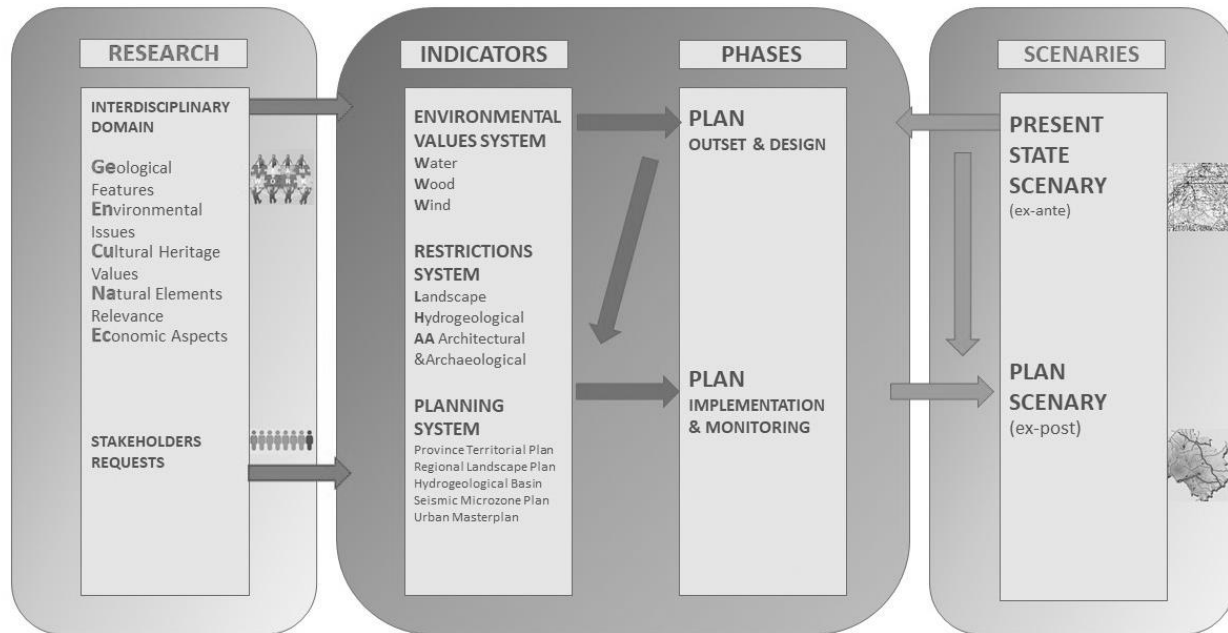


Figure 1. The Methodology's Flow-chart (Source: L.a.co.s.t.a. Laboratory, 2025)

3.2. The case-study

The Feasibility Plan for the 'South Historic Centre Recovery Plan: "Case spallate e non solo..." (Ruined Houses and more...)', has been drawn up in line with the objectives set out in Article 3 of Regulation (EU) 2021/241 (European Parliament and the Council of the European Union, 2021), which establishes the Recovery and Resilience Facility. It is intended to be an innovative instrument designed to provide effective and significant financial support to accelerate the implementation of sustainable reforms and related public investments in Member States, and to help address the consequences and negative effects of the COVID-19 crisis within the Union.

'Resilience' – defined as the ability to cope with economic, social and environmental shocks and/or persistent structural changes in a fair, sustainable and inclusive manner – aims to foster the development of robust economies underpinned by sound financial and welfare systems, in order to help Member States respond to shocks in a fair and inclusive manner and achieve a swifter recovery, not least in the interests of the Union's cohesion: "a lack of resilience can also lead to negative spillover effects resulting from shocks between Member States or within the Union as a whole, thereby posing challenges for convergence and cohesion within the Union".

The Feasibility Plan, whilst taking all objectives into account, specifically addresses the guidelines relating to the theme of "Urban Regeneration" – which aims to provide for "infrastructure works and the regeneration of buildings and public spaces for civilian use, designed to house services and activities of collective interest"; the theme of "Environment and natural resources", with the aim of "mitigating territorial risks" and "enhancing natural resources, including for development purposes"; and the theme of "Culture", aimed at implementing "measures to protect and enhance cultural heritage and the landscape, and to promote cultural activities". Such planning must aim to "give priority to the character of the local area, identify solutions compatible with general urban planning regulations, and must in any case be easily and swiftly implementable, even with minor adjustments, whilst incorporating solutions with low environmental impact focusing on the restoration and enhancement of the existing heritage".

As mentioned earlier, work then proceeded on the drafting of the Executive Urban Regeneration Plan, following a subsequent commission from the local council (Comune di Monacilioni, 2022a). Monacilioni features a historic centre situated on a rocky outcrop; between 1961 and 1963, it suffered a series of landslides leading to the disappearance of a substantial part of the settlement. Indeed, it was already the subject of Royal Decree No. 1547 of 3 November 1921 (Repubblica Italiana, 1921) which provided for the inclusion of the settlement of Monacilioni, in the province of Campobasso, amongst those to be consolidated at the expense of the State, pursuant to Law No. 445 of 9 July 1908 (Repubblica Italiana, 1908), was again the subject of Presidential Decree No. 1348 of 22 October 1970 (Repubblica Italiana, 1970) with the partial inclusion of the village of Monacilioni amongst those to be relocated at the State's expense, since, due to the landslide-prone nature of the terrain, instability has occurred affecting in particular the north-eastern part of the village, hence the need to proceed with the partial relocation of the village itself" (Figure 2).

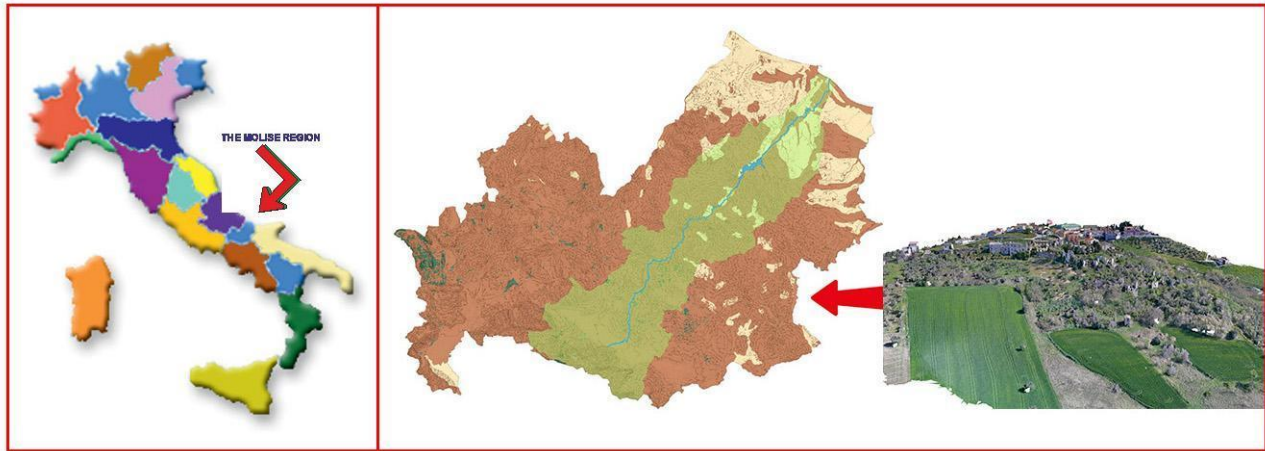


Figure 2. The localisation of the Monacilioni Municipality (Source: L.a.co.s.t.a. Laboratory, 2025)

The Plan aims to restore a sense of identity to this part of the village, which is defined in the current town planning regulations as "Zone A2: landslide-prone area due for demolition" (Comune di Monacilioni, 1979). The area identified by the Municipality for the Feasibility Study is commonly known as "le case spallate". Adjacent to the historic town centre, more than sixty years after the catastrophic event, stand the remains of the houses that were the focus of the most disastrous phenomena to have occurred in the Municipality of Monacilioni – phenomena that recurred constantly but which, in the early 1960s, brought about a change in the fate of its population. In fact, a substantial part of the housing stock and the public spaces where village life took place disappeared. The comparison of aerial photographs of the town centre presented here demonstrates what happened in those years and how the state of neglect has

persisted over time to the present day (Figure 3): it also allows one to recognise the changes in the blocks and central areas of the village.

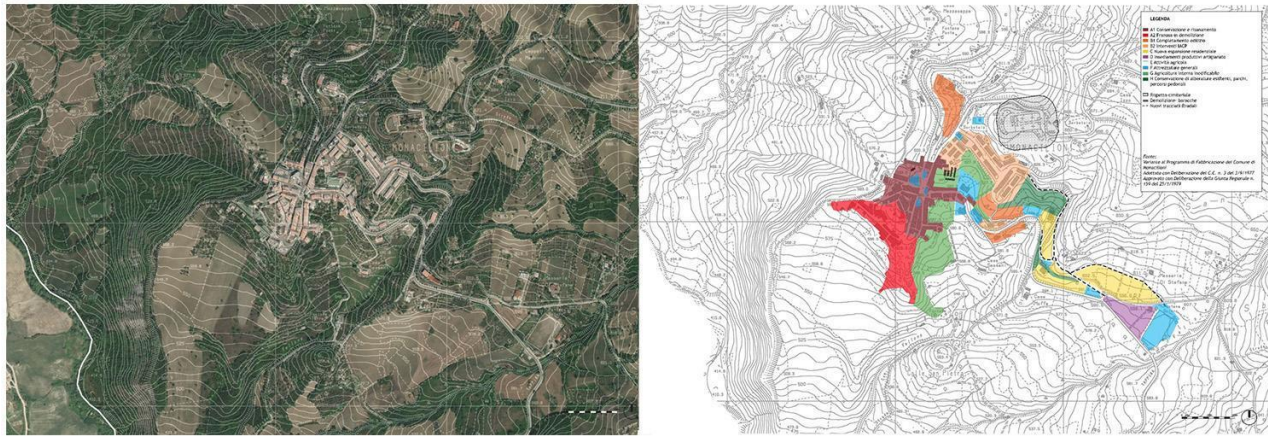


Figure 3. Monacilioni Municipality: Orthoimage and the local Planning Tool
(Source: L.a.co.s.t.a. Laboratory, 2025)

Consequently, the urban and landscape regeneration plan drawn up for this area is driven by a desire to restore the urban identity, whilst preserving the memory of the disaster. Undoubtedly, the most striking aspect was the loss of a large part of the built heritage (in some cases of considerable architectural merit). Even more significant was the loss of communal spaces, public spaces and roads. But the most serious consequence was the loss of a sense of community (with the departure of a large part of the population who chose to move elsewhere). Since the 1960s, these disastrous events have persisted over time, fuelled in part by extreme weather conditions. Consequently, the persistence of landslides has been a constant feature of life in Monacilioni and has brought with it two significant negative consequences. The first concerns the loss of the built heritage, the settlements and the church – a cultural and religious focal point for the population – with the negative consequences associated with the forced relocation to council housing (where residents are no longer homeowners but are forced to pay rent). The second consequence has been a severe demographic decline.

4. Results and Discussion: from territorial analyses to concept design

The project insists on an area characterized from a surface territory of about 8 ha and provides for the creation and arrangement of open spaces dedicated to usability. These elements defined the areas of intervention that will be the main drivers of the project: they were defined as Identity Elements, or those elements that guided the design of the area. The interventions, in fact, will fundamentally involve the desire to re-propose the memory of the fabric of the area of the disappeared town. The executive phase consisted of defining the areas more specifically involved in the project, going into detail on the different types of intervention that the project envisages. During the already described phase in which the Feasibility Plan was developed some preliminary studies have been conducted. They were:

- Data Collation: Cartographic surveys and territorial data
- Local Surveys: Site inspections and comparisons with old photographs
- Ground and Drone Surveys: Surveys conducted on the ground and utilising unmanned aerial vehicles (UAVs); The photogrammetric survey is conducted utilising a drone platform; New Ortho-image; The creation of an orthophotograph of the current situation

The following Executive Plan encompasses the creation and development of open spaces for the benefit and enjoyment of residents. As illustrated in Figure 4, the Masterplan exemplifies the project's conception

in close alignment with the local context. Despite the present state of abandonment and perceived deficiencies in the area, the project's vision entails its regeneration as the town's primary hub. This ambition is underpinned by the objective of transforming the area into a captivating locale where information regarding the region's landscape and cultural network can be both collated and disseminated. The new developments highlight and emphasise significant landmarks in the urban centre, while concurrently presenting novel opportunities that facilitate connectivity between the urban centre and the broader municipal territory, as well as the surrounding historical and landscape areas. As will be demonstrated in the project description, this area is closely connected to the rest of the urban centre, and one of the primary objectives was precisely its connection to the pre-existing fabric.

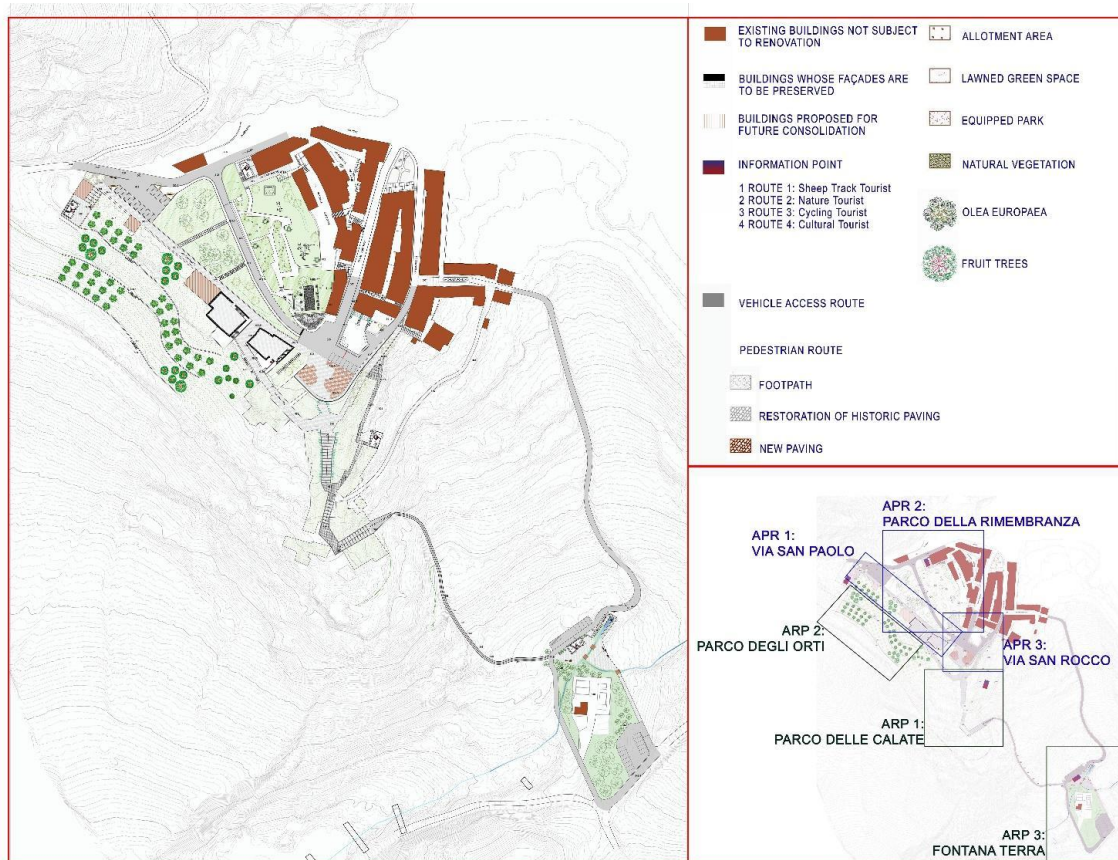


Figure 4. The Monacilioni Masterplan (Source: L.a.co.s.t.a. Laboratory, 2025)

The following two categories of intervention have been identified:

- APR zones (Aree di Parziale Recupero)

The term 'APR' is an acronym for 'Partial Recovery Areas'. These include:

- Maintaining the visibility of Via San Paolo;
- Demolition of the dilapidated and abandoned buildings in the A2 zone, from the current concrete square to the Fontana della Terra;
- Renovation of the current Parco della Rimembranza, which houses the remains of the destroyed Church and also includes small areas for a playground;

- Connection of the already funded projects for both the urban start of Calata Fontana and the renovation of the road to the Fontana della Terra, which falls within the project area.
- ARP zones (Aree di Ricomposizione Paesaggistica)
 - The term 'ARP' is an acronym for 'Landscape Reconstruction Areas'. These include:
 - Redevelopment of the terraced area located behind Via San Paolo;
 - Demolition of all dilapidated buildings in Zone A2 that compromise the safety of the site;
 - Reconstruction of the axes as memorial paths and reconstruction of the "scalette" (stairways).

In the ensuing paragraphs, two emblematic cases will be illustrated: the design of an APR and the design of an ARP.

4.1. 'Partial Recovery Areas': the main square and the disappeared church

The redevelopment of the square in front of the main church (of which only the entrance balustrade remains) consists of the "ideal" completion of the terminal block on Via San Rocco, which is also no longer existent. The edifice will also serve the purpose of a memorial to the former Town Hall.

The area has previously been examined by the Municipality, which has specifically drawn up a Disposal Plan, with the aim of acquiring the previously privately owned areas. The 2022/2024 Real Estate Disposal and Enhancement Plan (Comune di Monacilioni, 2022b) was approved, as was the 2022/2024 Real Estate Disposal and Enhancement Plan - Integration (Comune di Monacilioni, 2022c).

Moreover, the project encompasses the development and promotion of a series of routes, which symbolise the aspiration to establish a connection between the urban centre and the broader municipal territory, in addition to existing tourist routes within the surrounding municipalities. The Via San Rocco block is interrupted at its extremity by the collapsed edifices, the remembrance of which has been eradicated by the square that has been constructed to consolidate that portion of the terrain. The abrupt interruption at the conclusion of the block is evident in Figure 5a. The project's objectives also include the transformation of the square, which, at present, disrupts the urban fabric and its relationship with the landslide-prone area being treated, which were once connected. In light of this, a strategy has been devised to restore its historical configuration. This strategy involves two primary components: the regeneration of the concrete square, which will be adorned with new paving that reflects the historical blocks that are no longer extant, and the renovation of the block's extremity, where a memorial to the erstwhile Town Hall will be erected. The demolition will involve the asphalt sections in the areas where the reconstruction of the disappeared blocks is planned, and the ground-level slab on the Corso Umberto side. Excavation for the construction of the new parking lot is also planned. In the area where the old Town Hall once stood, a lightweight structure with steel pillars and a roof is planned, along with a steel access ramp for the new staircase, providing access from the lower level of Via San Rocco. The remains of the edifices that formerly occupied the southern side of the extant concrete square are to be constructed in sandstone. The erection of a panel will finally see the light of day, and this panel will reproduce the old image of the Town Hall, which has now disappeared Figure 5b.

Via San Rocco

There is a brutal interruption at the end of the block. The urban fabric is no longer legible. The current concrete square, which was rebuilt 20 years ago for consolidation purposes, completely disregards the consolidated urban fabric of Via San Rocco. Above all, the layout of the final section remains unresolved, and the solution visible in the photo is absolutely unsatisfactory in terms of the differences in level and the urban and architectural quality of the area.
Foto: Authors



Figure 5a. Via San Rocco: present condition (Source: L.a.co.s.t.a. Laboratory, 2025)



Figure 5b. Via San Rocco's comparison: a. ante-post aerial view; b. ante-post Old Town Hall memory (Source: L.a.co.s.t.a. Laboratory, 2025)

4.2. Landscape Reconstruction Areas ': the "Calate" Pathway - where the houses were

This area is of pivotal significance to the project. The objective of the project is to revive the memory of the ancient urban centre (Figure 6a) through several primary interventions, including the demolition of ruined buildings that compromise the safety of the site, the reconstruction of the memory of the "stairways," and the recovery of the memory of the lost buildings through permanent exhibitions supported by photographic and video documentation, and plexiglass display panels reconstructing the ancient views.

The most significant interventions involve the complete demolition of the remains of the civil buildings, both underground and above ground, with the subsequent clearance of debris and vegetation infestations. The pavement will then be reconstructed using recovered materials from previous demolitions, thereby restoring the appearance of the old routes. Consequently, the restoration of salvaged local stone pavement will be executed through a meticulous process of removal, preparation, and cleaning of the subgrade, followed by the replacement of the stone, including the completion of any missing sections. Along the Calata Colle path, side panels will be installed to recreate the feel of the old blocks and lead to the small square connecting Via Vattuta and Via Vista l'Oste, where a panel will be installed depicting the image of the church as it was perceived while walking up the Calata. The panels will be composed of Corten steel.

A particularly interesting solution was to propose a reimagining of the image of the disappeared church through the creation of this panel, which reproduces the facade as it was. (As has been demonstrated, at present only the balustrade with the access stairs to the church has remained.) Concealed behind the facade, however, is a diminutive elevator. In order to surmount the disparity in height occasioned by the construction of the aesthetically displeasing concrete square, which, it was acknowledged, could not be eradicated, a freight elevator was installed to convey passengers to the level of the square (Figure 6b).

Calata Colle

The Calata Colle route is a path that ascends to the highest point of the village, leading towards the primary church.

The square's closure has resulted in the formation of a belvedere, surrounded by a grove of trees. However, the current arrangement of these trees creates an image that is disconnected from its surrounding context. Continuity that once existed between the upper and lower parts of the village, which is currently undergoing restoration to preserve its historical significance, is no longer perceptible.

Foto: Archive Pannitto

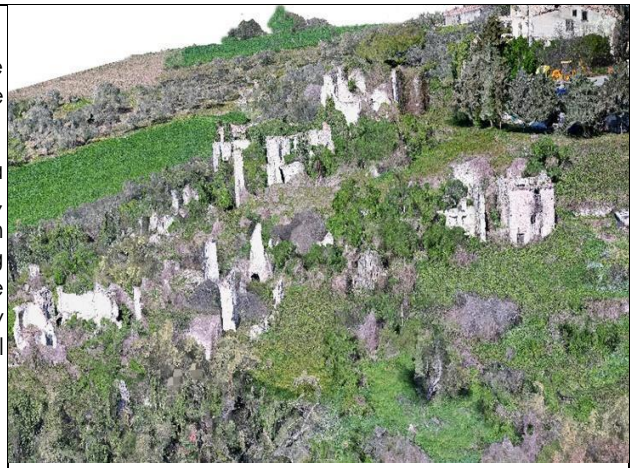


Figure 6a. Calata Colle: present condition (Source: L.a.co.s.t.a. Laboratory, 2025)



Figure 6b. Calata Colle's comparison: a. ante-post view; b. panel of the Old Church memory
(Source: L.a.co.s.t.a. Laboratory, 2025)

These two examples, selected from among the various projects to be carried out, can be regarded as emblematic of the aims of our Executive Plan, the purpose of which is to translate strategic decisions into concrete interventions, whilst protecting and enhancing the local area in accordance with landscape regulations.

5. Conclusions and Remarks

In conclusion, the research underpinning the project focused on the evolving data from territorial analysis, the guidelines of the emerging landscape planning framework, and the principles of environmental regeneration, adopting an integrated approach that combines environmental, natural, agricultural and historical-cultural aspects. These themes were explored through a comparative analysis of the territory, in particular through a diachronic comparison drawing on recent research based on geographic information systems (GIS) concerning changes in territorial and landscape characteristics.

The ongoing refinement of the methodology through its application in various locations is certainly not yet complete, but it is based on the experience gained from these case studies, which we are currently testing in the Molise region. This is a deliberate design process, aimed at integrating the historical and cultural nuances of the area into the project. This also highlights the contribution of these experiences to the drafting of the Regional Landscape Plan, which is currently lacking in the region and on which we are working. It has become clear that urban planning must take into account the effective control of land-

use development and the historical local memory. In Italy, "there is a major problem of discrepancy between older-generation urban plans – which are still so widespread – and actual changes. A similar observation can be made regarding emergency planning in the context of natural disasters: whilst implementation mechanisms are accelerated, there is subsequently a failure to integrate these changes into the structure responsible for governing the wider territory beyond the urban area. In short, the mechanism for monitoring transformations is difficult and unclear; whilst it is effective in many other countries, in Italy it is carried out inconsistently and with significant differences from one region to another' (Cialdea, 2023). Despite the extensive literature on indicators relating to natural and landscape resources, this methodology is innovative in that it introduces and compares parameters that can be incorporated into planning tools. This is a particularly significant aspect in the region under consideration, given that the municipalities' urban planning tools are outdated, as was clearly demonstrated in the case study.

In any case, the aim of this project was to improve the following aspects during both the preliminary and implementation phases:

- Quality of public space

Improving the usability of the entire integrated system of communal public spaces is a fundamental requirement of the project. The overall aim of the project is to encourage a sense of shared ownership of these spaces and to increase their use, as a prerequisite for the development of social activities.

- Quality of the landscape

The reconnections achieved by the design scheme (both in terms of the restoration of existing buildings and landscape interventions) help to enhance the appeal of the urban landscape.

- Environmental quality

A key environmental requirement is undoubtedly to make the area affected by the landslide – which is currently off-limits – safe, by demolishing the collapsed houses and creating a footpath.

- Social quality

The active involvement of citizens began with the public consultation at the launch of the Regeneration Programme and continued with a survey on citizens' preferences regarding issues of public interest, conducted via a multiple-choice questionnaire.

This experimental Recovery Plan is, however, based on the methodology used to draw up the landscape plan for the Molise Region, an area characterised by a large number of small towns with significant territorial vulnerabilities. It is hoped that the design phase – which was successfully presented to local residents, who also took part by completing a questionnaire we provided to understand their wishes – will be followed as soon as possible by the implementation of the planned measures.

Funding

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Conflict of Interests

The author declares no conflict of interest.

Contribution to the Field statement

The issue of small towns that have always been prone to landslides is a subject that has been addressed by many researchers. This study aims to combine historical factors with physical factors (and thus the susceptibility to instability as a permanent feature). For this reason, the study is based on an extensive analysis of territorial factors, collected and analysed within a Geographical Information System specifically designed for the case under examination. The innovation lies in proposing a new layout for the destroyed substantial part of the village, taking into account the 'potential' of the territory, where physical resources can be channelled towards new uses.

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