BUILT FORM

Designing with Geomorphology: Adaptive Territorial Strategies for Regenerative Public Space in Southern Italy

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Abstract

The Albano Urbano Greenway, developed in Albano di Lucania (Basilicata, Italy), exemplifies a methodological approach to territorial regeneration in post-demographic contexts. Grounded in the concept of Reclaiming Without Antagonism, the project interprets emptiness not as loss but as a field of possibility, where memory, landscape, and metabolism intertwine. The methodology follows a three-phase structure- territorial reading, geomorphological translation, and regenerative implementation- tinking diagnostic tools, theoretical frameworks, and low-impact constructive solutions. Through the integration of biophilic design, biomimicry, and Nature-based Solutions (NbS), the project establishes adaptive infrastructures that restore ecological continuity and symbolic belonging. Key strategies include the activation of interrupted metabolic flows, the reinterpretation of curated voids, and post-populational participation models suited to low-density territories. While still under execution, expected impacts are framed through bio-physical, socio-ecological, and symbolic indicators, offering a replicable framework for fragile contexts. The Albano Urbano Greenway thus contributes to advancing design methodologies for sustainable, culturally grounded, and adaptive regeneration.

The site as a catalyst for regeneration

The inland territories of the Basilicata region, in southern Italy, constitute an emblematic case of systemic fragility in the Mediterranean European context. This condition is the result of interrelated processes of depopulation, demographic aging, agricultural abandonment, ecosystem degradation, and prolonged institutional marginality (D'Oronzio et al., 2018). Over the past century, and more markedly since the final decades of the twentieth century, many rural communities in Lucania have experienced a structural decline of their social, economic, and ecological fabric, as a consequence of internal and external migratory dynamics, as well as the mismatch between sectoral public policies and the specificities of the local territory (D'Oronzio et al., 2018). From an environmental perspective, various studies have documented phenomena

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of soil degradation, such as erosion, landslides, loss of organic matter, and reduction of biodiversity, particularly associated with the abandonment of traditional agroforestry practices (Santarsiero, 2023). These processes have been intensified by rising average temperatures, the frequency of extreme events, and water stress in submontane forest ecosystems (Costantini & Lorenzetti, 2013). At the same time, the unplanned implantation of energy infrastructures in ecologically sensitive areas has generated impacts on landscape quality and ecosystem services (Leo & Altamore, 2025).

To this condition of environmental vulnerability is added the progressive loss of human and cultural capital. Numerous municipalities, especially those distant from the metropolitan corridors of Potenza and Matera, record negative population growth rates, high dependency rates, and increasingly scarce basic services (CNRISMed, 2024). In response to this scenario, diverse revitalization strategies have emerged from regional governance, civil society, and the academic sphere. Pilot projects such as the ecological cultivation of saffron in marginal areas, the valorization of historic cultural routes, the reactivation of identity festivals such as the Maggio di Accettura, and the promotion of slow tourism linked to landscape and local culture represent examples of a regenerative approach that integrates economic development, environmental sustainability, and symbolic resilience. In contexts such as Albano di Lucania, what is claimed is not so much the restitution of usurped rights as the reactivation of a territory whose social and metabolic life has been interrupted (CNRISMed, 2024).

This article departs from the recognition of this void, not as a definitive loss, but as a field of projective and methodological possibility, to explore the potential of the concept Reclaiming Without Antagonism as a framework for action in post-demographic contexts. In contrast to the logic of antagonism, typical of urban contexts where re-appropriation often implies resistance to privatization or gentrification processes, here the design intervention is proposed as an act of care, listening, and symbolic activation of the territory (Edensor, 2018; García Grinda & Instituto Leonés de Cultura, 2006). Re-appropriation, in this case, does not seek to restore vanished ways of life but to configure new spatial ontologies from absence, integrating memory, landscape, and affectivity.

The Albano Urbano Greenway project, developed in 2025 in the Comune di Albano di Lucania, is proposed as a laboratory for this vision. It is an environmental requalification intervention in an urban soil context that articulates green infrastructure, biophilic design, and Nature-based Solutions (NbS) as means to restore metabolic and relational continuity in an interrupted territory. The design is conceived not as a formal imposition, but as a biomimetic territorial choreography, in which the system of paths, platforms, and terraces follows the geomorphological logic of the place and activates latent traces of the past. Within this framework, the research is organized around a guiding question: How can territorial design regenerate marginal landscapes through a geomorphological logic, integrating memory, landscape, and Nature-based Solutions? From a methodological standpoint, the article proposes an integrated reflection between professional practice and critical territorial thought. The conceptual framework of Reclaiming Without Antagonism is articulated here with the notion of territorial metabolism (Van Den Berghe, 2018; Wolman, 1965) and with categories such as the curatorship of the void (Didi-Huberman, 1997), desynchronized culture (Haesbaert, 2020), and post-populational participation. These concepts allow urban voids to be interpreted not as dysfunctional spaces, but as potential scenarios of slow reactivation, where nature, community, and memory intertwine to generate new forms of belonging.

The purpose of this article is to present the Albano Urbano Greenway project as a professional practice case that explores the non-antagonistic re-appropriation of urban space in post-demographic territories, through a methodological approach integrating territorial reading, adaptive design, and Nature-based Solutions. From my dual role as designer and researcher, the intervention is conceived not only as a technical solution but as a critical and situated exploration of new methodologies for the regeneration of marginal landscapes. The article is organized into

three main sections: (i) territorial reading as a project foundation, (ii) the design process as geomorphological translation, and (iii) technical implementation as an environmental and symbolic regeneration strategy.

Theoretical framework / background

From this point onward, the article develops its theoretical framework following a sequence that connects different layers of territorial reading. First, territorial metabolism is addressed as a critical tool to interpret the systemic interruptions that characterize post-demographic contexts. Second, the ontologies of void and absence are introduced as cultural and symbolic categories that allow for the re-signification of marginality and fragmentation. Finally, the need to rethink forms of participation and territorial agency from a projective perspective is proposed, recognizing that regeneration in depopulated territories requires sensitive, adaptive, and situated methodologies. This structure gives coherence to the conceptual framework, articulating a trajectory that moves from systemic diagnosis (A), to the cultural and symbolic dimension (B), and finally to projective and methodological agency (C).

Territorial metabolism as a critical tool

The concept of urban metabolism was introduced by Wolman (1965) to describe cities as systems that consume resources and produce waste, in a cycle analogous to biological metabolism. Subsequently, Van Den Berghe (2018) expanded this notion by situating the production of space within a historical and social logic, where material flows intertwine with cultural, economic, and political practices. These foundations have been taken up by urban ecology and ecological economics to propose multi-scalar analytical methodologies, such as the MuSIASEM approach (Giampietro, 2023), which integrates biophysical and socioeconomic dimensions in complex territories. In recent literature, urban and territorial metabolism has consolidated as a tool to diagnose the sustainability of socio-ecological systems (Kennedy et al., 2011, 2015).

In recent studies on insular and sensitive territories such as the Galápagos Islands, culture has emerged as a significant variable shaping the metabolic performance of human settlements, not merely as a contextual backdrop but as an active component influencing construction systems, economic logics, and resource flows (Perlaza Rodríguez et al., 2024). By analyzing how cultural patterns affect material cycles and urban dynamics, it becomes possible to trace structural tensions between tradition and transformation. Transposing this lens to post-demographic contexts like Basilicata, territorial metabolism can be reinterpreted as a critical diagnostic tool, not only to measure flows of water, energy, and materials, but also to detect interruptions in socio-cultural circuits. Here, the concept of interrupted metabolism allows us to frame demographic decline, infrastructural obsolescence, and symbolic fragmentation not merely as symptoms of crisis, but as generative conditions for projective thinking. Rather than restoring a lost past, the project proposes to work with the fragments, to rearticulate dormant flows and reweave disrupted relations between land, memory, and collective life.

Ontologies of the void and absence

The second theoretical strand focuses on understanding emptiness, ruin, and the unfinished as spaces of possibility. From an aesthetic and philosophical perspective, Didi-Huberman (1997) proposes the notion of the curatorship of the void, understood as the work of revealing suspended memories in seemingly uninhabited spaces. This idea resonates with Haesbaert's (2011) proposal on desynchronized culture, which describes how territorial marginality manifests in discontinuous times, where cultural and socioeconomic practices lose synchrony with metropolitan and global rhythms. In the field of urbanism, introduced the category of terrain vague to refer to vacant, obsolete, or marginal spaces that hold creative potential precisely because of their indeterminate

condition García Grinda and Instituto Leonés de Cultura (2006) expanded this reading by studying industrial ruins and unfinished landscapes as scenarios where new cultural and affective practices emerge.

Recent research further demonstrates that subjective perceptions of neighborhoods can outweigh objective physical conditions in shaping urban wellbeing. Heylen et al. (2025) shows that cohesion, aesthetics, and symbolic attachment have stronger associations with loneliness than measurable factors such as green space or walkability. This finding reinforces the importance of latent cultural and affective dimensions in territorial regeneration, supporting the categories of curated voids (Didi-Huberman, 1997) and interrupted metabolism as methodological tools for design.

On this basis, the concept of Reclaiming Without Antagonism, adopted as a projective approach, proposes a re-appropriation of territory not in terms of confrontation, as often occurs in contexts of resistance to privatization or gentrification, but as an act of care, listening, and re-signification. Emptiness, far from being an absolute absence, thus becomes a methodological and projective field, where memory, landscape, and affectivity intertwine to generate new possibilities of belonging.

New forms of participation and territorial agency

A third theoretical axis concerns the redefinition of participation in contexts where human capital has been drastically reduced. Jim (2015) has proposed the notion of post-populational participation, which challenges classical models of community co-design and opens reflection on how to activate territories with low demographic density. This perspective is crucial for the inland municipalities of Basilicata, where interventions must be conceived beyond the idea of a dense and organized community. Within this framework, projective practice assumes a role of sensitive mediation, in which the designer engages in acts of care and symbolic activation through reversible, adaptive, and biophilic designs. These strategies resonate with the growing approach of Nature-based Solutions (NbS), defined by Dunlop et al. (2024) and further developed by Nesshöver et al. (2017), which not only address environmental objectives (climate adaptation, enhancement of ecosystem services) but also cultural and social dimensions. Recent studies have emphasized the importance of integrating co-creation and territorial justice into the implementation of NbS (Oetken, 2025; Hien et al., 2005), which directly connects with the vision of sensitive and situated interventions in post-demographic contexts. In this way, projective agency is understood as an exercise that transcends the production of physical infrastructure: it entails constructing methodologies of listening, activating suspended memories, and establishing new metabolic relationships between nature, community, and territory.

These three categories, the territorial metabolism as a diagnostic and generative tool, the ontologies of the void as methodological spaces of possibility, and post-populational participation as an exercise of symbolic agency, configure the operative theoretical framework of the Albano Urbano Greenway project. From this basis, design is conceived as a critical practice that not only responds to biophysical and social flows but also reinterprets and reactivates them. What follows is an overview of the main theoretical and empirical contributions that have helped consolidate these approaches within the fields of urbanism, territorial ecology, and regenerative design.

State of the art: regeneration practices in marginal territories

In Mediterranean Europe, various experiences have sought to reverse depopulation and territorial fragmentation through strategies that combine culture, heritage, and sustainability. The case of Urueña, Spain, transformed into the first Villa del Libro with barely 182 inhabitants, demonstrates how cultural innovation can slow depopulation and revitalize local economies through museums, festivals, and identity-based tourism (Azuara-Grande, 2015). Similarly, Italy's National Strategy

for Inner Areas (SNAI) has promoted projects in peripheral municipalities through investment in basic services, enhancement of local resources, and slow tourism, although critical studies point to the need for better integration of symbolic and ecological dimensions in its implementation (Khodaparast, 2025). These precedents highlight that rural regeneration requires integral models that articulate cultural heritage, territorial cohesion, and environmental sustainability.

In parallel, projects based on Nature-based Solutions (NbS) and biophilic design have gained prominence in the regeneration of rural and urban environments. A notable case is the river renaturalization in Albufeira, Portugal, where a canalized watercourse was transformed into a blue-green corridor combining sustainable drainage, native vegetation, and symbolic elements, achieving benefits in health, social cohesion, and climate adaptation (Blau & Panagopoulos, 2018). Complementarily, biomimicry has provided a methodological framework to inspire resilient designs from natural processes and ecosystems (Leila & Naima, 2016; Baczyńska & Lorenc, 2012; Canzonieri, 2007). These strategies validate the relevance of the approach adopted in Albano, where green infrastructure and traditional low-impact techniques are combined with bio-inspired solutions to restore ecological continuity and territorial memory.

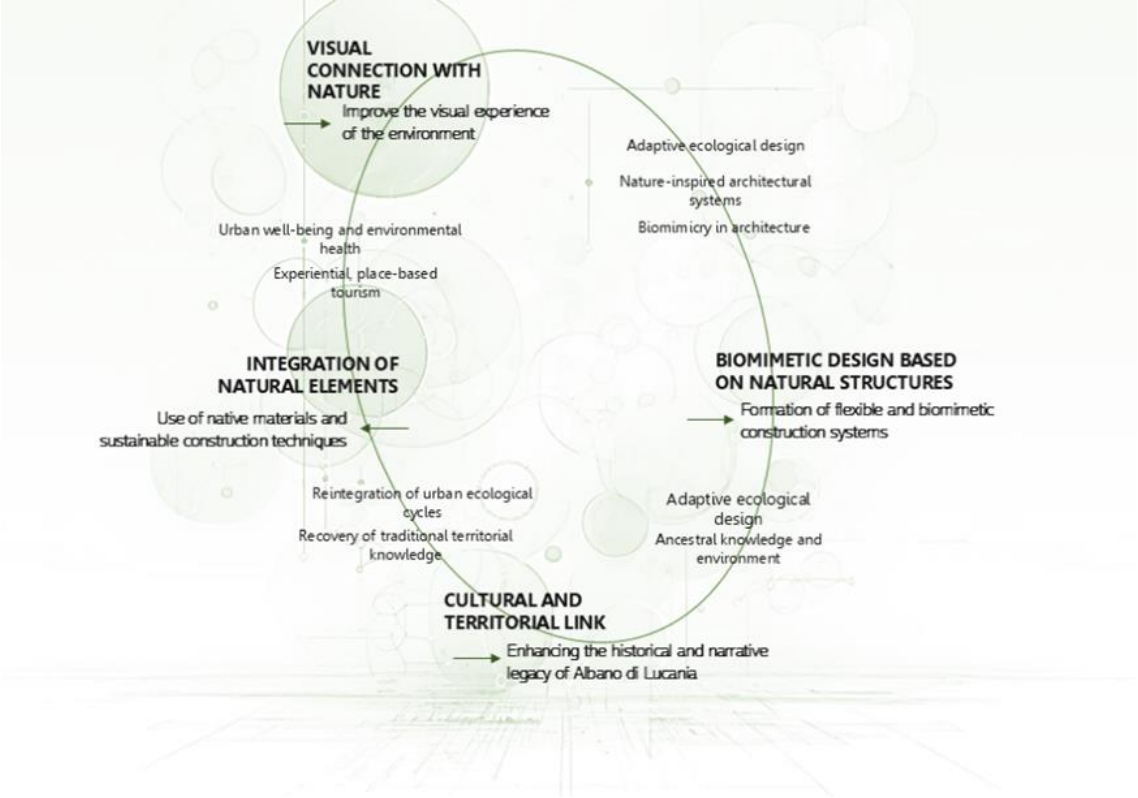


Figure 1. Dimensiones conceptuales y operativas del proyecto Albano Urbano Greenway (Author´s own elaboration)

Finally, international experiences reinforce the idea of slow reactivation as a long-term process. The Eden Project in Cornwall (United Kingdom) transformed a quarry into an environmental and educational center, generating more than £150 million annually in regional benefits, showing how anchor projects can reconfigure local economies and revalorize identities (Baczyńska & Lorenc, 2012). In Latin America, initiatives such as the Neltume eco-park in Chile have combined ecological conservation, community tourism, and the recovery of Mapuche culture, evidencing the importance of integrating symbolic and ecological dimensions in territorial regeneration. Within this panorama, the Albano Urbano Greenway project positions itself as a methodological laboratory that combines lessons from these references -identity-based

cultural tourism, NbS, biomimicry, and curatorial participation- to generate a replicable model of regeneration in post-demographic territories.

The articulation between territorial metabolism, ontologies of the void, and new forms of participation translates into an operative framework that guides project practice. This framework is organized around four interdependent dimensions: visual connection with nature, which enhances environmental experience and supports wellbeing; the integration of natural elements, through the use of native materials, sustainable techniques, and the reintegration of ecological cycles; biomimetic design based on natural structures, which inspires flexible and adaptive constructive systems; and the cultural and territorial link, which reinforces the historical and narrative legacy of Albano di Lucania.

As summarized in Figure 1, these dimensions act in a complementary way and constitute the methodological basis upon which the intervention phases presented in the following section are developed.

Methods / approach

The methodological approach of the Albano Urbano Greenway is structured around the logic of research by design, where design is not conceived as a finished formal result but as an iterative process of exploration, diagnosis, and proposition (Lenzholzer & Duchhart, 2016). The methodology articulates territorial analysis, theoretical references, and adaptive design decisions, with the aim of transforming conditions of fragility into opportunities for regeneration. This process is organized into three interdependent phases: territorial reading, geomorphological translation into design, and technical implementation as a regeneration strategy.

Territorial reading as a project foundation

The first phase of the project consisted of a comprehensive reading of the territory, understood as a simultaneous exercise of diagnosis and listening. Through historical cartographies, geomorphological analyses, topographic surveys, and transect walks, dynamics of erosion, agricultural abandonment, and ecological fragmentation affecting the urban area of Albano di Lucania were identified. This reading included both biophysical dimensions and cultural traces and suspended memories, interpreted through the lens of the curatorship of the void (Didi-Huberman, 1997). From the perspective of territorial metabolism, interruptions in material and symbolic flows, water, soil, agroforestry practices, festivals, were recognized, configuring emptiness not as a deficiency but as a structural and generative condition. On this basis, the design was conceived not as a sum of isolated elements, but as a living infrastructure: a continuous and adaptive system that rearticulates connections between people, landscape, and memory. Guided by the terrain's morphology and the narrative logic of place, the project defines paths, terraces, and resting areas that follow contour lines, water flows, and topographic transitions. Rather than imposing exogenous forms, the intervention recovers latent spatial identities through non-invasive, subtle, and low-impact gestures. Each component, panoramic platforms, play areas, permaculture terraces, forms part of a broader ecological and experiential sequence that interprets the site and projects it toward new inhabitable possibilities.

This initial phase relied on advanced tools of territorial analysis, such as drone surveys and the generation of high-resolution point clouds, which allowed for precise modeling of Albano di Lucania's complex topography (Corner, 2011). These images, shown in Figure 2, reveal the drainage lines, slopes, and soil transitions that guided the layout of paths, terraces, and platforms. The use of geospatial data not only ensured the technical adequacy of the intervention but also reinforced its coherence with the geomorphological logic of the site.

Design process as geomorphological translation

The second phase of the design process consisted of the direct translation of the physical and environmental conditions of Albano di Lucania into landscape and ecological design strategies (Kellert & Calabrese, 2001). The intervention area is characterized by highly erodible clay soils, medium slopes ranging between 8% and 18%, and mixed vegetation zones with high tree density, particularly in the areas adjacent to the Bosco Cupolicchio. The presence of disused rural paths, irregularly compacted soils, and uncontrolled surface runoff created conditions of geomorphological fragility and functional fragmentation. Designing a network of paths, terraces, and platforms in this context required following the logic of contour lines, avoiding terrain cuts, and favoring a progressive and reversible implementation, as in the case of the AIA del Tempo. Stabilized-earth surfaces and modular permeable pavements were adopted to facilitate water infiltration and reduce runoff in the areas of paths and planters surrounding recreational spaces. The muri a secco, which form part of the site's architectural landscape, not only stabilized slopes for pathways but also enabled the creation of agricultural and ecological micro-terraces that reactivate productive functions and support vegetative retention.

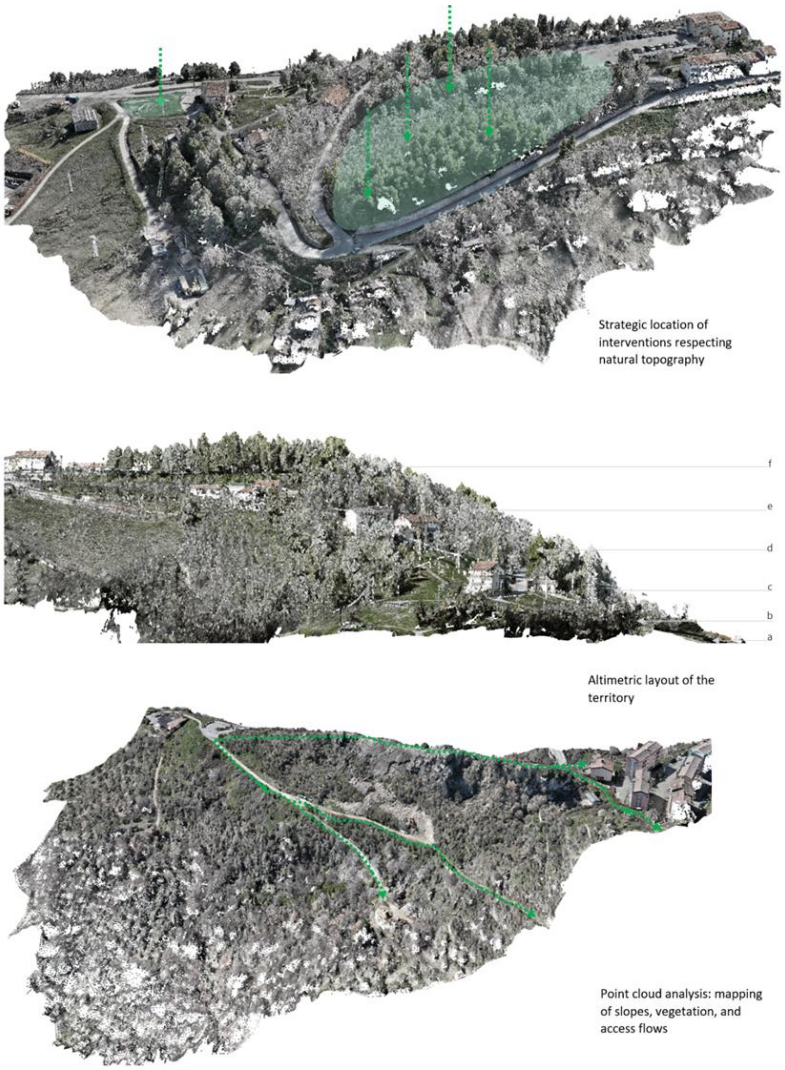
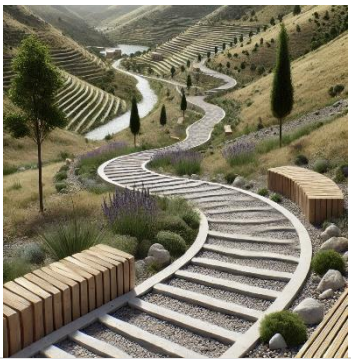


Figure 2. Territorial reading through high-resolution point clouds (Author´s own elaboration)

Table 1. Operational dimensions of the Albano Urbano Greenway (Author´s own elaboration)

Operational Dimension	Applications	Examples	Render
Visual Connection with Nature	Urban Observatory, Belvedere *'Il Volo del Nibbio'*	• Telescope in *Piazza Salvo D'Acquisto*, not only for astronomical observation but also for reading the surrounding topography. • Panoramic bench in stone/wood to maximize valley views. • Strategic planting of native vegetation to frame resting areas, providing shade and aromas without blocking vistas.	
Integration of Natural Elements	Ecological pavements, *Recinzione Ecologica*, *Aia del Tempo*	• Permeable pavements with natural stone, compacted gravel, or recycled wood. • Green fences made of hedgerows of native shrubs and trees instead of artificial barriers. • Expansion of agricultural memory in the *Aia del Tempo* with olives, almonds, and medicinal plants tied to local traditions.	
Design Inspired by Natural Forms and Patterns	*Landscape Integration Stairs*	• Stairs designed with organic, non-linear forms imitating natural paths. • Fractal patterns embedded in pavements and urban furniture. • Tree canopies creating dynamic light and shadow effects, evoking forest atmospheres.	
Cultural and Territorial Link	Narrative signage, wooden sculptures, *Aia del Tempo*	• Wooden panels with inscriptions narrating local agricultural history. • Sculptures in wood honoring traditional rural crafts. • Interactive circuit with QR codes and sound narratives about ancestral resource management practices.	

The use of local materials and techniques, such as limestone collected on site and chestnut wood from surrounding forests, not only ensured aesthetic and cultural coherence but also reduced the logistical and environmental impact of the construction process. Instead of imposing external forms, the design reinterpreted the topography, incorporating light and adaptive structures that engage in dialogue with the landscape and allow for its future evolution (McLaughlin, 1991).

The application of Nature-based Solutions (NbS) was translated into concrete operations: stabilized natural soils and permeable paving in areas of water accumulation, planting of native species to reinforce biodiversity, integration of natural shading through the preservation of existing tree cover, and the creation of unadorned contemplative spaces such as the Belvedere Volo del Nibbio. These actions made it possible to recompose ecological continuity and enable new forms of habitability that combine wellbeing, community use, and environmental care.

Finally, a series of conceptual renderings developed through artificial intelligence tools served as instruments of anticipatory verification, visualizing how the projected elements -paths, belvedere, terraces, educational platforms- responded not only to the conceptual framework but also to the site's specific conditions. The conceptual visualizations and operational guidelines guided the design in order to achieve compatibility with the territory's geomorphology and to overcome the technical challenges that arose.

Technical implementation as a regeneration strategy

The third phase corresponded to the definition of constructive and ecological solutions aimed at restoring the metabolic and relational continuity of the territory. The design was developed through a multi-scalar approach, integrating principles of biophilia, Nature-based Solutions (NbS), and low-impact strategies. The proposed solutions include permeable surfaces, infiltration terraces, vegetated muri a secco, and micro-green infrastructures, all conceived to promote water infiltration, reduce erosion, and stabilize slopes. Although the project is currently under execution, the proposed devices can be considered consistent with the adopted conceptual framework. The selection of local materials (stone, chestnut wood, stabilized soils) and reversible construction techniques reinforces the morphological, ecological, and cultural continuity of the territory. The design does not impose itself on the topography but interprets it, aligning with the principles of biomimicry (Leila & Naima, 2016; Naghibi et al., 2021) and with the Reclaiming Without Antagonism approach, which frames intervention as a sensitive, adaptive, and care-oriented practice.

This dual orientation, technical resilience and symbolic regeneration were articulated through specific design elements summarized in Table 2.

The methodological logic adopted in the Albano Urbano Greenway was not conceived as a linear process, but as a system of interdependent layers that interact dynamically. As synthesized in Figure 3, the project pathway unfolds from the initial territorial reading to the realization of a living infrastructure, integrating geomorphological, cultural, and ecological dimensions at each stage (Waldheim, 2006). This visualization reinforces the understanding of the method as an iterative cycle, where each phase feeds back into the others.

Figure 3 presents a conceptual sketch that illustrates the methodological framework guiding the design process in Albano di Lucania. It visualizes a four-tiered translation from territorial analysis to architectural expression. The process begins with territorial reading, which involves interpreting hydrological, topographic, and geomorphological features that shape the site. It then moves to symbolic interpretation, focused on revealing cultural and historical layers tied to local memory and landscape identity. The third level, ecosystem composition, integrates native vegetation, ecological linkages, and soil-water dynamics. Finally, the design culminates in living infrastructure, a spatial configuration of low-impact interventions that synthesize ecological, spatial, and symbolic dimensions. Rather than imposing form, the design emerges through a

progressive and sensitive reading of the territory, grounded in biomimetic and regenerative design principles (Spirn, 2022).

Table 2. Technical implementation of Albano Urbano Greenway (Author´s own elaboration)

Design Element	Function	Materials	Construction Technique
Ecological pavement	Ecological connection surface	Modular permeable paving, grass 57%	Installed over a draining sub-base, compacted and leveled
Stabilized natural surface	Integrated pedestrian path	Stabilized soil, sand, natural binders	Layered application, compaction, surface finishing
Dry-stone wall	Soil stabilization	Local stone, soil	Manual assembly, dry interlocking, natural drainage
Landscape integration stairs	Connection between levels	Natural stone, chestnut wood	Stone step assembly, natural anchoring
Panoramic bench (Panchina gigante)	Rest and contemplation	Solid wood, galvanized steel supports	On-site assembly, fixed to a natural base
Sports fields	Recreational and sports area	Synthetic grass, rubber, steel	Prefabricated installation over prepared foundations
Ecological terraces (Aia del Tempo)	Agricultural and environmental regeneration	Local stone, raw earth, native vegetation	Manual construction, terracing on slopes, planting
Pet area	Space for domestic animals	Light mesh fencing, natural ground	Minimal installation anchored on soil
Signage	Informative and orientation element	Galvanized metal, wood, UV-resistant graphics	Installed on posts or frames, weather-resistant

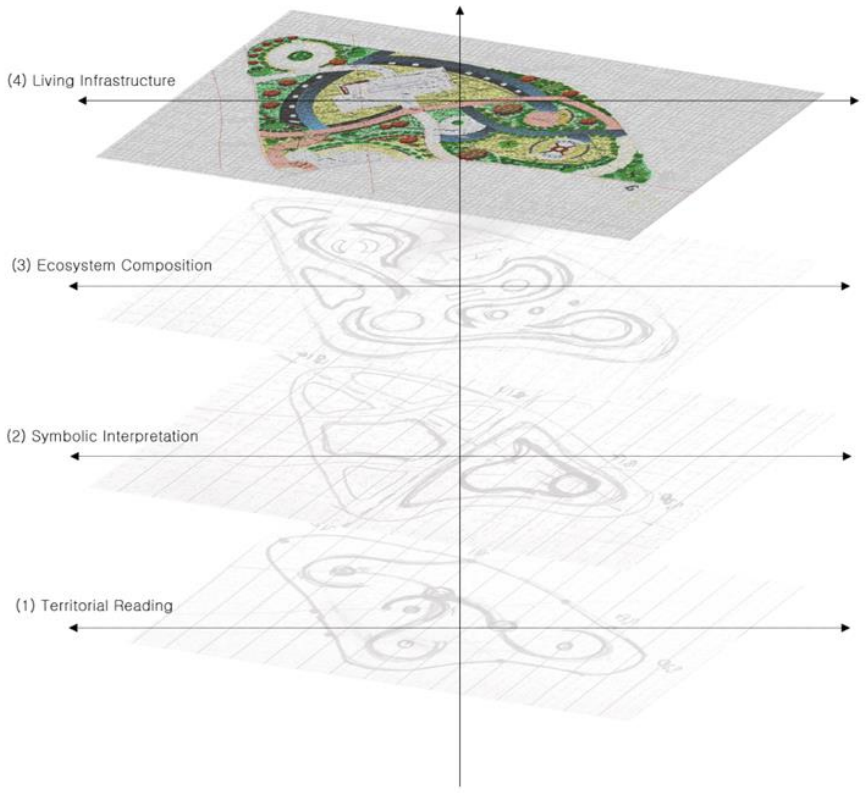


Figure 3. Conceptual layering of design logic based on geomorphological interpretation (Author´s own elaboration)

Practice: territorial devices and constructive strategies

Albano Urbano Greenway is a territorial and urban regeneration project located in the Comune di Albano di Lucania (Basilicata, Italy), a mountain village at 899 m a.s.l. nestled in the Dolomiti Lucane, within the Zona Speciale di Conservazione (ZSC) Bosco Cupolicchio of the Natura 2000 network. The area is characterized by geomorphological fragility (landslides, calanchi, erosion), progressive depopulation, and ecological fragmentation, yet it holds remarkable landscape and cultural value. The project emerges as a response to these critical conditions, aiming to reconnect community and territory through a multifunctional, adaptive, and symbolic green infrastructure. Developed in 2025 with funding from the Regione Basilicata (€499,410) and commissioned by the Municipality, the design was led under the concept of living infrastructure, not a set of isolated interventions, but a continuous system activating geomorphological, ecological, and cultural traces.

The project integrates advanced territorial technologies (drones, point clouds) with community-based participatory processes (transect walks, memory mapping), bridging local knowledge with technical criteria to ensure landscape coherence.

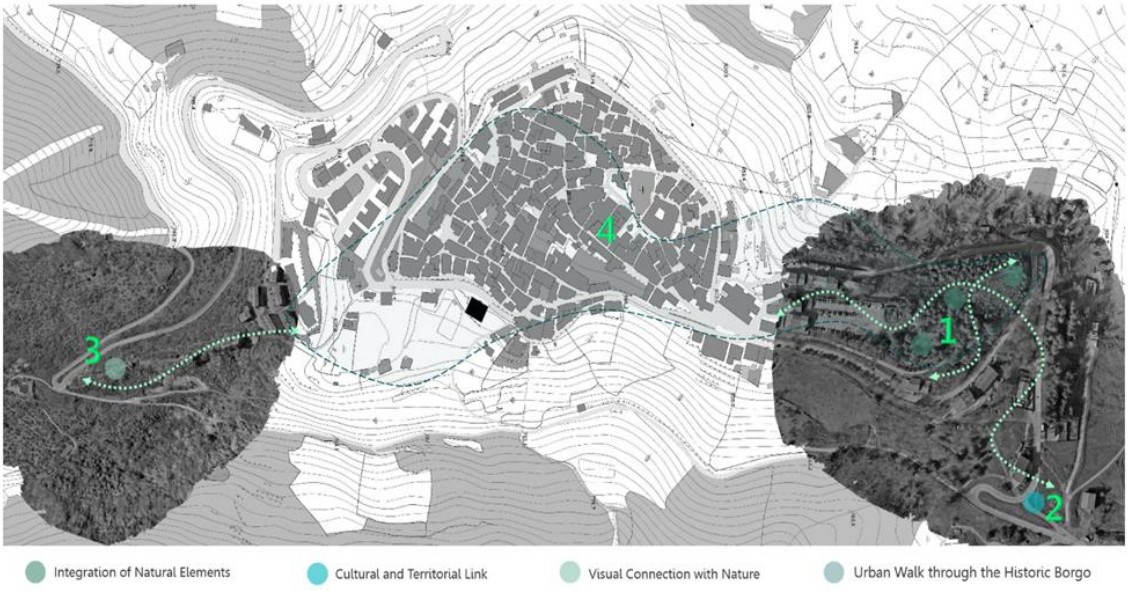


Figure 4. Site plan with location of intervention zones (Author´s own elaboration)

This figure illustrates the spatial distribution of the main intervention areas within the urban and peri-urban context of Albano di Lucania. The numbers indicate:

- 1 –Recreational node: including the Paddle Tennis Court, Children's Playground, Pet Area, and Eco-Fitness Trail. Subzones a, b, and c correspond to specific micro-infrastructures placed to enhance ecological connectivity and low-impact habitability.
- 2 – AIA del Tempo: a linear path that reconnects symbolic and ecological layers through an immersive, interpretive itinerary.
- 3 – Il Volo del Nibbio Viewpoint: located at the western edge, this elevated overlook offers panoramic views and anchors the ecological trail that loops through the hillside.

The combination of topographic data, aerial imagery, and programmatic notation provides a synthetic yet detailed reading of the intervention's geomorphological and cultural integration.

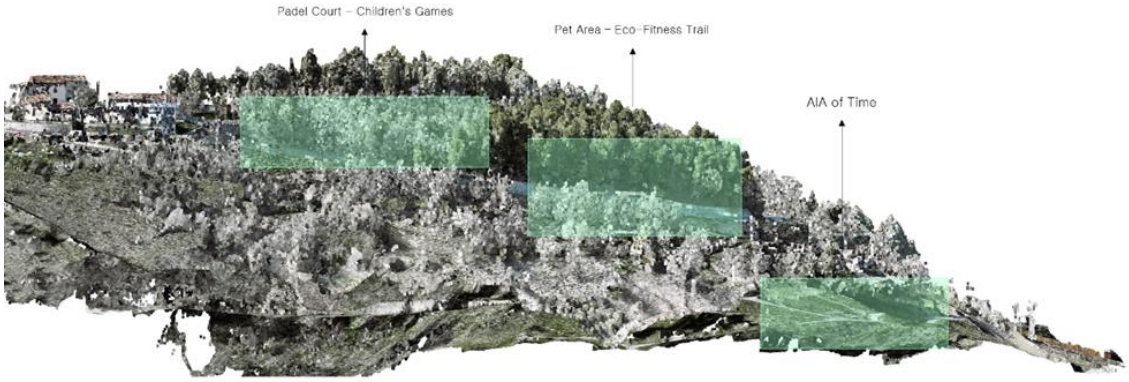


Figure 5. Topographic section showing the location of low-impact landscape interventions (Author´s own elaboration)

This geomorphological model, derived from a high-resolution point cloud, shows the distribution of proposed nature-based micro-infrastructures across the eastern slope of Albano di Lucania. The white rectangles identify three main intervention areas:

- Padel Court – Children's Games: located on a leveled clearing near the inhabited area, adapted to existing slope conditions.
- Pet Area – Eco-Fitness Trail: positioned within a dense pine forest, with minimal intervention to preserve the vegetative cover.
- AlA of Time: a cultural trail that follows the historical and symbolic continuity of the landscape.

Each intervention was conceived with a biomimetic approach, respecting the terrain's morphology and ecological potential. This section illustrates how topography actively informed the spatial and functional arrangement of the design.

Figure 6. Morphological integration of the periurban belvedere and transhumance path (Author´s own elaboration)

3D point cloud of the periurban slope showing the elevation difference between the provincial road and the panoramic platform. The intervention reactivates a traditional transhumance route and inserts a low-impact structure aligned with the terrain.

Four strategic areas of intervention

The project was structured around four strategic areas of intervention, each conceived as a territorial device linking ecological, cultural, and social dimensions. Their specific functions and components are summarized in Table 3, which outlines the operative framework guiding the design. The following images illustrate how these areas were translated into spatial configurations, materials, and constructive solutions within the Albano Urbano Greenway.

Table 3. Strategic areas of the Albano Urbano Greenway (Author´s own elaboration)

Area	Function	Main Components	Objectives / Expected Outcomes
Villa Comunale	Urban social node	Padel court (310 m²); under-13 sports field with anti-shock flooring (88 m²); stabilized-earth fitness trail (386 m²); fenced pet area (314 m²); ecological paving; native landscaping.	Strengthen social interaction; integrate sport and recreation; improve urban biodiversity and comfort.
Belvedere 'Il Volo del Nibbio'	Contemplative and symbolic space	Wooden and stone panoramic platform; giant bench; optical viewer.	Reinforce landscape identity; connect community with topography and local fauna; promote slow tourism.
AIA del Tempo	Urban permaculture and educational device	Ecological terraces; natural drainage (green drain); didactic amphitheater; landscape agora; memory and sensory garden.	Support environmental education; valorize agricultural memory; promote biodiversity and cultural continuity.
Ecological Connectivity	Landscape integration and slow mobility	Pathways; landscape integration stairs, aligned with contour lines and water flow.	Ensure ecological continuity; enable slow mobility; increase territorial legibility and accessibility.

Figure 7. Integration of programmatic interventions along the geomorphological section (Author´s own elaboration)

Figure 7 synthesizes two complementary readings of the intervention area in Albano di Lucania. The base of the diagram presents a longitudinal section generated from a topographic point cloud survey, illustrating the altimetric configuration of the site and the spatial relationship between key programmatic elements, from the lower provincial road to the elevated communal garden. This geomorphological visualization was essential for designing adaptive micro-interventions that respond to the terrain's natural morphology. Overlaid on this section are rectangular frames that highlight specific zones of intervention: a paddle tennis court and children's play area, a pet zone with an eco-fitness trail, and interpretive installations along the 'AIA del Tempo' route. Within each frame, photorealistic renderings depict how these low-impact infrastructures integrate with the topography and native vegetation. The upper strip of the diagram presents contextual images that illustrate the ecological and cultural gradient of the surroundings, ranging from the inhabited centre to rural landscapes. Together, these layers reveal a design logic based on terrain adaptation and nature-based strategies, aimed at creating an ecological and cultural corridor with minimal intervention.

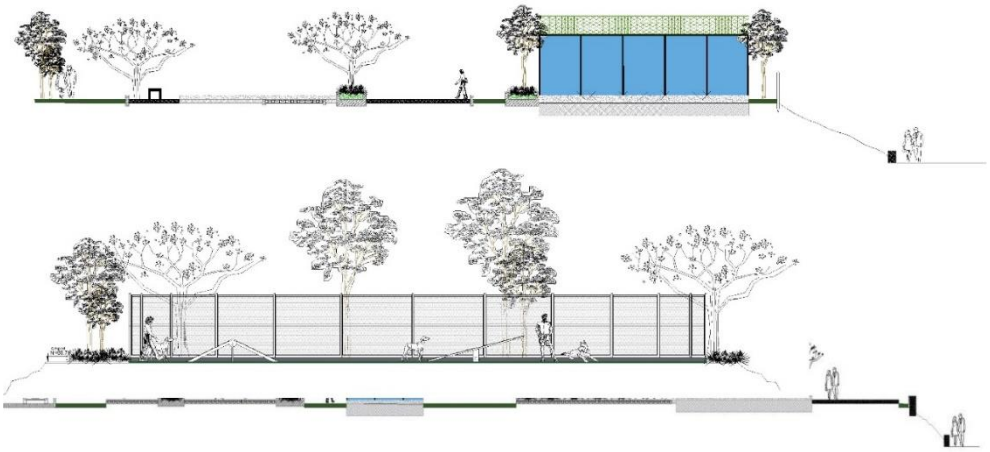


Figure 8. Schematic and technical sections of the Villa Comunale intervention (Author´s own elaboration)

These sections illustrate the integration between nature, sociality, and micro-infrastructure.

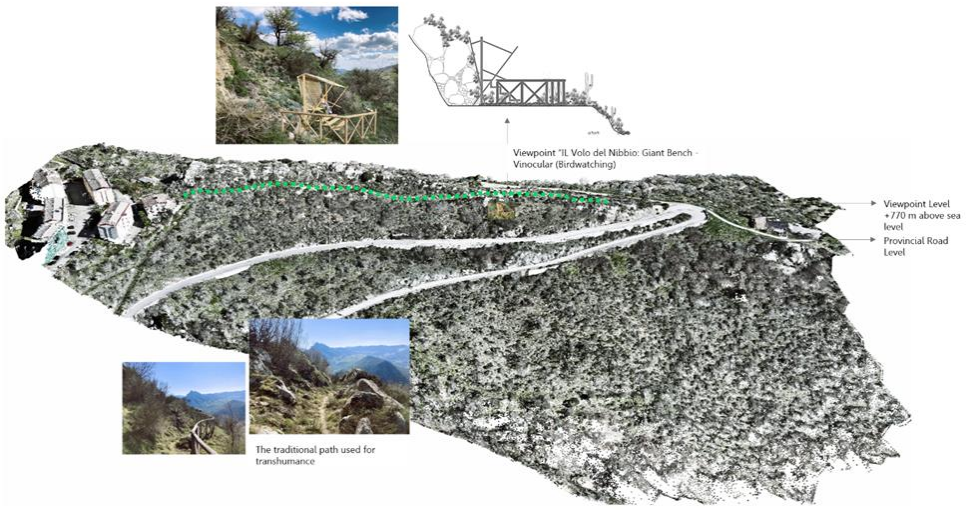


Figure 9. Panoramic viewpoint as symbolic infrastructure (Author´s own elaboration)

It reinforces the notion of affective reconnection with the territory and observation as a projective act.

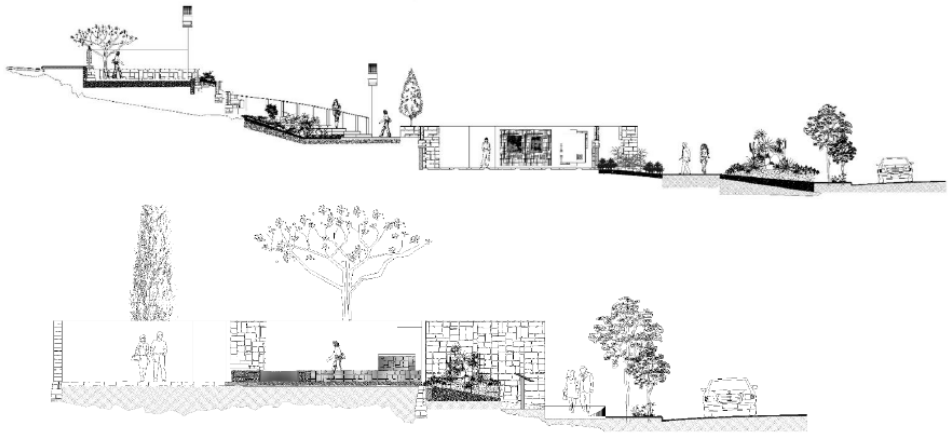


Figure 10. Agro-educational space for climate resilience and cultural transmission (Author´s own elaboration)

The ‘AIA del Tempo’ is conceived as a micro-infrastructure that adapts sensitively to the natural slope of the terrain, transforming vertical discontinuities into spatial opportunities. As shown in the sectional drawings, the design leverages topographic variation to articulate a sequence of platforms, thresholds, and transitions that accommodate distinct uses, such as contemplative areas, interpretive signage, and rest zones, without altering the geomorphology. Each level supports a differentiated experience while maintaining visual and ecological continuity. The stepped configuration not only ensures universal accessibility through gradual paths and ramps but also enhances environmental integration by preserving existing trees and minimizing soil movement. This strategy exemplifies the project's broader aim to regenerate public space through low-impact, site-responsive interventions rooted in geomorphological logic.

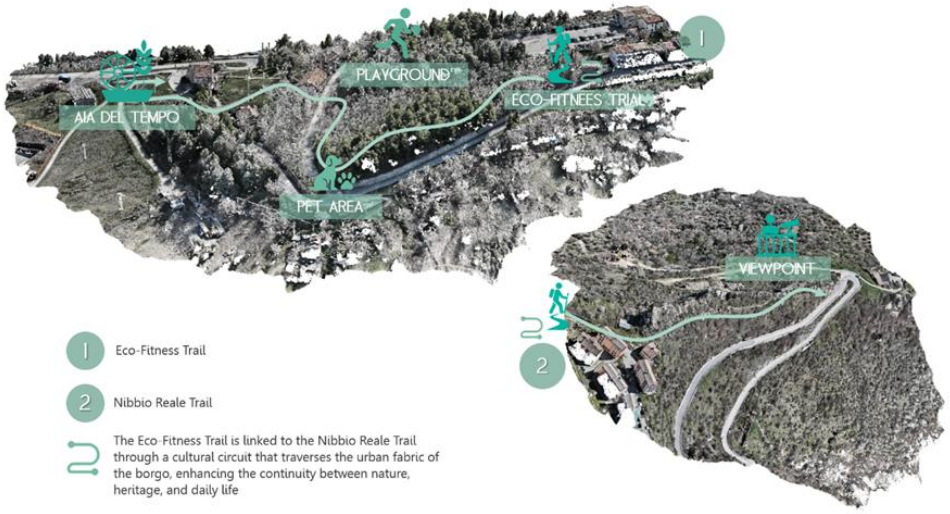


Figure 11. Diagram showing the spatial articulation of the project area based on the point cloud survey (Author´s own elaboration)

Key low-impact interventions, such as the Eco-Fitness Trail, Pet Area, Playground, Aia del Tempo, and Viewpoint, are geolocated and connected through a continuous cultural and

ecological route. This system integrates nature-based infrastructure with the urban fabric, creating a regenerative landscape framework grounded in topography and local identity.

Conclusions

The *Albano Urbano Greenway* project represents a concrete application of the Reclaiming Without Antagonism approach, understanding territorial regeneration not as a formal imposition or mere ecological remediation, but as an act of care, listening, and symbolic rearticulation. From this perspective, emptiness is recognized not as absence but as a field of possibility where memory, landscape, and territorial metabolism intertwine. The methodology developed does not limit itself to describing the territory or applying theoretical references in an abstract way. On the contrary, it integrates multi-scalar diagnosis, critical conceptual frameworks, and adaptive design strategies to intervene under conditions of fragility. This approach made it possible to identify specific metabolic interruptions in the flows of water, energy, memory, and land use, and to translate them into design decisions coherent with the topography, local ecology, and symbolic structure of the site. Thus, the project does not simply respond to a degraded context but activates its regenerative potential through a situated logic.

A particularly revealing finding emerged during the initial phases of execution in the *Villa Comunale*. The replacement of degraded vegetation to enable an area for active wellbeing, a technically justified action and consistent with the principles of biophilic design, provoked an immediate emotional reaction from some inhabitants. Although the space had not been frequented for years, this response revealed a form of latent curatorship of the void: a symbolic presence that only manifested once the space was altered. This experience highlights the importance of considering invisible presences -those not expressed in active use but embodying memory and affectivity- as part of the interrupted territorial metabolism.

Although still under execution, the project has defined, since its conception, a series of indicators that will allow its impact to be assessed in the short and medium term. These indicators are organized into three key dimensions, biophysical, symbolic, and socio-ecological, and will be the subject of post-intervention evaluation through specific technical sheets. To systematize and evaluate the project's impact, monitoring indicators have been defined that will be implemented in a post-intervention monitoring phase. These metrics will allow the regenerative scope to be quantified across three key scales:

Table 4. Expected impact indicators and monitoring metrics (Author´s own elaboration)

Dimension	Expected Indicator	Planned Evaluation Method
Biophysical	Increase in soil permeability index	GIS comparison of permeable surface before and after the intervention
Symbolic	Reintegration of spaces into local collective narratives	Qualitative analysis through interviews and community media
Socio-ecological	Emergence of new community uses of public space	Direct observation and monitoring of activities
Ecological	Increase in plant diversity through reintroduction of native species	Recording of planted species and monitoring at 12 months

The Albano Urbano Greenway project contributes to the field of territorial planning and design in three specific ways. First, it validates a three-phase workflow, territorial diagnosis, geomorphological design, and regenerative implementation that links biophysical analysis, theoretical frameworks, and low-impact constructive solutions, offering a replicable methodology for regeneration projects in fragile contexts. Second, it introduces ex-ante evaluation instruments through the definition of expected impact indicators, such as permeability, biodiversity, community appropriation, and new social uses, making them an integral part of the design and

anticipating monitoring and verification criteria that are often absent in small-scale urban projects. Third, it advances a multi-scalar articulation in governance by proposing a curatorial role for local administrations, showing how synergies between inhabitants, collectives, and authorities can be coordinated in low-density territories, and how these experiences may inform top-down policies oriented toward adaptive regeneration in Europe and Latin America. Taken together, the project is offered as a methodological basis for regeneration in post-demographic contexts, transferable to territorial planning programs and public policies that aim to integrate ecological continuity, cultural memory, and social resilience within a single operative framework.

Disclosure statement

The author reports there are no competing interests to declare.

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