# The Challenges of Urban Regeneration Between Conservation and Transformation in Coastal Areas. The Case Study of La Caletta, Sardinia, Italy

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**Abstract.** Balancing the conservation of modern architecture's legacy with the demands of contemporary urban transformation represents a key challenge for urban regeneration, particularly in coastal areas affected by tourism development pressure. The coastal settlement of La Caletta, in the municipality of Siniscola, on the central-eastern coast of Sardinia (Italy), represents one of the most interesting contexts for observing, on a local scale, the interplay between the major ongoing transitions and the specificities of Sardinian coastal landscapes. In this context, the history of tourism development, the expansive urban growth and the consequent transformation, as well as demographic changes have shaped a complex geography, in which the relationship between the main urban center (Siniscola) and the coastal settlement (La Caletta) has progressively been redefined. This paper investigates the opportunities offered by sustainable urban regeneration, understood as a systematic set of actions aimed at qualitative renewal and strengthening of both material and immaterial infrastructures (physical space and digital environment) in order to improve the quality of life of residents and city users. The study takes as its starting point the experience of the Villaggio Milano, designed by Carlo De Carli in the late 1940s, that can be considered a significant combination between residential and tourist demand, modern architecture, characteristics of the coastal landscape, and connections with the broader geographical context.

**Keywords:** Urban Regeneration · Coastal areas · Sustainable Spatial planning

## 1 Introduction

Urban regeneration has been at the core of disciplinary debate for more than twenty years, representing one possible response to the environmental, economic, and social challenges facing the contemporary city [1–3].

In Italy, until the 1990s, spatial planning was dominated by the management of the building expansion. With the shift from an urbanism of urban growth to one of demographic decline and urban regeneration, new priorities came to dominate the spatial

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planning domine: the need to reuse the existing city to reduce land consumption, mitigate climate change, and improve urban resilience; the importance of moving from recovery or redevelopment actions, often limited to the physical-building dimension, to the concept of regeneration, based on a systemic approach integrating social, economic, and environmental policies; the urgency of rethinking other parts of the city beyond the historic center, such as peripheral areas, urban "voids," and brownfield sites (former industrial areas, railway yards, barracks), with particular attention to the public city [4]; the awareness of the role of participation and governance in managing complex processes involving a plurality of stakeholders (public, private, and third sector), together with the updating of the regulatory framework and spatial planning tools to make them consistent with the principles of sustainability [5, 6].

The debate prominently involves major sector organizations, including the National Institute of Urban Planning (INU), the Italian Society of Urban Planners (SIU), the Association of Disused Urban Areas (AUDIS), as well as the National Council of Engineers (CNI) and the National Council of Architects, Planners, Landscape Architects and Conservators (CNAPPC).

INU's commitment to urban governance (at local, regional and national scale) has promoted an integrated approach to the design of the existing city, synthesized in a series of official documents that highlight how urban regeneration should be understood as a new frontier of Italian urbanism for acting on the social and environmental fabric, restoring dignity to peripheral and degraded areas, and thereby countering land consumption [7]. The ten proposals presented by INU in 2017 outline an operational strategy to turn urban regeneration from an intention into a structural practice [8]. The main fields of action concern: operational tools (the establishment of a regular state fund to finance integrated programs addressing social distress and seismic/hydraulic risk); necessary reforms in housing policy and urban standards (to allow a shift from the concept of "quantity" to the "quality" of contemporary spaces and services [9], including smart grids, green management, and climate resilience); land consumption (downsizing municipal local plans and updating outdated zoning previsions); and experimentation and system action to coordinate national policies on building rehabilitation and urban regeneration under a single coordinating authority.

Many of these principles are also expressed in the document of the CNAPPC, which proposed a National Plan for Sustainable Urban Regeneration (2012) [10] as a priority strategy to overcome the construction crisis and relaunch the Italian economy. Here, the key proposals concern: the renewed role of demolition-and-reconstruction projects, using urban equalization and compensation tools; the enhancement of public real-estate assets; the need to promote ecological transition through the creation of eco-neighborhoods ensuring water and energy efficiency and seismic safety; a general renewal and strengthening of urban welfare through the upgrading of public spaces and digital infrastructure to foster social cohesion and inclusion; the updating of the regulatory framework through simplified procedures, tax incentives, and coordinated national governance.

These issues are also reaffirmed in the AUDIS Charter for Urban Regeneration (2015) [11], which helps consolidate a framework of principles supporting city makers. (public and private actors).

More recently, INU proposed guidelines for addressing the post-Covid-19 pandemic phase in an extremely dramatic moment for the country [12], recognized urban regeneration as a tool for creating healthy, accessible, and inclusive environments, in line with the concept of the 15-min city, where public spaces are redesigned to ensure local services, widespread greenery, and softer mobility, reducing spatial inequalities that the health crisis made even more evident.

At the XXIII SIU National Conference (2021), dedicated to the regeneration of urban space and social transformation, urban development schemes characterized mostly by episodic interventions were strongly discussed for their limited ability to fit into a broad strategic vision, which leads to the exclusion of certain parts of the city and, consequently, social marginalization. Reflections thus return to the issues of urban marginality and housing, the relationship between the urban plan and the urban project, and the operational methods that make it possible to engage with territory through policies and practices based on the broadest participation [13].

INU's most recent 2025 motion [14] reproposes urban regeneration as an opportunity to address the challenges of sustainable urban planning through an integrated approach, recognizing the centrality of the planning tool, the local plan, in identifying the areas to be subjected to regeneration interventions, in defining the necessary incentives, and in enabling the transfer of building volumes and development rights under public leadership. It also calls for a national law guaranteeing continuous financial resources, tax relief, and a comprehensive reform of urban standards.

In this regard, the INU's legislative commitment is also evident in its various proposals for a new Urban Planning Law that would provide the Italian regions with a single regulatory instrument capable of renewing and coordinating regional regulatory frameworks on territorial governance, in line with the sustainable development goals.

The more recent bill on urban regeneration discussed by the Italian government (DDL Rigenerazione urbana 2025) is largely the outcome of the disciplinary advances described above. The text introduces a national strategy to bring net land consumption to zero by 2050 and establishes a national fund to finance rehabilitation of the built environment, energy efficiency upgrades, and seismic safety measures in municipalities. It also introduces volumetric bonuses for demolition and reconstruction, as well as specific incentives for relocating buildings from areas exposed to hydrogeological risk.

Significant procedural simplifications and tax advantages are also provided, with the primary aim of improving quality of life in urban environments by integrating environmental sustainability, social housing, and soft mobility.

Within this framework, this contribution explores the opportunities offered by urban regeneration, taking as its starting point the case of Villaggio Milano in La Caletta di Siniscola (Sardinia, Italy), one of the first tourist accommodation village developed in Sardinia and designed in the late 1940s by Carlo De Carli. Although it has undergone significant transformations over time, which have strongly damaged its memory, this valuable project can be considered a significant combination between residential and tourist demand, modern architecture, characteristics of the coastal landscape, and connections with the broader geographical context. In this sense, La Caletta is today one of the most interesting contexts for observing, at a local scale, the interplay between the major transitions underway and the specific features of Sardinian coastal landscapes.

In this context, the history of tourism development, the expansive urban growth and the consequent transformation, as well as demographic changes have shaped a complex geography, in which the relationship between the main urban center (Siniscola) and the coastal settlement (La Caletta) has progressively been redefined.

The manuscript is structured in 6 sections: the introduction is followed by an overview of the legacy of theVillaggio Milano (Sect. 2), between memory and transformation (Sect. 3), the challenges of urban regeneration (Sect. 4) and the contextual value of the symbolic and cultural dimension (Sect. 5) in guiding future urban renewal policies. The final section is dedicated to the conclusion of the study (Sect. 6).

## 2 Villaggio Milano. The Legacy of the Past

From its origins, La Caletta has occupied a threshold position between the Siniscola hinterland and the sea, functioning at once as a landing place, a seaside resort, and, increasingly, a place of permanent residence (Fig. 1).

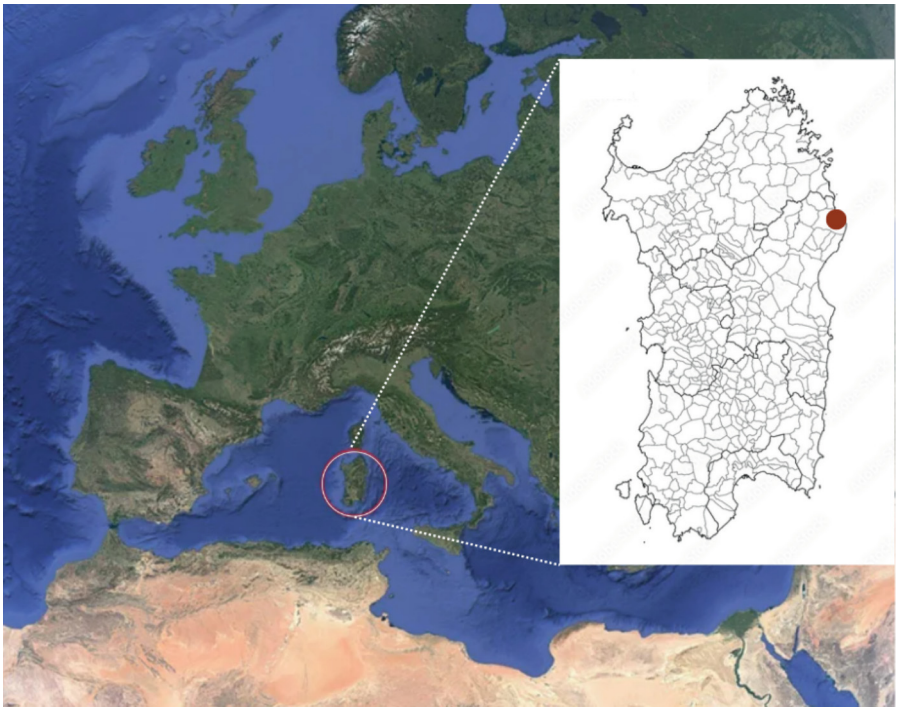

**Fig. 1.** The study area. La Caletta di Siniscola in Sardinia, Italy (in red)

Its relationship with the municipal center has historically been marked by a clear functional distinction: the inland town as the seat of services and historical identity, and the coastal district as a space for leisure and seasonality. In the last twenty years, the port of La Caletta has mainly served as a fishing port and a tourist port (Fig. 2).

In recent decades, however, demographic change and patterns of land use have challenged this dichotomy, giving rise to a network of mobility and permanence that connects the two urban centers daily. La Caletta is no longer merely a "holiday place," but a fragment of coastal urbanity in which residents, commuters, tourists, and new temporary inhabitants interact.



**Fig. 2.** The tourist harbor of La Caletta, Siniscola (Sardinia, Italy)

Within this framework, the tourist accommodation village (Villaggio Milano) designed in the late 1940s by Carlo De Carli, emerges as a foundational episode in Sardinian tourist modernity. It was the island's first tourist settlement, conceived as a device capable of combining architectural quality, attention to the landscape, and experimentation with forms of temporary dwelling. The layout of the village reflects a particular sensitivity to the site's morphology: buildings are organized in relation to the topography, open spaces are conceived as extensions of the housing units, and pedestrian paths create a sequence of views, thresholds, and vistas toward the sea. In this way, the project departs both from the logic of the continuous built front along the coast and from the random dispersion of isolated volumes, proposing a balance between density and permeability. It embodies an idea of vacation that engages with the landscape not in terms of mere occupation of space, but as a dialogue with nature, topography, and light. The composition of the buildings, the use of materials, and the arrangement of open spaces and pathways create a settlement system that seeks to enhance the threshold

condition between the built environment and the sea, between the individual experience of temporary residence and the collective experience of shared spaces.

However, the legacy of Villaggio Milano has not remained isolated within the landscape of La Caletta. It can be interpreted as a forward-looking laboratory for many of the issues now central to urban regeneration: sustainable density, the relationship between private and shared spaces, and the ability of existing architectural assets to activate new forms of use and place-based interpretation. Its position within the Siniscola coastal landscape and its formal recognizability make it a potential anchor for enhancement policies that do not stop at passive preservation but instead promote forms of reuse compatible with contemporary needs. This, among other things, implies reflection on the role of architectural memory and on the possibility of building interpretive pathways for modern architectures, involving residents, visitors, and professional communities.

## 3 Between Memory and Transformation

From the 1960s onward, and even more intensely during the 1970s and 1980s, the coastal strip of La Caletta experienced a progressive spread of settlement, driven by waves of demand for second homes and by the growing centrality of seaside tourism in the local economy. The result is a layered urban fabric in which high-quality design interventions coexist with building additions developed mainly according to speculative or purely quantitative logics. Diachronic analyses of the different evolutionary phases—from the 1950s to the 1970s, and then through more recent developments between 2017 and 2024—highlight the shift from a relatively compact settlement model to fragmented forms of growth, often poorly integrated with one another.

Reading these changes through the digital land cover platform, obtained by comparing historical image series and territorial data, makes it clear how urban expansion has affected the original environmental mosaic. Natural and semi-natural surfaces have been progressively replaced by low-density residential fabrics, local roads, parking areas, and hospitality facilities, with a consequent fragmentation of open spaces and ecological corridors.

This process is common to many Mediterranean coastlines, but in La Caletta it takes on particular significance because it concerns a context in which landscape quality constitutes the main resource on which tourist attractiveness has been built.

The central issue for regeneration is not so much "how to grow further," but rather how to reconnect, selectively densify, and restore continuity and meaning to the spaces that are now interstitial. The notion of "dispersion and densification" can be understood not only as a description of a past process, but also as an interpretive approach for future strategies. In recent years, dispersion has meant settlement sprawl and land consumption; densification can today mean, by contrast, a reasoned concentration of functions and interventions within already urbanized fabrics, aimed at improving accessibility, public space quality, and mixed use, in line with the paradigms of the sustainable city [15, 16].

## 4 The Challenges of Urban Regeneration

The regeneration of the La Caletta tourist settlement depends on the development of a systemic project for open space, understood as a primary infrastructure that permeates and reshapes the consolidated urban fabric and its future expansions [17].

Conceiving open space as a connective tissue and a proximity hub integrating different functions (sports, urban gardens, sustainable mobility stations, and outdoor coworking spaces) means recognizing the value of the elements of the urban fabric in all their forms [18].

According to the definition proposed by the Public Space Charter (2013) [19] later by the Global Public Space Toolkit (2016) [20]: "Public space is any place that is publicly owned or publicly used, accessible and usable by all free of charge or without profit-making purposes. […] a key element of individual and social well-being […]. Public spaces consist of open spaces (such as streets, sidewalks, squares, gardens, parks) and covered spaces created without profit-making purposes for the benefit of all (such as libraries, museums)." However, for public spaces to effectively constitute "the physical network and support for the movement and stopping of people and vehicles, on which the functioning and vitality of cities depend," it is necessary to ensure that all their elements form a continuous, articulated, and integrated system [21].

In this sense, the recovery of urban voids, the reorganization of pedestrian and cycle routes, and the strengthening of the relational nodes between La Caletta and the agricultural and mountainous hinterland of Siniscola become strategic actions (Fig. 3).

Systematically coordinating these interventions can reduce pressure on further undeveloped areas while helping to recombine a fragmented urban landscape, creating an infrastructure capable of responding simultaneously to the challenges of contemporary life: adaptation to climate change, social inclusion, and economic regeneration.

Among the most recent approaches, Nature-Based Solutions (NbS) [22] should be mentioned: intelligent design solutions to support sustainable water management, including reducing the load on sewage networks (rain gardens), and reducing urban heat islands (urban forestry), with particular attention to biodiversity conservation.

From a social perspective, the open-space project aims to restore meaning to places and create new spaces that enhance memory and local community relations, while respecting the principle of "Accessibility for all" [23], namely the design of inclusive spaces accessible to all age groups, avoiding gentrification processes.

From an economic perspective, significant resources could also come from the proceeds of the tourist tax which, according to the legal framework (Art. 4 of Legislative Decree No. 23/2011), must be used to support the governance of tourist flows in high-density destinations, thereby financing interventions for the maintenance, use, and recovery of local cultural and environmental assets—including sustainable waste management—urban renewal and public realm improvement, the enhancement and strengthening of local public services (e.g., mobility and transport) and cultural events, to the benefit of both the resident community and city users [24].

A tourist tax can help curb overtourism easing pressure toward gentrification only if it is carefully structured, fenced, and managed transparently with input from local communities. More precisely, main aspects concern finance resident-oriented services, combined with strong housing and land-use policies that explicitly prevent gentrification.

Revenues should mainly support residents and common-good infrastructure, such as relieving public transport (buses, metro, bike lanes), waste collection, public toilets, and park maintenance, as well as social housing schemes, rent-control-related programs, or rehabilitation of historic housing to expand affordable-housing stock to protect low- and middle-income residents or support long-standing tenants against rent hikes.

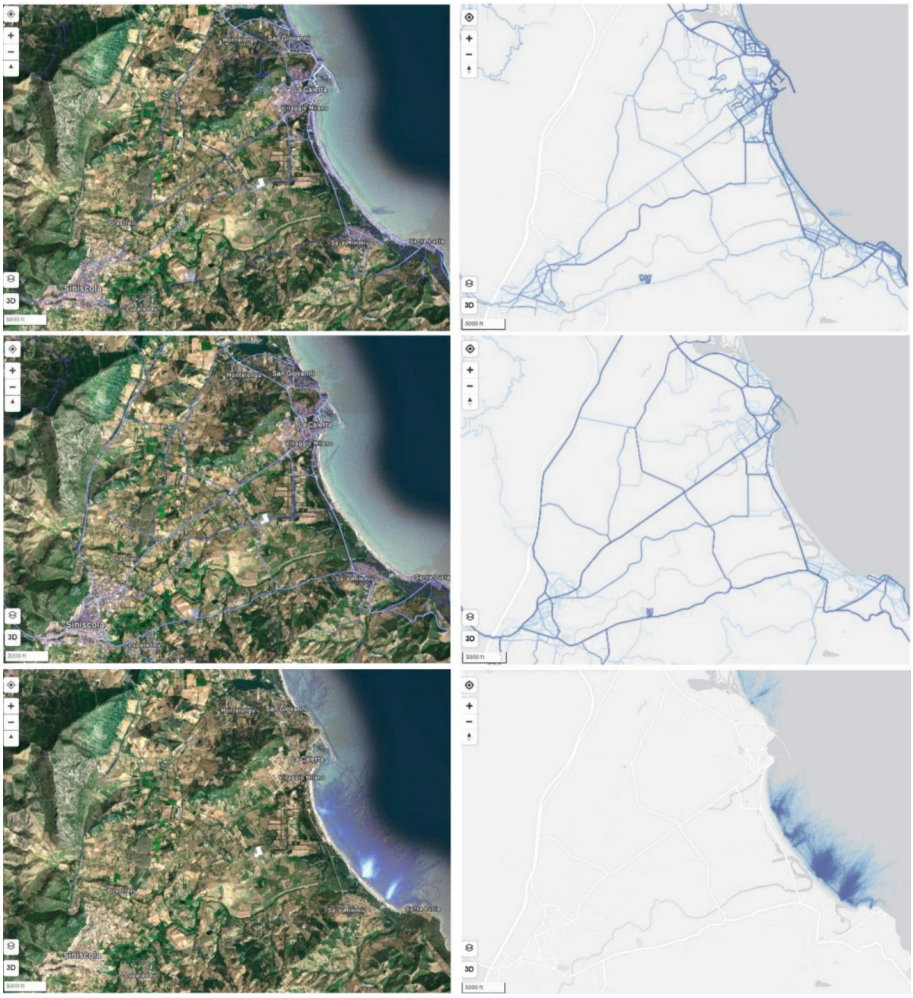

**Fig. 3.** The STRAVA heatmaps related to the main connections between La Caletta and Siniscola. The maps show the places where users record their sports activities: walking a), cycling b), and water sports c). Source: STRAVA.

An innovative element of the current framework is the digital transition, which introduces a new immaterial infrastructure [25]. Connectivity maps—showing fixed-line speeds and wi-fi coverage—reveal that accessibility is no longer only a matter of road

infrastructure, ports, and parking areas, but also of data networks and online services [26]. The availability of stable and fast connections directly affects the ability to attract new residents, remote workers, and companies linked to the knowledge economy. In a context such as La Caletta, digital transition could shape interesting future scenarios for the de-seasonalization of presence and for the integration of traditional tourism with new forms of staying that combines work and leisure. Digitalization, however, raises important questions about social equality. Differences in coverage and service quality across different parts of the municipality may reinforce existing inequalities, further marginalizing less well-served areas. For digital transition to become a lever for urban regeneration, it must be integrated into planning policies and local programming tools, making connectivity a structural dimension of territorial design.

## 5 Symbolic and Cultural Dimension

The symbolic and cultural dimension that helps define La Caletta's identity cannot be overlooked. The reference to André Pieyre de Mandiargues' novel The Sea Lily, set precisely in this coastal location, highlights how the place was already, by the mid-20th century, the setting for narratives intertwining nature, memory, and identity. The description of seascapes, atmospheres, and holiday experiences conveys an image of La Caletta that goes beyond its physical reality, projecting it into the collective imagination as a space of passage and transformation. This literary component, alongside the architectural history of Villaggio Milano and the evidence of industrial and artistic heritage (such as the Monteponi mining village and the frescoes by Aligi Sassu), helps build a symbolic capital on which regeneration policies can and should rely.

Regenerating La Caletta, in this sense, does not mean only restructuring buildings, improving infrastructure, and upgrading public spaces, but also reactivating narratives and reconnecting the community with the multiple legacies inhabiting the territory. The interplay between nature and artifice, between modern architecture and coastal landscape, and between memory and contemporary tourism offers the possibility of imagining enhancement paths that do not reduce the place to a mere tourist product [27, 28]. On the contrary, regeneration can become an opportunity to rethink the pact between residents, visitors, and the environment, restoring to the Siniscola coastline the role of a laboratory for new forms of coastal living, more attentive to the resources, fragilities, and opportunities of ongoing transitions.

## 6 Conclusions

The considerations developed in this study suggest the need to reorient territorial and urban planning instruments so that they treat regeneration as a strategic axis rather than a simple add-on chapter. First, the local plan can become the place where the value of Villaggio Milano and the historic coastal fabrics is formally recognized, with specific protection and reuse regulations that encourage recovery interventions, qualitative densification, and the enhancement of public spaces [29], while discouraging further land consumption. From this perspective, the regulation of consolidated areas and completion areas should be reconsidered considering the objectives of reducing settlement fragmentation, improving soft accessibility, and restoring ecological continuity.

Alongside structural planning, a crucial role can be played by integrated urban and territorial regeneration programs, developed through regional calls, European funds, and national initiatives dedicated to coastal areas and smaller urban settlements. Such programs could act on several fronts: public-space and waterfront redevelopment, recovery of underused buildings to be assigned to cultural, social, or diffused hospitality functions, energy-efficiency improvements, and seismic upgrading of the built heritage. Significant resources could also come from the proceeds of the tourist tax which in Italy has been constantly growing due to the increase in the number of tourists and the number of municipalities that introduced the tax. Despite the existence of legislation that limits the use of tourist tax funds to specific interventions in the tourism sector, a strategic vision should finance regeneration schemes focused on revitalizing local cultural and environmental assets.

Within this framework, policies for digital transition should be explicitly linked to regeneration objectives, making connectivity a lever for supporting new local economies, remote-working arrangements, and innovative services, while preventing coverage gaps from turning into further territorial inequalities. Finally, planning strategies should more decisively integrate the landscape and cultural dimension, enhancing the interplay between modern architecture, memory, natural heritage, and the literary imagination. This implies, on the one hand, close dialogue with landscape-planning instruments and conservation policies; on the other, the promotion of projects that connect places such as Villaggio Milano, the marina, coastal spaces, and inland routes, building thematic itineraries capable of strengthening La Caletta's identity [30]. In this sense, regeneration becomes an eminently political and cultural operation, requiring participatory processes, alliances among administrations, local communities, and economic actors, and the ability to use plans, programs, and policies in a coordinated way as instruments of a unique territorial vision.

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## References

1. Said, Z.M., Dindar, S.: Key challenges and strategies in the evaluation of sustainable urban regeneration projects: insights from a systematic literature review. Sustainability **16**(22), 9903 (2024)

2. Errigo, M. F., Iacomoni, A.: Rigenerazione urbana e governo della città contemporanea. Le prospettive e le azioni in ambito ecologico-ambientale e urbanistico. I contributi. In Rigenerazione Urbana E Governo Della Città Contemporanea. La Prospettiva Ecologico-Ambientale. Piani E ProgettI, pp. 13–20 (2022).. Inu Edizioni
3. Losco, S., de Biase, C.: Consumo di suolo versus eco-planning. In: La declinazione della sostenibilità ambientale nella disciplina urbanistica, vol. 3, pp. 123–129. Planum Publisher e Società Italiana degli Urbanisti (2023)
4. Ladu, M.: Patrimonio immobiliare pubblico. Prospettive di rigenerazione per una città accessibile e di prossimità, vol. 2. UNICApress (2022).
5. Torelli, G.: La rigenerazione urbana nelle recenti leggi urbanistiche e del governo del territorio. Le Istituzioni Del Federalismo **3**, 651–679 (2017)
6. Di Lascio, F.: Governare la rigenerazione urbana. Rivista quadrimestrale di diritto dell'ambiente **2**(2022), 88–115 (2022)
7. Berretta, T., Desideri, F., Staltari, M.: Il progetto dello spazio pubblico, tra complessità e crisi ecologica: da sfida a opportunità per la rigenerazione urbana. Agathon: Inter. J. Archit. Art Design **16** (2024).
8. Istituto Nazionale di Urbanistica (INU), Rigenerazione urbana. Le 10 proposte dell'INU. 4 strumenti, 4 riforme, 1 sperimentazione, I azione di sistema (Novembre 2017): http://www.inu.it/wp-content/uploads/10_proposte_INU.pdf
9. Arcidiacono, A., Giaimo, C., Talia, M.: Priorità per il progetto urbanistico. Reti ambientali, nuovi standard e rigenerazione urbana. Accademia, 166–179 (2018).
10. CNAPPC Piano Nazionale per la Rigenerazione Urbana Sostenibile (2012). https://www.awn.it/attachments/article/731/CNAPPC_Piano_Nazionale_per_la_Rigenerazione_Urbana_Sostenibile.pdf
11. AUDIS La Carta AUDIS della Rigenerazione Urbana, Bologna (2015)
12. Istituto Nazionale di Urbanistica (INU) Le proposte dell'Istituto Nazionale di Urbanistica per il superamento dell'emergenza e il rilancio del Paese (2020). http://www.inu.it/wp-content/uploads/proposte-inu-15-maggio-2020.pdf
13. Caruso, N., et aI. Rigenerazione dello spazio urbano e trasformazione sociale. Introduzione. In: Caruso N., Pasqui G., Tedesco C., Vassallo I. (eds.) Rigenerazione dello spazio urbano e trasformazione sociale. Atti della XXIII Conferenza Nazionale SIU. DOWNSCALING, RIGHTSIZING. Contrazione demografica e riorganizzazione spaziale, Torino, 17–18 giugno 2021, vol. 05. Planum Publisher e Società Italiana degli Urbanisti, Roma-Milano, pp. 5–8 (2021)
14. Istituto Nazionale di Urbanistica (INU), Mozione sulla Rigenerazione urbana approvata all'unanimità. XXXII Congresso nazionale – Assemblea dei soci del 24 maggio (2025). http://www.inu.it/wp-content/uploads/allegato-4-inu-mozione-rigenerazione-urbana.pdf
15. United Nations. Transforming our world. The 2030 agenda for sustainable development. New York: Resolution adopted by the General Assembly on 25 September 2015 (2015). Retrieved 21 September 2018
16. Moreno, C. The 15-Minute city: a solution to saving our time and our planet. John Wiley & Sons (2024)
17. Cutini, V.: La rivincita dello spazio urbano: l'approccio configurazionale all'analisi e allo studio dei centri abitati (2010)
18. Marella, R.M.: Lo spazio urbano come bene comune. TECHNE–J. Technol. Archit. Environ. **28**, 28–34 (2024)
19. Carta dello Spazio Pubblico 2013, Biennale Spazio Pubblico Maggio, 2013, Biennale Spazio Pubblico» Carta dello Spazio Pubblico (2013)
20. United Nations Global Public Space Toolkit. From Global Principles to Local Policies and Practice. United Nations Human Settlements Programme UN-Habitat, SIDA, INU (2016)

21. Balletto, G., Sinatra, M., Ladu, M., Sechi, F., Borruso, G.: A methodological proposal to assess proximity in functional urban areas. In International Symposium: New Metropolitan Perspectives, pp. 70–79. Springer Nature Switzerland, Cham (2024). https://doi.org/10.1007/978-3-031-74679-6_7
22. Ladu, M., Sulis, G.: Nature-Based Solutions per mitigare gli impatti della urbanizzazione: il caso del Parco di Molentargius-Saline. Reticula **29**, 44–59 (2022)
23. United Nations: Accessibility and Development: Mainstreaming Disability in the Post-2015 Development Agenda. Department of Economic and Social Affairs, New York (2015)
24. Balletto, G., Ladu, M., Battino, S., Attard, M.: A methodological perspective on understanding overtourism in Mediterranean Islands. the case of Sardinia region, Italy. City, Territory Archit. **12**(1), 31 (2025)
25. Borruso, G., et al.: Aree interne e sviluppo locale al tempo dei social network e media. Il caso del Sulcis–Iglesiente (Sardegna, Italia). Trieste, Italy: EUT Edizioni Università di Trieste (2022).
26. Ladu, M., Balletto, G., Paddeu, D., Corona, L.: Beyond spatial accessibility. redefining access to services through digital connectivity. Euro. Trans. **103**, 1–17 (2025)
27. Balletto, G., Borruso, G., Ladu, M., Milesi, A.: Smart and slow tourism. evaluation and challenges in Sardinia (Italy). In: International Conference on Innovation in Urban and Regional Planning, pp. 175–182. Springer International Publishing, Cham (2021). https://doi.org/10.1007/978-3-030-96985-1_20
28. Balletto, G., Ladu, M., Sinatra, M., Borruso, G.: Application of Geospatial analysis to tourist flows in the insular destinations. In: International Conference on Computational Science and Its Applications, pp. 241–252. Springer Nature Switzerland, Cham (2024). https://doi.org/10.1007/978-3-031-65308-7_17
29. Ladu, M.: Rigenerare il patrimonio costruito, tra sviluppo turistica e domanda abitativa. In Santa Lucia. Paesaggi e passaggi. 3ª rassegna di studi storici e sociali in onore della dottoressa Antonietta Boninu, pp. 184–206. Editrice Taphros srls (2025)
30. Borruso, G., Balletto, G.: The port-city relations in the era of hybridization. In: International Conference on Computational Science and Its Applications, pp. 594–607. Springer Nature Switzerland, Cham (2023). https://doi.org/10.1007/978-3-031-37123-3_41