

Opinion

Reuse and Reconversion as Sustainability Paradigm for Marginal Areas Regeneration

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Abstract: Imagining the future has become an increasingly arduous exercise especially if we consider the constant anthropic modifications and their consequences to which the environment is subjected. In the face of climate change, the reduction in land consumption and the energy efficiency of buildings are some of the missions to be pursued to achieve an adequate level of sustainability, in the constant search for inclusive, safe, and durable urban settlements. Trying to rebalance a relationship, which has been compromised for too long, between nature and artifice can only take place through an ecosystem approach capable of promoting conservation, productivity, and resilience. These indications become the tracks to formulate exploratory projects of urban regeneration for marginal territories, linking, through a multidisciplinary approach, the architectural scale and the urban scale. In particular, this contribution addresses the debated topic, especially in the Italian context, of possible sustainable transformation scenarios for inland areas, with a focus on hamlets and villages and reflects on the possibility of working on the resilience of territories either by recovering the heritage of villages for housing purposes or enhancing the ecological–environmental component through renaturalization.

Keywords: urban regeneration; inland areas; sustainability; reuse; reconversion; renaturalization



Citation: Cervesato, A. Reuse and Reconversion as Sustainability Paradigm for Marginal Areas Regeneration. *Sustainability* **2022**, *14*, 15270. <https://doi.org/10.3390/su142215270>

Academic Editor: Seungjun Roh

Received: 9 September 2022

Accepted: 14 November 2022

Published: 17 November 2022

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1. Introduction

Sustainability, redevelopment, reuse, and renaturalization are keywords that animate today's cultural debate in environmental, urban, and architectural fields when trying to impose multidisciplinary and specialized contributions, which can provide concrete answers for the management and protection of territories.

Looking at the inland areas [1], we can observe how abandoned—or in the process of being abandoned—villages, or hamlets, today represent a phenomenon, as widespread as it is complex, that is present in many parts of the Italian territory. In order to illustrate the state of the art of this phenomenon, first of all it is necessary to define the abandonment of the villages as a resulting phenomenon from a series of different crises that have hit Italy for the last forty years. These crises deal with a strong demographic and economic decrease, after which population has been increasingly concentrated in larger cities, a process that is still underway and that needs to be deeply understood, in order to mitigate its effects.

“For a long time, the residues [2] have attracted the attention of the administrators of the territory—parliamentarians, heads of local communities—but also of those who intervene in the territory: planners, urban planners, landscape-designers... In the official context, the answers expected from sponsors of projects concerning residues correspond to a traditional and moralizing vision of the landscape: how to make them disappear” [2].

From the point of view of public institutions [3], we see how a whole series of attempts have emerged over the last ten years to regenerate those villages or hamlets that have suffered the phenomenon of abandonment. In particular, “in 2013, on the initiative of the Minister for Territorial Cohesion Fabrizio Barca, the National Strategy for inland areas (SNAI) was born, a policy aimed first of all to recognize the social and physical fragilities of

places and distant communities and at the same time to enhance the provision of essential citizenship services in order to counteract depopulation” [3].

The recent National Recovery and Resilience Plan NRRP [4] also pays a peculiar attention to the prevention of depopulation, in particular through the *Bandi Borghi*, promoted by the Ministry of Culture, which sees a large number of resources directed towards the inland areas of the Italian territory, with the aim last to favor recovery projects. The NRRP is part of the Next Generation EU (NGEU) program, namely the EUR 750 billion package—of which about half is in the form of grants—that the European Union negotiated in response to the pandemic crisis. The main component of the NGEU program is the Recovery and Resilience Facility (RRF), which has a duration of six years—from 2021 to 2026—and a total size of EUR 672.5 billion—of which EUR 312.5 billion is in the form of grants and the remaining EUR 360 billion is in the form of low-interest loans. The Plan is developed around three strategic axes shared at a European level: digitization and innovation, ecological transition, and social inclusion. It is an intervention that aims at repairing the economic and social damage caused by the pandemic crisis, contributing to addressing the structural weaknesses of the Italian economy, and leading the country along a path of ecological and environmental transition. The NRRP will substantially contribute to reducing territorial, generational, and gender gaps.

Inland areas constitute a reference context for this research. Concepts such as the reuse of materials, the reconversion of buildings, social inclusion, and sometimes a controlled renaturalization are brought into play [5,6].

Renaturalization actions represent methods of securing and greening the territory, if we consider ecosystem services, the benefits that plants are able to provide to the environment in terms of improving air quality and reducing hydrogeological risk. This is a scenario that Franco Purini [7] anticipated recalling the themes of renaturalization through the reconstruction of an original landscape in the form of an immense forest studded with the “new ruins of centers finally left free to return to their remote memories”.

These indications become the tracks for formulating urban regeneration projects for abandoned villages, defining design intervention strategies that can be adapted and reiterated in different contexts, and assuming sustainability as an operating principle in the reuse of the built heritage, in the technological and functional adaptation of buildings and in the appropriate use of materials and construction techniques for individual contexts.

2. Tools and Methods for Investigating Inland Areas

2.1. Demography and Socio-Economic System: Issues of Social Equality

In Italy, we are experiencing a period of severe crisis both from a demographic and economic point of view. In 2018, we saw the worst population decline in the last hundred years [8,9]. The resident population in Italy decreased by 124,427 units in 2018, marking a -0.2% ; as of 1 January 2019, 60,359,546 people reside in Italy, among them 8.7% are foreigners. The decrease in births is over 18 thousand units compared to 2017; 439,747 children were registered in the birth register, which is an all-time low from the Italian unit. The decline in enrolments from abroad mainly due to the decrease in foreign immigrants' marks is 3.2%; the registrations in the citizens from abroad register were 332,324, over 11 thousand less than the previous year. These data bring with them a series of possible negative consequences but at the same time they can form the base of a broader reasoning to rethink the inland areas. Demographic changes are characterized by a sharp decline in births, an aging population, and a loss of residents. The population of the last twenty years has grown only thanks to the number of foreigners. Without the implementation of the appropriate intervention measures to counter this negative trend, the repercussions on economic growth will be severe.

From the economic point of view, the forecasts are equally negative. The gross domestic product (GDP) is expected to grow by $+0.3\%$ in real terms, a decisive slowdown compared to the previous year. Meanwhile, a deceleration of production rates is expected, which would negatively affect the labor market, leading to an increase in the unemployment rate.

The political situation both nationally and internationally contributes to all of this, creating uncertainty within the financial markets with negative consequences for the global economy. A negative economic situation makes its weight felt more in disadvantaged or poor areas, among which we find the smaller city centers. Due to the lack of services, infrastructures and job offers, some parts of the Italian territory suffer a continuous phenomenon of abandonment in favor of large metropolitan cities where we find greater opportunities for the new generations. In addition to the migration of new generations to foreign countries, the phenomenon of migration within the national territory should not be underestimated, because it is constantly growing as confirmed by the forecasts for future years. A shift in the weight of the population from the South to the Center-North of the country is expected in the years to come. According to ISTAT (National Institute of Statistics), in 2065 the Center-North will welcome 71% of residents against the 66% today; on the other hand, the South would welcome 29% against the current 34% [10]. The analysis of these data leads to a reflection on Italy's future in the coming years. A drastic demographic decline underlines the extreme need for interventions in favor of births and effective and concrete political actions for the life of future generations. The lack of confidence in the future is a factor that should not be underestimated, because, as emerges from the ISTAT data, it is recorded in the year 2018 at already very low levels. A direct consequence of the lack of trust is the choice of a precautionary attitude, which pushes young couples to postpone the choice of having a child. In this direction, a parallel discourse on inland areas could start, trying to unite two problems that travel on different tracks nowadays. The abandoned villages would need new inhabitants, large public and private investments for the recovery of buildings, and new infrastructures. They could become the concrete answer to the need to offer housing and work to young people. A policy for families that is at the same time a policy for the repopulation of inland areas.

"If we think of the birth rate crisis affecting our country and the general phenomenon of population aging, finding solutions and introducing innovations in these extreme contexts means experimenting anticipatory intervention practices for social situations that can be found in other contexts" [11]. The abandoned villages adopt a central role for the national welfare policies during the coming years. This re-processing would certainly be much more complex and articulated and presents numerous aspects that require long and detailed studies. It is certainly not easy to cause those areas to be attractive that have been the protagonists of incessant abandonment in recent decades.

Speaking about crisis, a particularly interesting contribution is provided by Giovanni Carrosio in his book, *I margini al centro. L'Italia delle aree interne tra fragilità e innovazione*, where the author expresses the need to emphasize territorial inequalities defined as an "ordering principle of analytical strength" [11] to understand the current transformations and provide a turning point. By reversing the gaze and putting peripheral areas at the center, great changes acquire their original perspectives for analysis. In this book emerges what the author defines as the three crises: the environmental one, the fiscal state one, and the migratory one, underlining the interconnection between them in generating the current condition of marginal areas. "The places on the margins are spaces of criticism and social experimentation, bearers of requests and new development models [...] in advantage over the centers, placing themselves as laboratories capable of producing solutions and contaminating—or innovating—others territorial contexts" [11]. "Climate change, loss of biodiversity, hydrogeological instability are elements that make up the environmental crisis, which can be expressed directly in the territories on the margins" [11].

What is hoped for now, as the author clearly points out in his conclusion, is this new way of observing the problems from the margins that will find confirmation in the institutions in a more ordered sense. In this way the numerous individual experiences of success could be recognized in the future, valued, and replicated in other contexts. It would be desirable to be able to orient public policies to these places, increasing their resilience, bringing them closer to citizens, and causing them to be equal to the change that the margins represent. These issues are further explored by the working group of Aree

Fragili [12], of whom Carrosio is a founding member. The social promotion association Aree Fragili aims to bring together the people who, during the annual conferences, informally created the “community of practice fragile areas”. In addition to the development of a community of practice centered on the study and promotional action of environmentally and socially fragile areas, with particular attention to rural areas, the association intends to continue to organize an annual conference that develops the themes of socio-territorial marginality, plus other seminars on specific topics to be held in areas reflecting problems of fragility and/or exemplary experiences of redemption. In addition, it wants to start collaborating with public, private and non-profit organizations working on the same issues according to a network model. A further factor to be taken into account when discussing the various crises that affect people’s lives, concerns with social inequalities. On this topic, it is useful to consider the broad work carried out by Fabrizio Barca in The Forum on Inequality and Diversity (ForumDD), that is an alliance of active citizens organizations and researchers aimed at producing and disseminating research, policy proposals, and methods for decision making able to enhance social and environmental justice, defined as sustainable substantive freedom. It was launched in February 2018 and now counts more than 110 members and project partners. The Forum operates through advocacy, alliances with social and labor organizations, a heated and informed dialogue with public institutions, and pilot projects at local level [13]. Working in marginal areas also means trying to work to reduce social inequalities, in an area that for a whole series of reasons suffers this type of problem more than other areas. The results obtained by the ForumDD can constitute a fundamental basis for proceeding with the regeneration process for inland areas.

2.2. The Numbers of the Crisis as Indicators of Territorial Fragility

In order to understand the background that defines the sphere of abandoned areas, it may be useful to start from the definition of fragility, an aspect that characterizes all the territories at the center of this research work. I refer to the definition of fragility proposed in a recent volume entitled *Rigenerazione urbana. Un glossario*. [14], which provides a glossary of the main concepts that are referred to when talking about urban regeneration, also at the level of inland areas. “In the face of the major climate changes and pandemics of recent years, the fragility of our system—environmental, economic and social—has become the first dimension to be reckoned with. Despite numerous and continuous advances in science, society is extremely sensitive to fractures, changes, and unexpected effects that undermine its management and control mechanisms. In order to protect a fragile system, behaviours or changes are usually implemented to make it stronger, therefore implementing the concept of resistance as well resilience. However, resilience carries within it a limitation: rupture. The real answer to fragility lies in antifragility. To overcome fragility, one must become antifragile. Antifragility is the true opposite of fragility. It expresses the characteristic of a system to change and improve in the face of external stressors in order not simply to protect itself but to adapt. An antifragile system embraces the unexpected, uncertainty, and positively assumes risk: concepts well expressed in Nassim Taleb’s book *The Black Swan*. This is why scientific thought is focusing on human relationships across different technological, economic and social contexts: to understand the nature and attitude of antifragility” [14].

When analyzing the crisis and the consequences it has generated, it is essential to know its numbers. In this direction it may be useful to retrace the research work presented in the Italian Pavilion of the XII Architecture Biennale in Venice, as part of Ailati. *Riflessi dal future/Ailati. Reflections from the Future*, curated by Luca Molinari [15]. This exhibition is a game of mirrors with the word Italy, a two-faced word that refers to the original look at Italian architecture and architecture outside the international media clamor. The project is organized in three large macro sections. The first one, *Amnesia in the Present. Italy 1990–2010*, is a review in images of the last twenty years that reads, for the first time, the complexity and density of a period that has seen the succession of different generations of architects and ideas. The second one, *Laboratorio Italia*, a central section dedicated to

a selection of built projects that have responded to 10 themes, and as many challenges, that cross the nation on a daily basis. The last one, *Italia 2050*, is the section dedicated to the future where exclusive visions and interpretations of the priorities awaiting Italy are presented.

It is precisely starting from the work Ailati that Fabrizia Ippolito created the volume *Paesaggi frantumati. Atlante d'Italia in numeri*. The idea behind this publication is that “in Italy some quantities are making the quality of the passages, that a multitude of materials, dynamics and subjects, individually not always relevant but cumulatively incisive, often invisible during their action but very visible in their own effects, they are producing phenomena of construction and modification” [16]. The idea is to reread and carry out a reconnaissance of Italian landscapes starting from their quantities. From the sharing of this thought, the rereading of the numbers contained in the volume allows us to draw on important information, which constitutes guidelines for the future development of the Italian landscape.

It was interesting to carry out a particular operation of rereading the volume, trying to find, from the more than seven hundred pages, those quantities that can also become interesting keys to assessing the current condition of marginal areas. *Paesaggi Frantumati* constitutes a useful and sometimes necessary tool in territorial and planning investigations, not only for the value of the numbers analyzed, but for the comparisons, the methodologies proposed and the directions it offers us. The ephemeral and transitory dimension, that characterizes number-based surveys by their nature, is completely overcome. The work I have attempted to carry out, consists of a selection of quantities from a greater quantity, an attempt to extract some numbers from many numbers, with the ultimate aim of elaborating visions, with possible directions for formulating hypotheses for intervention and regeneration.

In particular, the chapter “Italy is a country of new natures” provides us with some interesting data: “In the last thirty years, the surface area of Italy has increased by 807 square kilometers, in the last sixty years the Po Valley has shrunk by 45 cm, every year the Alps rise by 1 mm. [...] Nature advances where man retreats, deserts and forests cover agricultural land that is no longer cultivated, they invade abandoned villages” [17]. These numbers describing the Italian territory are alarm bells that can direct some important choices in various sectors and in multiple disciplines. These observations on nature advancing, for example, become the basis for a broader line of reasoning, that will be dealt with in this text and that recall the themes of renaturalization.

2.3. The Exposure to Environmental Risk

Another factor not to be underestimated is the environmental risk to which inland areas are highly exposed. Abandonment is both the cause and the consequence of this risk condition. Phenomena such as the earthquake have accelerated the abandonment of these environments, which see the risk of other catastrophic phenomena increase, precisely because of the man's absence. For example, when floods or fires occur, the negative consequences increase exponentially due to the lack of maintenance associated with the anthropogenic presence. “A misunderstood ecological sense could lead us to think that some areas are finally reaching a better balance between resources and population, leaving more and more space for nature and wild animals. Unfortunately, this turns out to be largely false. [...] In some respects, poorly guarded areas are more at the mercy of ecological threats such as illegal discharges, poaching phenomena, the taking of materials from riverbeds, not to mention hydrogeological instability” [11].

The World Economic Forum in 2019 published the fourteenth edition of the *Global Risk Report* [18], based on the survey conducted among experts and decision-makers from the various sectors of the global economy on the perception of risks at an international level. The main global risks remain linked to environmental issues, representing five of the top ten global risks both in terms of probability of occurrence and impact: in particular, climate disasters are still the main risk in terms of probability.

Starting from the analysis and study of risk is a choice dictated by the desire to use the Sustainable Development Goals (SDGs) of the UN Agenda 2030 as a reference.

Among the sustainability objectives of Goal 11—Sustainable Cities and Communities the theme of environmental disasters emerges in Target 11.5: “Reducing the adverse effects of natural disasters. By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease direct economic losses related to global gross domestic product caused by disasters, including water-related disasters, with particular attention to the protection of the poor and people in vulnerable situations”.

Going down to a national scale, we realize how even the Italian territory is at a high environmental risk, at a seismic and hydrogeological level. The risk [19] is the probability of reaching the level of damage in the conditions of use or exposure to a determined factor or agent, or to their combination. Risk is a probabilistic concept, that is the probability that a certain event capable of causing harm to people will occur. The notion of risk implies the existence of a source of danger and the possibility that it turns into damage.

It is critically important to consider the ability to respond to risk. If we think, for example, of an earthquake, we have two possibilities: first, the safety of the territory and the construction of anti-seismic buildings to be less vulnerable; on the other hand, to generate a migration phenomenon of populations from dangerous places, to reduce exposure to the danger itself.

These two possibilities are viable directions, but they require a reasoning that leads to evaluating the multiple social and economic aspects that the two choices could modify.

In Italy, these issues are treated today with two very different attitudes, the desire to want to secure everything and, at the same time, the attitude of remaining still waiting for a catastrophic event to occur and then treating the post-tragedy. The first position is difficult to pursue since the current demographic shortage and the scenario that lies ahead in the coming years do not justify a similar choice. The second position is currently almost always travelled: reconstruction interventions with a high expenditure of resources, where prevention would however require high but more contained costs. Acting proactively would also cause it to be possible to carry out precise and targeted interventions trying to minimize the waste of resources.

This stalemate—or standstill—can be approached in a different way with a hypothesis that is placed in an intermediate position: the idea is to provide a critical and realistic vision to make choices. The theme is to decide on which portions of the Italian territory to intervene with safety measures and on which instead to apply new tools that recall themes such as re-inhabiting, densifying, and renaturalization, which in particular finds positive feedback from the environmental, ecological, and touristic point of view.

The inland villages that are the protagonists of the safety measures could become the answer to the need for new homes in a larger subsidized building project, which sees the main action in the recovery of abandoned buildings. A concrete answer to instill security and trust and respond to the needs of the youngest.

3. Possible Sustainable Transformation Scenarios for Inland Areas

3.1. A Controlled Renaturalization: “An Immense Forest Dotted with New Ruins”

In order to talk about landscape, it is necessary to attempt a definition. “Landscape, in my opinion, means that which is within the reach of our gaze. For the blind, it means that which is within the reach of all the other senses. To the question “what is landscape?”, we can answer like this: what we store in our memory after we have stopped looking; what we store in our memory after we have stopped exercising our senses within a space invested by the body. There is no scale, in the landscape, it can appear in the immense and the minuscule, it lends itself to all kinds of matter—living or inert—, to all places, unlimited or without a horizon [...] Since it is a perception (and its transcription, for example in a painting: the first landscape painters were painters, not decorators), the landscape seems essentially subjective. It is read through a powerful filter, made up of personal experience and cultural armoring” [20].

A nostalgic vision, towards the Italian territory, pushes at the image of the “original landscape” proposed by Franco Purini in a 1991 issue of *Casabella* dedicated to the Italian landscape: “The landscape is therefore the awareness of the relationship between initial aspect of a neighborhood of the earth and the configuration that it ends up assuming in a certain time. [...] This is [...] the result of the idealization of the initial scene of the creation of a landscape in which the primary elements already bear the signs of the advanced stages of their transformation. The image towards which a scene tends turns into a sort of premonition superimposed on its original configuration that is granted to the imagination only after a radical and often agitated virtual deconstruction of the building layers deposited on a site” [7].

A possible solution may be to begin an analysis to identify macro-trends, focusing attention on the less safe areas that have suffered the abandonment phenomena. Therefore, starting from a storytelling of risk and abundance, minor areas are defined that can meet two different trends: in the first instance, repopulation, where the accessibility requirements in the event of seismic and hydrogeological risk can be guaranteed; secondly, the renaturalization and safety of the territory, with the aim of guaranteeing a greater environmental quality of the anthropized and non-anthropized landscape. It opens up to a different possibility for these territories, which goes beyond the utopian vision of total safety and generalized restocking for all the inland areas.

Returning to inhabiting abandoned areas means transforming the heterogeneous “abandoned matter” into an articulated device capable of responding to the differentiated needs of all social subjects. Where the conditions necessary to favor restocking are not guaranteed, it is possible, on the other hand, to carry out a controlled renaturalization. This process can take place using “green matter” in order to ensure greater safety and livability of the environment. “Green matter” can provide a series of ecosystem services to the environment and the society, from the protection of the stability of soils and slopes to protection from landslides and rock falls, reducing the risk of floods. Land consumption is one of the aspects of land management on which the European Union has focused for several years. Among the possible ways to preserve and reduce land consumption, renaturalization can be an example of reducing the anthropogenic presence fostering the return to the original landscape. A controlled renaturalization will preserve the environment and push the architectural debate towards new landscape’s representations and forms.

Renaturalization is a method of securing and green transformation of the territory, which is also the city and its architecture. It can become a useful tool in the planning and design processes of the territory, given the positive impact it can have on the quality of social life and social processes.

In a certain way, the theme addressed by Vittorio Gregotti in the *Casabella* issue dedicated to the design of the Italian landscape [21] opened the “possibility of investigating the foundation of a design technique for the transformation of the anthropogeographic landscape from the point of view of architecture” [22]. Already, at the beginning of the 1990s, a scenario was hypothesized that recalls the themes of renaturalization: “The Apennines, an Italian corridor today largely marginalized, would be entrusted with the task of reconstructing an original landscape in the form of an immense forest dotted with the new ruins of the village centers finally left free to return to their remote memories” [7].

Talking about renaturalization, the forest can be considered as a building material. “Green is a complex organism capable of triggering multiple beneficial functions, including ecological–environmental, climatic, hygienic-sanitary, thermo-regulating, reducing noise pollution, protective and soil protection, recreational, aesthetic and landscaping” [23]. In a key to the regeneration of urban and extra-urban environments, the use of the forest as an architectural and technological element is a tool of fundamental importance for the purposes of a sustainable design of the environmental system at all its scales. In carrying out this operation, it is important to take into account ecosystem services, the multiple benefits that plants and vegetation are able to provide to the environment and society: solar radiation control, biological control, carbon capture, acoustic improvement, air quality,

protection of the stability of soils and slopes, protection from landslides and rock falls, reduction in flood risk, and a long series of factors that can ensure greater accessibility to the territory from an environmental, ecological, and tourist point of view. It is a question of applying forms of controlled abandonment of the territory to restore a certain balance between the man-made environment and the spontaneity of nature. It is not possible to think of letting nature take its course without any form of management. An example above all: in the mountains, the forest is constantly growing without adequate control and its continuous development would lead to an increase in the level of danger. In the plains, over the centuries, we have witnessed an important deforestation activity and it is now very important to plant new trees to try to compensate for this lack. It is necessary to ensure that nature regains its space but in a controlled way to ensure the conservation of biodiversity. New woods in the plains, new green areas in the mountains, new or restored parks and green areas managed and controlled to ensure they are accessible, and usable as tourist and leisure areas are required to change from abandoned and unsafe areas to places that find a new destination of use, becoming safe and usable environments.

3.2. Building Materials, from Tradition to Innovation: Reuse and Reconversion as a Tool for the Recovery of Abandoned Buildings

“The project must therefore aim at a clear redesign of the Italian landscape that does not disdain even the demolition gesture to gain a renewal of the forma regionis” [24].

With this premise it opens to the possibility of demolishing those parts of buildings that have become ruins over time due to the absence of man; carry out selective demolitions with the possibility of recovering waste materials to reuse them in those villages or hamlets in which they instead opted for reconstruction and safety measures in view of future reuse. In the process of reconversion and redesign of abandoned villages, it is important to define a set of interventions that can be previously assessed in terms of costs, displacements, and installation, so as to predict general construction costs in advance and in a simple way. It is a question of implementing a modernization in the management, from an energy and environmental point of view, of all those technological aspects concerning the building scale, with particular attention to the management of the direct and indirect costs of the construction site. Promote an innovative model of management of the architectural process, which sees the recovery and reuse of materials as essential paradigms, through which to start a process of transformation of the building fabric, with the aim of promoting a general improvement of the built environment.

Therefore, refer to the use of a mixed system that allows to work on standard products adaptable on site, through prefabricated products such as lightweight aluminum structures. These systems can be easily modified without the need for bulky machinery, but with simple cutting tools that can be used directly on site. Building a potentially reversible form of transformation, which allows for interventions in full respect of the original artefacts, a crucial aspect when intervening in certain protected areas.

The recovery of a village can arise through an integrated process that sees the tools of traditional recovery flanked using the new technologies and innovative materials.

A new scenario opens the possibility of reaching more philological recoveries, certainly reversible for more important buildings, and for instead implementing a series of standard interventions for the other buildings. This mix of languages can respond to the need to operate in the villages, defining a system that thanks to its flexible structure can be increased over time according to the different technological developments of the materials or the local availability of resources.

4. Discussion and Conclusions

Renaturalization processes, applied to abandoned villages, represent a type of project that has not obtained yet an adequate development in Italy. The Italian territory is one of the most anthropized in the world and it is necessary to think about a possible future for the large number of existing architectures. At the same time, it is not possible to think

of recovering all the buildings spread over all the marginal territories. One hypothesis could be to apply a critical attitude toward marginal areas that have less potential for future development, also taking into consideration the data and evaluation criteria provided in the previous paragraphs. In order to draw on experiences that could become replicable models, we can refer to those episodes that have achieved important results in the European context. For example, we can consider as a reference, the experiences of functional reconversion of former landscapes and mining sites conducted in Germany since the 1990s, coinciding with the progressive contraction of coal mining and processing.

“Among these pioneering experiences are certainly the two editions of the Internationale Bauausstellung (IBA) held in the Ruhr (IBA Emscher Park, 1989–1999) and in West Lusatia (IBA Fürst-Pückler-Land, 2000–2010), during which numerous innovative strategies were planned and implemented for the redevelopment of disused mining sites and, at the same time, for the economic and social revitalization of entire former industrial regions in steep decline. In the case of the Ruhr, the highly anthropized landscape (an urban-industrial agglomeration of 53 cities with a total of 5.5 million inhabitants) has favored a dual interpretation of the former mining sites as elements of an ecological–environmental network—the Emscher Park—and stages of a cultural–tourist itinerary for the rediscovery of the region’s industrial past—the Route der Industriekultur” [25].

The proposed work takes place on a different scale and in territorial environments with characteristics that are distant in time from those that define the marginal areas, but, at the same time, these examples of sustainable regeneration dealing with the themes of renaturalization could constitute study traces from which to develop concrete proposals that lead to action on Italian territory. We can start working from models that have produced positive results, in order to reinterpret and to reactivate them in new areas, trying to cause them to become experimental models for different forms of design and also for new ways of thinking about architecture and landscape.

When we talk about landscape, what is certainly missing is an intervention by political institutions, which often leave the responsibility to take action to individual municipalities or local cooperatives and associations. In this context, Franco Zagari offers an interesting insight into what he calls year zero. “It is a Year Zero that we need, to grasp the cultural, economic, social need for a radical overhaul of the orders, starting precisely from the restitution of a principle of responsibility:

- Choosing, experimenting, welcoming and directing every available resource by guiding it, and if possible, anticipating it opening up with confidence to the consultation of all social components, fostering awareness and assumption of responsibility, bringing into play all available knowledge and promoting its hybridization;
- In the implementation of urban planning instruments, decentralize and ensure the duties and rights of each subject that is the bearer of an initiative in accordance with the plan policies are transparent, simple, and agile;
- In the implementation of public works, to place trust in the authors chosen as the most suitable, to shift the focus on the quality of the project as a whole, also calling into question the courage of choices that are not only constructive and economic but also aesthetic” [26].

Parallel to the hypothesis that recalls the themes of renaturalization, other possible scenarios open up for the inland areas, which instead concern those villages for which it has been decided to opt for a principle that does not envisage pandering to abandonment. The alternative scenario seeks, in a diametrically opposite direction, to trigger regeneration processes through a sustainable use of resources, recalling themes such as recovery and re-use. In support of this thesis is the account of an experience of co-projecting carried out in the administrations of Resia, a municipality located on the margins of Friuli-Venezia Giulia, a region in the north-east of Italy. In particular, this research project led to the design of a space with tourist-information purposes, to be realized in a small village in the Friulian inland areas, specifically in the hamlet of Prato in the municipality of Resia, in the province of Udine. The request of the municipal administration was to create an info-point in the

area adjacent to the headquarters of the Julian Pre-Alps Park, a place located next to the town hall. It was decided to opt for a wooden building, to be constructed with prefabricated modules, produced by a company that operates in the region, according to environmental sustainability criteria and using local materials. A small building that is easy to construct, composed of lightweight panels that can be transported to the site with small vehicles in order to minimize the environmental impact and installation costs, thanks to the very short construction time. A sustainable building with a high level of comfort; a first building, a sort of case-zero, that once built and used can become a model, easily replicable in other areas, inside and outside the municipality of Resia.

They are no longer unwanted and marginal spaces but potentially sought-after places. “Repopulating the small municipalities of the inland areas means being able to return to living that condition of density of spaces that alone creates an urban community, but changing the size and breadth of domestic spaces and enjoying an extraordinary relationship with nature and the landscape” [27]. The nostalgic attitude of returning to villages, which trivializes them by causing them to be mere museums of rural life, is abandoned. Instead, it opens up to a broader scenario of a global rethinking of these fragile territories, protagonists of a possible economic and demographic development project. In order to continue this path, it is important to connect the villages with the large cities, that must have dialogue with these marginal portions of the territory. “We do not need new cribs, but small, active centralities to protect a still extraordinary territory” [27]. To aspire toward this result, jointly constructed strategies are indispensable, among all the protagonists who revolve around the world of inland areas.

In trying to propose new scenarios for the regeneration of inland areas, a decisive role can be played by the Local Action Groups (LAGs) [28] that we find spread throughout the Alps. “For the most part, LAGs and their action tools (Local Development Plans) are tied to rural development and think of local development often on a tourism basis, keeping them disconnected from an integrated territorial vision. Furthermore, the territorial perimeter of the LAGs is linked to a reading “by valleys” that denies the metro-mountain dimension of the territory and the relationships between valleys and foothills. What is needed instead is a reading of the metro-mountain space “in section” or “from top to bottom”, which looks at the upper valley and the piedmont as integrated. A reform of the LAGs from a functional metro-mountain perspective, therefore, is capable of strategic collaboration with urban nodes in a broader vision of local development. All this requires a common vision of a vast area, not crushed by administrative borders, not enslaved to the search for short-term political consensus, which identifies and promotes social and institutional innovation at the level of metro-mountain polycentrism, its sources, and its actors [29]. Metro-mountain is a new word created by De Rossi and Barbera that aims to enclose under a single term two realities that appear divided to us, deconstructing the opposition between city and mountain.

The identification of inland areas is clear, if we evaluate the roughness of these territories as the distance from basic services. Once the basic scenario has been defined, an attempt has been made to promote a strategy trying to rebalance the relationship between man and nature, which can be implemented through renaturalization processes, to allow nature to take part back of its spaces, always under human control. Another problem to be solved, even more complex, is the explanation of the method that must be followed to implement the various strategies proposed. The participation becomes a condition of priority importance: trying to unite the local knowledge with political processes, starting from the founding idea, that the participatory process, in the democracy of this century, is the way in which advanced knowledge, technological and engineering of the highest profile, meets with local and sectoral knowledge that is familiar with territorial dynamics, problems, needs, and local aspirations. In this context, the central role of the mayors of the cooperatives and the federations emerges as a trait d’union between the different knowledge involved in this kind of regeneration processes.

Transforming the current conformation of inland areas with the ultimate goal of promoting a technological and modernization design of buildings is necessary. Choosing sustainable materials, first and foremost wood, whose physical and technical characteristics cause it to be an emblem of a regenerative process in a sustainable key.

Sustainability is again the center of a process of the reconversion, reuse, and recovery of existing buildings that can be modified and improved in terms of seismic, thermal, and general living comfort.

Funding: This research received no external funding

Data Availability Statement: All data used during the study are presented in the paper.

Conflicts of Interest: The author declares no conflict of interest.

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