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REPAIRING LANDSCAPES TOWARD THE REGENERATION OF PERIURBAN ECOLOGIES. A LIVING LAB PROCESS IN THE SOUTH OF ITALY

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Abstract. Contemporary metropolitan areas present landscapes in transition towards sustainability, showing a regenerative potential based on their own natural, aesthetic, social, eco-systemic characteristics. This is connected to forms of landscape regeneration, taking into account different structures: spatial features, economic forces, but also communities' perceptions and imaginaries. This paper unpacks this general question by making reference to some experimentations in the Campania Region in the South of Italy, and by investigating the ecological dimension within an Urban Metabolism approach and through a Living Labs methodology, to achieve communities' and institutional engagement in the co-creation of knowledge and regeneration strategies.

Keywords: co-creation, ecology, Living Labs, regeneration, repairing, periurban, socio-spatial dimension, transitional landscapes, urban metabolism.

Introduction

A periurban landscape question in a socio-spatial and ecological dimension

A central issue for contemporary metropolitan areas relates to the identification of forms of unconventional, latent landscapes (Forman, 1995, 2008), which show a regenerative potential on the basis of their own natural, aesthetic, social, eco-systemic and environmental characteristics. This is connected to the increasing need to regenerate the ecologies of severely urbanized landscapes in a metropolitan dimension (Amenta et al., 2022). In this paper, this general question is developed with reference to the territory of South Italy, and in particular with reference to research within the metropolitan conurbation of Naples and Caserta in the Campania Region.

These territories show a complex combination of urban and periurban settlements between the city and the countryside, in a phase of transition due to a continuous process of transformation of functions, activities and settlements, taken to extremes by abandonment phenomena with loss of ecological values.

Figure 1. Types of Landscapes: urban core, compact city, fringe, periurban areas, rural zones:
n.1 from top. photomontage edited by Annunziata Alfonso Maria. Urbanism studio_D (DiARC); n.2 from top. photomontage edited by Valentina Vittiglio and Lorena Santamaria. Master Degree in Architecture (DiARC); n. 3 from top. photomontage edited by Salvatore Ferraioli. Urbanism studio_D (DiARC)
Source: International Exhibition 'Transitional Landscapes' (2020-21), section 'Images and Projects for the Landscape of Campania Region'. Edited by DiARC Team for Landscape Plan for Campania Region (Map reference: E. Formato / Data: F. Garzilli, N. Fierro).

In this reference area, with the end of the Second World War the landscape had to cope with the spatial changes caused by a boom in demographic and economic growth. The existing border between the city and the countryside starts blurring, due to a long-term process of urbanization of low-density suburban and fringe areas, severely crossed by high-speed infrastructures of railways and motorways (Attademo & Formato, 2019), coinciding with both residential areas and specialized settlements and productive areas, commuting zones of large cities and smaller urban centres.

In the post-metropolitan city model, according to the geographer Edward Soja (2000), the urban region is no longer concentric, but characterized by gradients of population density and uses, which transform the relationships between external areas and metropolitan cores: the external areas become increasingly demographically and functionally dense and differentiated, and new spatial and functional layouts emerge.

In this large redefinition of spatial relationship, periurbanization (Piorr et al., 2011) coincides with in-between territories, which support the crossing of flows of materials and resources between the city and the rural areas (Fig. 1).

In Campania, the presence of large infrastructure networks generates fragmentation of the landscape components and becomes a catalyst for low-density urbanization phenomena, close to compact city cores, showing the absence of urban centrality, low settlement and environmental quality, and concentration of operational landscapes (Brenner, 2014). These territories are stuck between sectoral approaches or informal building processes, as in the case of illegal housing due to vacation or to disadvantaged conditions.

At the same time, the presence of all the abandoned interstices, awaiting for a new life cycle restoring deep identity and meaning for everyone, and of all the residual spaces of the agricultural territory unravel a potential dynamics of restoration and regeneration, through their design treatment, in multi-scalar strategic frameworks able to restore ecological values in networks of public facilities and open spaces across periurban areas.

In the Horizon 2020 project 'REPAiR. Resource Management in Peri-Urban Areas. Going beyond urban metabolism', the research unit of the University of Naples Federico II worked on these landscapes, collaboratively building eco-innovative solutions and strategies with the involvement of local communities and all interested stakeholders for the systemic reuse of post-construction and organic waste for the reactivation of wastescapes (Amenta & van Timmeren, 2018). Here, the periurban landscape constitutes an area of re-balance for the city and the countryside, absorbing and combining not only their characteristics, but also their materials and (Rigillo et al., 2020). In REPAiR project general assumptions and overall hypothesis, waste can become resources and wastescapes become the point of intersection and territorial reactivation, according to the principles of the circular economy and circular urban metabolism, as well as of nature-based solutions, in shared and regenerative visions (Russo & van Timmeren, 2022). These visions have been developed in a multi-actor environment, following the Urban Living Lab methodology, an inclusive process to handle complex issues at multi-scale levels (Ståhlbröst & Holst, 2012). In the project they have been specifically referred to the specificities of (Peri) Urban Living Labs (Steen & van Bueren, 2017; Amenta et al., 2019) and combined with the Geodesign framework (Steinitz, 2012), which integrates social interaction in a decision-making process aimed at territorial regeneration (Amenta et al., 2022).

In 2019, during the timeframe of the REPAiR project, Campania Regional Authority started the development of the Regional Landscape Plan, with the scientific consultancy from the University of Naples Federico II. This coincided with the development of a framework of baseline knowledge on regional landscapes, with a specific focus on their most vulnerable components and most

risk-exposed territories. Here, the mapping of periurbanisation and wastescapes on a regional level becomes the intersection between physiographic components on a spatial level and local meaning and hidden resources, based on data collected within co-creation activities. In coherence with the European Landscape Convention (CoE, 2000), in the Regional Landscape Plan fragile landscapes must be identified through field research by professionals, but working in a strong interaction with local communities, within a planning process aimed at the regeneration of compromised areas and the design of landscapes, also with specific preservation and valorisation interventions.

This paper focuses on the co-creation processes implemented within the methodological framework of Urban Living Labs, through which these visions to regenerate landscapes for public use are collaboratively imagined, designed and then effectively realized. The field of action is twofold: on the one hand, it regards Urban Metabolism, as the methodological approach that can reimagine the ecological question in periurban areas but in a systemic way, also incorporating the social and spatial dimensions; on the other hand, the paper is focused on co-creation activities, as methodological tools to achieve communities and institutional engagement, while co-creating place-based services, including 'eco-systems services' as in the case of the recovery of degraded landscapes.

The two following sections pose the question of how to deal with landscapes to be ecologically repaired not only through interventions on the spatial dimension, but also simultaneously acting on the plurality of society imaginaries within place-based collaborative processes carried out in the Living Labs. The methodology of Urban Living Labs is then explored, with reference to the case study developed in the Horizon 2020 project REPAiR. Main findings of the application of this methodology in the landscapes to be repaired are mentioned in the Results section. Future perspectives and agenda (section Discussion and conclusion) refer to the further implementation of REPAiR methodology (both in terms of spatial analysis and co-creation activities) within the in-progress landscape planning.

Repairing the landscape

The multiplicity of landscape imaginaries and perceptions in the urban region between Naples and Caserta today seems to respond to the collective demands to repair the landscape focusing on values such as healthiness, spatial and environmental justice, safety (Palestino, 2012, 2015; Berruti & Palestino, 2018) within an ecological perspective. Besides being protected and enhanced, these landscapes require being repaired through a collaborative effort by institutions and society. The repairability of the territory acts as a guarantee for a wide-ranging sharing of landscape values, starting from the investigation of landscape perceptions.

The contemporary landscape can be read as an assemblage of images resulting from the interweaving of a plurality of stories, memories and narratives that convey perceptions of diversified users and intentions, condensing them around the formation of specific imaginaries. The dispute between conflicting images, more and more frequently, produces the weakening and progressive loss of some imaginaries and the prevalence of others, favoring the disappearance of meanings that minorities attribute to their landscapes.

The risk related to the presence of conflicting images is twofold: flattening the profound meaning of landscape imaginaries to respond to market needs that end up weakening the 'imageability' (Lynch, 1960) of contemporary territories; or neglecting the complexity of highly compromised landscape ecosystems, enhancing labels of stigmatization that return homologated interpretations of urban and periurban regions. Countering this drift, it is necessary to explore the set of actions necessary to describe and interpret the landscape in a plural key with the aim of placing landscapes to be repaired at the center of programs, policies and projects.

Figure 2. Extraordinary, fragile and stigma landscapes: perceptive-valuable factors: n.1 from top. photomontage edited by Roberta Braca. Master Degree in architecture (DiARC); n. 2 from top. photomontage edited by Mara Longobardi e Claudia Pengue. Master Degree in Urban Planning (DiARC); n. 3 from top. photomontage edited by Salvatore Ferraioli. Urbanism studio_D (DiARC); n. 1 from bottom-left. photomontage edited by Elisabetta Terracciano. Urbanism studio_D (DiARC); n. 2 from bottom-left. photomontage edited by Marano Francesca. Urbanism studio_D (DiARC)
Source: International Exhibition 'Transitional Landscapes' (2020-21), section 'Images and Projects for the Landscape of Campania Region'. Edited by DiARC Team for Landscape Plan for Campania Region (Map reference: G. Berruti, M.F. Palestino / Data: F. Vingelli).

Building on the outcomes of REPAiR research, in the Campania Landscape Plan landscapes to be repaired can be grouped into three main categories: **extraordinary**, **fragile** and **stigma** landscapes. (Fig. 2).

In **extraordinary landscapes** the very high cultural, environmental and symbolic value is frequently crushed by the poverty of an image increasingly dependent on tourism marketing, without evolving to respond to the new images conveyed by settled or transiting populations. In the Campania region, reference is made to universally recognized landscapes such as Pompeii, Capri, Vesuvius, which risk perpetuating the stalemate of images that paralyze the present and prevent the region from projecting itself into the future. Among extraordinary landscapes, in the urban region between Naples and Caserta, there is the Royal Site of Carditello, a symbolic place where the exceptional dimensions of the historical artistic heritage and the fragility of the territorial context converge (Verdile, 2014). In such a context, where the dimensions of protection and valorization often play a paralyzing role with respect to the future, repairing means designing constraints and opportunities that allow to continue a dialogue with contemporary needs and, possibly, to look at the past by introducing elements that re-actualize landscape meanings and imaginaries.

Within **fragile landscapes** vulnerability is mainly due to territorial depopulation and/or the abandonment of productive uses linked to the ordinary maintenance of the natural and built environment. These are a multiplicity of landscapes that make up the so-called inner Campania: for example, the Upper Caserta area, characterized by a residential and functional decline although traditional valuable environments persist. Fragile landscapes are marginal places rich in natural resources but lacking in infrastructural opportunities and logistical support useful to trigger new production phases and the return of young generational groups. However, a cultural transformation is underway which is leading to the construction of new centralities compared to those consolidated over time (De Rossi, 2018). In these contexts, valorisation can start from the trigger of virtuous synergies between different policy sectors and from a dialogue with local actors, unlocking the stalemate and the delay in development.

Stigma landscapes include sites of regional interest for reclamation, or territories marked by volcanic or seismic risks, where the abandonment of productive uses and the spread of urban informalities (Berruti & Palestino, 2020) ended up reverberating malignant effects on the well-being of local communities (Palestino, 2015). Among these, there are the area once known as Campania Felix and then Terra di lavoro, and the Domitio coast, characterized by a variety of wastelands and a proliferation of wastescapes waiting for regeneration. These areas need a strong image relaunch, being faced with the need to rediscover or re-invent possible productive vocations that allow the territory to restart.

Responding to these challenges by appealing to traditional forms of protection and valorization would be insufficient. Rather, there is a need for the historical-artistic, natural and cultural heritage to become an opportunity to collaboratively build images and imaginaries so powerful to fight crime, restore unbalanced ecosystems and facilitate a plural local development shared by civil society.

In particular, representing landscapes to be repaired is important to open a dialogue with the imaginaries and values of the investigated territories in order to understand how to deal with socio-ecological imbalances and which actions to design to respond to them.

The proposed classification is not to be understood as a rigid framework. There may be overlaps in these categories in order to describe the specificity of some landscapes. The attempt to define landscape imaginaries that need to be repaired is based on the identification of features related to the specificities of the investigated contexts. On the other hand, facilitating the sharing

of landscape values also means being able to choose, case by case, which are the 'priority contexts' to face and the most suitable methods for dealing in the public arena with the overriding issues for stakeholders.

Collaboratively regenerating the landscape

Strategies aimed at collaboratively regenerating landscapes by repairing them can involve different steps, which become increasingly more operational:

- investigating community meanings and values to co-represent the landscape;
- communicating and managing plans and projects using inclusive approaches;
- collaboratively designing landscapes through the activation of places and actors.

The Image Survey approach, a qualitative methodology theorized and practiced by Kevin Lynch starting from studies on the perception of form (Lynch, 1960, 1990), can be adopted to investigate the plural perceptions of the contemporary landscape. Starting from the results of a survey tailored on local communities, it is possible to identify what to promote and to preserve, what would be appropriate to change, what is already changing and what appears to be most vulnerable to change. Adopting an Urban Metabolism lens, attentive to the functioning of ecosystem services, as direct and indirect contributions of nature to human well-being (Millennium Ecosystem Assessment, 2005), any dysfunctions or 'disservices' (Lyytimäki & Sipila, 2009; Sagie et al., 2013) produced by urban socio-ecological ecosystems can be highlighted. The next step is to test the willingness of local populations to take action to support the values of their landscape. This survey has the added value of 'narrating the resilience' of the investigated region (Goldstein et al., 2015), as it contributes to the emergence of unconventional narratives based on places that can be adopted in order to change current conditions and to influence ongoing policies (Palestino, 2016).

Among the methods and tools to investigate communities' landscape perception, we can list, since the 1980s, Community Mapping and the Parish Map, created by the English association Common Ground to explore the relationships between nature and local cultures with the contribution of art (Clifford, 1993; Clifford et al., 2006). Another participatory strategy for the collaborative design of landscapes based on Lynchian theories, is 'imaging', or 'construction of visually-based narratives on the potential of places' (Bass Warner & Vale, 2001, p. xv).

As shown in the following paragraphs, adopting imaging in relation to landscapes in the urban region between Naples and Caserta meant strategically focusing on the exploration and treatment of requests for care coming from the three meta-landscapes explored in the previous section.

The effectiveness of the repairing process can result in the activation of participatory processes that start from active listening and direct towards paths calibrated on the specific community needs and opportunities emerging in the region. How to communicate and manage ongoing plans and projects using inclusive approaches is the subsequent step, to be structured through the design of soft, but clear, interfaces involving planners, stakeholders and local administrations (e.g. Public Participation Geographical Information Systems, which collects users' observations and points of view through reports of landscape values, fragilities and disservices; Ball, 2002; Schlossberg & Shuford, 2005). All these methods can be integrated in the design of transactive environments such as the Living Labs, in the specific cases of Urban Living Labs (Steen & van Bueren, 2017), working on real processes and places, experimenting with the involvement of all the actors in the public arena with the objective to strengthen the convergence of plural territorial visions.

In this process, as described below, it is essential to work at the edges between the different fields of activation, identifying how specific resources can converge towards shared objectives and how to build a network of guarantees that supports different actors' initiatives. Ensuring a pro-

tection net to local actors, so to build a formal framework that supports them, is essential to guarantee the effectiveness of a collaborative design process, especially in Southern Italy. If carefully constructed, the protection network is useful for the development and implementation of master plans for pilot areas, where the design of scenarios has to correspond to a clear timing of objectives to be achieved in the different phases, and a clear knowledge of the available actors to implement them. A further step of the participatory process to be launched concerns the possibility of establishing mixed public/private partnerships by combating the weakness of social infrastructure. One of the risks related to plural processes is the possibility of prevarication connected to the protagonism of some actors. This does not mean that interests should be obscured, but that it is necessary to seek forms of agreement that involve a plurality of actors' interests, activating forms of transparent negotiation which help choosing with foresight which directions to take.

Methodology

Investigating Urban Metabolism through Urban Living Labs

The methodological approach of Urban Living Labs proposed in this paper looks at the question of how contemporary cities are undergoing a process of continuous transformation and linear growth, provoking increasing complexity, resource scarcity, spatial fragmentation, and environmental imbalances, as well as overcoming the ecosystems limits (Russo, 2022) and leading to ecological overshoot. Being the contemporary landscape in transition (Russo, 2023), and in a continuous movement towards a new socio-ecological equilibrium (Mininni, 2023), the planning approaches leading to circularity of resource flows, resilience and overall health are becoming more and more urgent. The latter needs to deal with territorial complexity and thus, to be effective, they should be tackled in novel and systemic ways, and through a metabolic lens, by interpreting cities and territories as ecosystems (Wolman, 1965; Kennedy et al., 2007, 2011; van Timmeren, 2014; Russo, 2021). Through the metabolic lens it is possible to propose an unconventional interpretation of the territory, by merging the objectives of the top-down agendas with the social needs and bottom-up approaches, and together with the transversal study of the metabolic flows (van den Boomen et al., 2017) which modify and strongly impact on the socio-ecological and spatial structure of the local contexts. At the same time, interpreting the territory through the lens of urban metabolism means to understand and tackle the rising complexity and fragmentation of cities. Thus, the necessity to integrate the multiple perspectives of different disciplines emerges, by comprehending long-term and visionary strategies responding to the global goals, with short term and very site-specific actions.

Fertile environments where to combine these approaches and expertise to manage the rising challenges of contemporary territories are the collaborative environments of Urban Living Labs (Bulkeley et al., 2016; Steen & Bueren, 2017; Amenta et al., 2019), where it is possible to intermingle institutional agendas with the requirements of local communities. Urban Living Labs can be defined as a user-centered and multi-stakeholders process of planning to develop eco-innovation and forms of social innovation. They are seen as an experimental arena for co-creating and managing research and innovation in real-world settings (Rizzo et al., 2021). Urban Ling Labs can benefit from physical and virtual agoras (Amenta & Lucertini, 2019) where they discuss potentialities for a better management of resource flows in cities.

In Urban Living Labs all the stakeholders have the same decision-making power, and they can collaborate in a safe and protected environment to co-develop innovations at all levels. Eco-inno-

vations are then finalized to develop sustainable urban and territorial regeneration and for a better management of material and spatial resources in urban and periurban contexts. Innovations could be: Political, Economic, Social, Technological, Legal and for the Environment (PESTEL analysis).

Urban Living Labs work and innovate at three main levels. Firstly, Urban Living Labs create awareness among a wide number of stakeholders by sharing knowledge on the certain topics debated in the labs; secondly, they ensure the care of the territory as a common (Formato et al., 2017) for which the eco-innovative solutions have been co-created with a large stakeholder involvement, by stimulating a sense of ownership of the developed innovation; thirdly, they ensure a great diversification of the expertise, and can allow, through a Research by design process (Amenta & Qu, 2020) to overcome the so-called institutional lock-in situation, by developing eco-innovative solutions (EC, 2011, 2012, 2018) which are beyond the path dependence and which are needed to face the so-called wicked problems like climate change, multi-risk and the need of closing loops of material resources.

Implementing Urban Living Labs

The methodology of Urban Living Labs is under continuous improvement, as soon as it is experimented in different research projects facing different problems and having a wide variety of objectives. Starting from the FormIT methodology (Ståhlbröst & Holst, 2012), and relying on some other and more recent experiences of Urban Living Labs (Cerreta & Panaro, 2017a, 2017b), the REPAiR project developed a five-phases Collaborative Methodology for Peri-Urban Living Labs (PULLS) (Amenta et al., 2019) for implementing a (five phases) Co-creation process for the Sustainable Regeneration of Wastescapes (Amenta & van Timmeren, 2018, 2022) and for closing the loops of resource flows.

The REPAiR five phases of co-creation – which work together and inform each other in a recursive way – are the following: 1. Co-Exploring; 2. Co-Design; 3. Co-Production; 4. Co-Decision; 5. Co-Governance.

The Co-Exploring phase (Phase 1) deals with the understanding of the tangible and intangible characteristics of the case-study, the spatial, socio-economic and metabolic structure of the territory, and it is co-elaborated, in an iterative way by alternating desk research with fieldworks and design exercises carried out in the Peri-Urban Living Labs, with the contribution of all the stakeholders (included researchers, students and experts) which are involved in the project and that can offer their site-specific know-how. This phase is finalized to co-define the main challenges/problems and objectives for the case study to tackle in the subsequent co-design phase.

Phase 2 (Co-Design) and Phase 3 (Co-Production) are complementary and they are finalized to the definition of the Change Model (Steinitz, 2012) to intervene and change the status quo by defining Eco-Innovative Solutions and Strategies and their functioning (REPAiR, 2018a, 2018b), for a circular and sustainable transition of peri-urban areas, and for boosting the innovation processes.

Phase 4 (Co-Decision) and Phase 5 (Co-Governance) are dealing with the decision-making processes, interpreting the agreements and possible conflicts between different interests and groups of decision-makers involved in the project, and aiming to trigger future local development and influence the decision-making process through co-creation. The last phase is also meant to deliver decision-making models based on co-creation and making them transferable to further cases (Dąbrowski et al., 2019).

The PULL events were collectively organized by the University of Naples Federico II team with the support of Campania Region Authority (CRA) in the timeframe of the REPAiR project, between 2016 and 2020. In the first four PULL events, participants included representatives of re-

gional, metropolitan and local governments and policy makers, waste management administrators, local companies' representatives and UNINA and CRA REPAiR teams, in forms of seminars.

From the fifth PULL event to the tenth, a Workshops formula was implemented. In this way, social organizations and active citizens were involved, to focus on the actual challenges and objectives for improving the quality of life of their territories.

This collective effort, developed within the Living Lab framework, and its results were extremely useful when Campania Region Authority decided to develop the Regional Landscape Plan, with the scientific consultancy from the Department of Architecture of the University of Naples Federico II, with specific reference to a Living Lab Co-Exploration phase, coinciding in seminars and mapping exercises among several academic and professional experts described above.

Results

PULLs as steps of innovation to co-create landscapes

The implementation of PULLS in REPAiR resulted in the proposal of a landscape regeneration process based on incremental, adaptive and flexible planning, where the most innovative element of the process lied in the PULLs as the construction of public arenas of public and private decision-makers with different skills, responsible for the care of the common good (their landscape), interpreted both as a crossing point of anthropic and environmental vulnerabilities, and as a starting point for territorial relaunch strategies.

The above mentioned level referring to the creation of awareness, led to the test and validation with stakeholders of the 'Wastescapes Map', co-developed - in an iterative way - by the research group through the use of composite indicators and datasets already available or specifically built for the project (REPAiR, 2018c; Amenta & Attademo, 2023).

The validation was expressly constructed working on the perception of risks and territorial fragilities within communities, asking if they recognize the mapped areas as neglected and if they want to add and/or eliminate areas.

The aim was to act on the awareness of people on topics of environmental fragility and spatial issues, to verify and broaden the available data, while increasing their resilience system thinking.

The result has been achieved through a series of workshops where the maps have been firstly shown and then dismantled by the stakeholders, asking them to intervene on the drawings, always soliciting their local knowledge (Amenta, et al., 2019).

This mapping of wastescapes accompanies a process of broadening the audience of explorers of the periurban landscape, through the combination of desktop research work and a perceptive reading, integrated into local contexts. Then, the participants were again involved in the setting of criteria that define the susceptibility to transformation (either regeneration, protection or valorization) of the identified wastescapes. These criteria have been developed by the research group through a review on the concept of 'Enabling Context' (Choo & de Alvarenga Neto, 2010; REPAiR, 2018c), firstly introduced to ease the relationship between Spatial Analysis, highlighting landscapes and environmental vulnerabilities, and Eco-Innovative Solutions, directing the interest of communities and institutions towards some priority areas where they can actively be involved in the level of the care of the territory.

Among the various identified criteria, REPAiR research group proposed to focus on the 'Transformability of the areas', based on the interests explicitly demonstrated by the stakeholders during the workshops (Amenta & Attademo, 2023).

As it is patent, this is the most relevant in a co-creation based environment such as the PULLs, as it can easily turn upside down selection of areas developed basing only on traditional sectoral approaches (e.g. based only on current regulatory framework, which risk to deepen socio-spatial inequalities), while enhancing the level of involvement of diversified expertise among stakeholders.

The final development of territorial strategies, to incorporate place-specific solutions to quantitatively reduce waste flows, works on the short supply chain but through morphological models, supporting the construction of spatialized eco-systemic services. Then, developed morphological models used metabolic systems as a lever for local development. The aim is to intertwine the dimension of flow accountability with its spatial effects, redesigning wastescapes as public spaces and facilities accessible to everyone, linking ecological, social and spatial domains.

Discussion and conclusion

Learning from PULL a Future Agenda: the Campania Landscape Plan

The PULL methodology has been the basis to start and orient further research activities of the Department of Architecture of the University of Naples Federico II as a scientific consultant for the development of a knowledge framework of Campania regional landscape[1], that has been approved with the Preliminary Landscape Plan of Campania Regional Authority in 2019 (Attademo et al., 2022).

These studies articulated an intense research work, organized through a series of seminars (entitled 'Towards the Regional Landscape Plan of Campania', 2019), which involved researchers from various universities of Campania Region, professionals and intellectuals, and representatives of public administrations. These scientists then developed, with different and multiple approaches, several essays which converged within a report accompanied by a graphic dossier, an Atlas which, in particular, puts in the form of a map an oriented synthesis of the principles, concepts, methods and techniques that are contained within the essays.

Specific contributions have been made on the subject of periurbanization, wastescapes mapping and resources/waste optimization for landscape regeneration and 'repair'. A central role is played by rural leftovers, as a driver for the production of 'functioning' landscapes where communities, which lost their attachment to places due to environmental fragmentation and social segregation, can identify themselves in a new dimension of local resources strengthening. In this sense, the Regional Landscape Plan builds on the findings of REPAiR, interpreting the potential of periurban areas in an ecologically-oriented dimension (Mininni, 2012), where it's possible to activate circular economy processes supported by defined morphological models of land regeneration, linking the reuse of waste and the regeneration of wastescapes through the enhancement of communities' imaginaries (Fig. 3).

The transformation of the landscape is a process that must address a multiplicity of actors and practices, in a collective phase of Living Lab Co-Exploration that can build on the link among different imaginaries. In this phase, the research team and participating scholars explored studies and personal research to understand the possibilities for also guiding a collaborative planning process. In this way, the study and interpretation of the regional landscape becomes part of a co-creation setting, capable of identifying in the landscape the combination of different societies and territories, their social imaginaries and perceptions, striving economic forces.

[1] The scientific consultancy has been guided by the Department of Architecture (DiARC) of the University of Naples Federico II, in a research unit coordinated by prof. Michelangelo Russo.

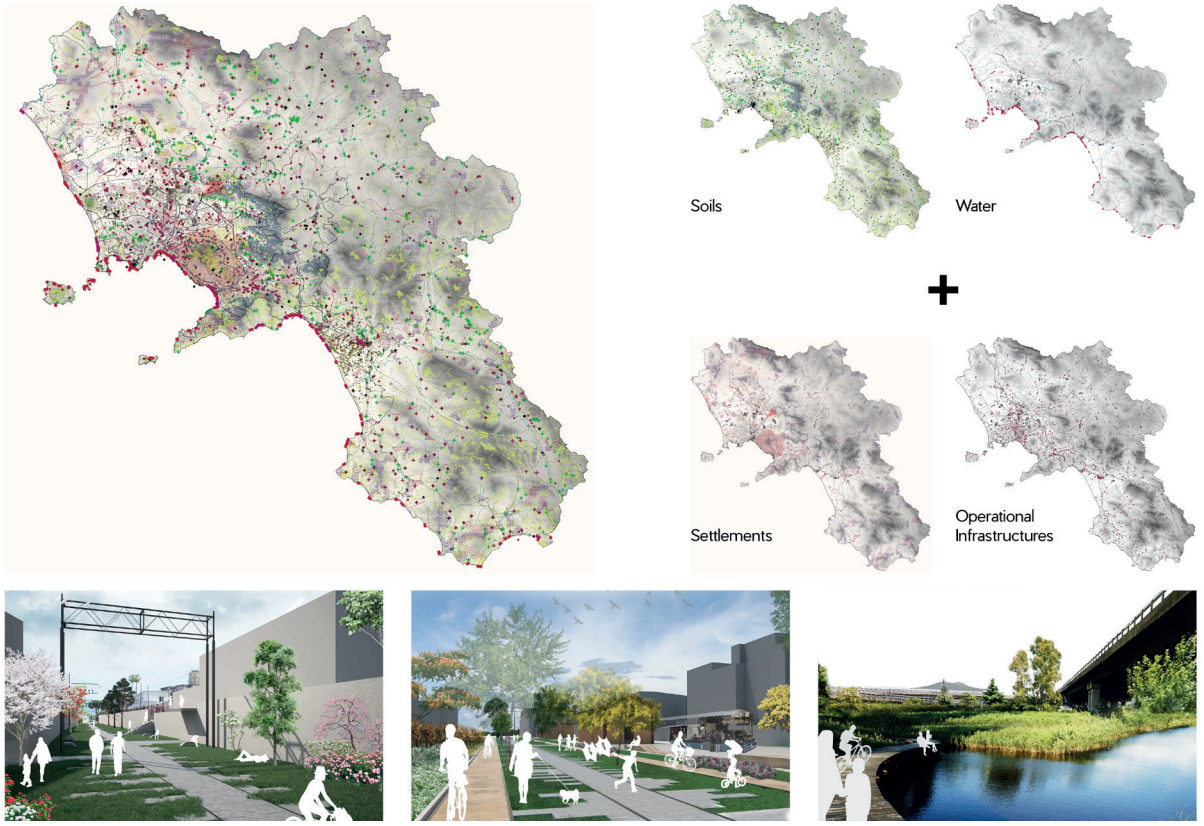

Figure 3. Wastescapes: places and factors of waste: n.1 and 2 from left. photomontage edited by Alessia Franzese. Master Degree in architecture (DiARC); n. 3 from left. photomontage edited by Fabio Di Iorio and Marco Norcaro.Master Degree in Urban Planning (DiARC)
Source: International Exhibition 'Transitional Landscapes' (2020-21), section 'Images and Projects for the Landscape of Campania Region'. Edited by DiARC Team for Landscape Plan for Campania Region (Map reference: M. Russo, A. Attademo / Data: F. Vingelli).

As it is defined by the Italian law (Law no. 42/2004) and according to the principles of the European Landscape Convention (CoE, 2000), this part will be capable of going beyond the general character of landscape zoning, describing in greater detail the specific conditions on which to orient valorization strategies, also on the basis of in-depth analysis and perceptive readings.

In a Living Lab Co-Design phase of Regional Landscape Planning, specific meetings could be useful to build systematic forms of interaction between researchers and social groups, between institutions and extended stakeholders (both public and private), defining future institutional choices and programs, overcoming traditional and main narratives on specific kind of landscapes (extraordinary landscapes). They will be oriented to a wide interpretation of the specificities of the territories, also including the most vulnerable and fragile parts as it is defined by the open concept of landscape provided by the European Landscape Convention.

Putting the community at the centre of the landscape policy means to work on open and flexible processes that can be really **effective** (Russo, 2020), raising awareness and sense of care within communities (Attademo & Berruti, 2022). Then landscape planning strategies will be oriented to preserve and valorize territories, establishing a strong connection among places and people, promoting well-being and sustainable development. This co-creation process can bring together different voices and perspectives, stakeholders from all levels (public, private, people), recognizing identities and empowering imaginaries. Having stimulated an open and democratic discussion between scholars created a set of interaction among those who govern, those who plan and those who live the landscape, which will eventually lead to the collaborative planning of the Regional Landscape Plan itself. This is an innovative action of 'visioning' to be built on the basis of intense social practices, in the form of cooperation and co-creation, to discover the latent potential of the landscape as an inseparable link between space and society, between territory and its inhabitants, as an unavoidable resource for building cities.

This design is then connected to the care of the territory, aimed at creating habitability and integration with the environmental and natural components. In this sense, repairing the landscape is an incremental and dynamic tool for collaboratively designing urban living spaces too, to overcome a sectoral planning distant from the people's needs. This co-creation of landscapes is guided by principles to re-inhabit spaces, supported by the individual and collective perception of those who inhabit them. It also becomes a space to rebalance the relationship between the city and the countryside, between areas that are vulnerable and in search of a new meanings with places of unexpected beauty and potential, discovered through the construction of a shared vision, aimed at understanding which ecologies to stimulate to keep communities connected to their territories.

In memory of Konrad Czapiewski

We shared with Konrad years of passionate research, and we had the opportunity to appreciate, in the many events that have seen us together in the various cities of our REPAiR H2020 network, not only his deep intellectual skills and his mental clarity, but also his calm, his cheerfulness, his authentic irony and sincere simplicity.

Konrad has been the leader of the Peri-Urban Living Lab of Łódź in the H2020 REPAiR research project. His early passing leaves in the whole scientific community and in our hearts a deep void that won't be fixed, except by the thought that Konrad lived a full life, achieving brilliant results in the field he had chosen and where he worked with passion and commitment, surrounded by the affection of his colleagues and friends.

Konrad's positive attitude towards life will always be a source of inspiration for all of us.

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