

# SMC

SUSTAINABLE MEDITERRANEAN CONSTRUCTION  
LAND CULTURE, RESEARCH AND TECHNOLOGY



Many different phenomena could produce alteration, decay, depletion or loss of material and immaterial assets that mark out landscapes. In this special issue, "Landscape at risk" is understood as concerning all the phenomena that could alter or interrupt that relationship between community and places, which lead to landscape features creation. Therefore, the topic "Landscape at risk" is addressed considering its multiple meanings: Landscapes under environmental risk, climate change effects, but also landscape at risk of abandonment, or at the contrary landscape overexploited by tourism and other intensive activities. Landscapes endangered by environmental phenomena are analyzed taking into account the way risk influences everyday life and the population-resources relationship underpinning landscape creation. Special consideration is given to climate change related risk and to methodological improvements to develop criteria and tools to achieve the integration of mitigation and adaptation measures within landscape. In addition, landscapes suffering drastic depopulation are investigated and the most suitable management processes to prevent modification of landscape features are proposed. Finally, causes, effects and possible solutions are examined for landscapes where exploitation levels exceed out saturation or where resources enjoyment is mainly based on an intensive consumption pattern and on the appropriation for commercial purpose, which lead to jeopardize the resources themselves, as mass tourism does.

**Carlo GERUNDO** is PhD Research Fellow at the Department of Civil, Environmental and Architectural Engineering of University of Naples "Federico II". He published works on the topic of urban adaptation to climate change and natural hazard mitigation in urban planning. He is designer in urban planning activities and advice for Public Administrations. He is a member of Italian National Institute of Urban Planning (INUR).

**Barbara TANGANELLI** is PhD Research Fellow in Urban and Technical Planning at the Department of Architecture of University of Naples "Federico II". She is an expert in Geographic Information Systems applied to decision support systems and in risk management. She has signed and published several works and took part to international research projects. She is expert member of the international committee of Urban Cities, Tours and Heritage (CITIES TOURS). She is member of the Federici3 group of UNICAPL, the European network of universities dedicated to landscape studies and education according to the principles of the European Landscape Convention.

SMC - SPECIAL ISSUE - 5-2021

LANDSCAPE AT RISK - 2021

Luciano Editore



LUCIANO EDITORE

SPECIAL ISSUE

N. FIVE 2021

# SMC MAGAZINE - SPECIAL ISSUE N. FIVE 2021

## LANDSCAPE AT RISK - vol. 2

000\_ COVER AND INDEX

003\_ *Notes on Landscape at risk and post-pandemic implications*

*Marialuce Stanganelli, Carlo Gerundo*

006\_ BOARD AND INFORMATION

### SECTION 1 – LANDSCAPE AT ENVIRONMENTAL AND CLIMATE CHANGE RISK

006\_ *Emergency management and urban planning: policies and actions for the Vesuvian coastal area*

*Marialuce Stanganelli, Carlo Gerundo, Maria Perillo, Beatrice Faggiano, Francesco Silvestri, Giovanni Forte, Giacomo Iovane*

013\_ *Insights on risk perception: the case of Friuli Venezia Giulia*

*Giorgia Bressan, Andrea Guaran, Gian Pietro Zaccomer*

016\_ *The post-disaster temporary landscape. Reflecting on housing and tourism practices in the crater of central Italy*

*Sara Cipolletti, Alessandro Gabbianelli*

020\_ *The complex thinking to avoid the "reconstruction risk". A design methodological proposal for Inner Areas*

*Giovangiuseppe Vannelli*

023\_ *Advanced planning for urban landscape enhancement*

*Roberto De Lotto, Caterina Pietra, Elisabetta Maria Venco*

027\_ *Elements of integration of Regional Landscape Planning with Risk Management Planning in Abruzzo*

*Donato Di Ludovico*

032\_ *Small Rivers and Landscape. Nature-based solutions to mitigate flood risk*

*Malena Magliocchetti, Valentina Adinolfi, Giacomo Viccione, Michele Grimaldi, Isidoro Fasolino*

037\_ *Post-communist urban landscape at risk – challenge and innovation*

*Tana Nicoleta Lascu, Cristina Victoria Ochinciuc*

### SECTION 2 – LANDSCAPE AT RISK OF ABANDONMENT

041\_ *Re-evaluating the distance: virus as a "great urban planner" in the rediscovery of inner areas at risk of depopulation*

*Francesca Bruni*

044\_ *On the relations between landscape and production. The case study of Rufoli in Salerno*

*Guglielmo Avallone*

051\_ *The landscape of the Amalfi Coast: an endangered paradise*

*Giorgia De Pasquale, Lorenzo Nofroni, Serena Savelli*

055\_ *Social ecology and traditional landscape enhancement. Some issues from a case study in the Gorizia Karst*

*Alessandra Marin, Alfredo Altobelli*

061\_ *Conservation through development: paths of innovation for protected areas*

*Giovanni Ottaviano*

064\_ *Circular economy as 'catalyst' for resilience in inner areas*

*Marco Rossitti, Francesca Torrieri*

068\_ *Designing the margins. A strategy for Lioni*

*Chiara Barbieri, Giovanni Zucchi*

073\_ *Landscapes at risk of peripheralization. A methodological framework for risk analysis to support planning strategies*

*Roberto Gerundo, Alessandra Marra*

080\_ Periurban landscapes, vulnerabilities and potentials for regeneration

*Anna Attademo, Maria Gabriella Errico*

SECTION 3 – LANDSCAPE AT RISK OF OVEREXPLOITATION AND TOURISM

084\_ Tourism in the time of COVID-19. A research on the behaviour and travel expectations of Italians

*Fabio Corbisiero*

089\_ Collaborative governance for coastal landscape integrated management. The Agro Pontino Coast Contract

*Stefano Magaudda, Serena Muccitelli, Carolina Pozzi, Cristina Palazzini*

093\_ Tourism in the Phlegraean Fields. Public perception and framing agenda of territorial public initiatives

*Salvatore Monaco, Carmine Urciuoli*

096\_ Environmental Hazard and Resource Use: a comparison Between Volcanic Landscape of Vesuvius and Stromboli

*Maurizio Conte, Dora Francese, Giuseppe Vaccaro*

101\_ Archeological resources: a blended landscape with various hazard factors. The case of Bacoli

*Luca Buoninconti, Paola De Joanna, Dora Francese*

106\_ LIST OF AUTHORS

# NOTES ON LANDSCAPE AT RISK AND POST-PANDEMIC IMPLICATIONS

## **A new concept of risk for Landscapes**

The choice of *landscape at risk* as a research topic arises from the belief that landscape design and landscape policies should no longer be considered external to risk reduction strategies but they ought to be considered a basic part of each action, as one of the sides of a multifaceted problem.

In this book, the concept of risk affecting landscapes concerns all the different hazardous phenomena threatening “the significant or characteristic features of a landscape, justified by its heritage value derived from its natural configuration and/or from human activity” (ELC, 2000). Starting from the concept of landscape proposed by the European Landscape Convention (ELC), risk is here conceived as risk of alteration or interruption of the relationship between community and places, which leads to the creation of landscape features. Therefore, everything that can cause alteration, degradation, depletion or loss of tangible and intangible resources that mark landscape out constitutes risk factor for landscapes. “Landscapes at risk” will then acquire many different meanings, starting from landscapes hit by natural disaster and Climate Change effects, moving to those suffering from shrinkage, abandonment or gentrification, or even overexploitation and/or congestion, up to landscapes in transition.

The pandemic has changed our daily lives and habits by transforming how we work, learn and interact. Social distancing guidelines have led to a more virtual existence, both personally and professionally. Landscapes have obviously been affected, not only in the way they are perceived but also as regards the intensity of the phenomena that usually put them at risk (i.e. abandonment, tourism) or our understanding of risks and the way to cope with them. In the following paragraphs, the different issues threatening landscapes are examined within the new changed context due to the sudden irruption of pandemic. Moreover, possible future scenarios for landscapes at risk in post-pandemic time are analyzed.

## **Landscapes, Natural Risk and Climate Change effects**

Many natural disasters are the direct outcome of devastation and irreversible changes perpetrated on everyday landscape. Such events can sometimes be construed as the result of an ill-adapted society that broke the connection with nature and its living context, which is essential to ensure an ecological balance and is a fundamental principle for the concept of landscape. Unsustainable spatial development and climate change are the main processes that lead to an increased level of risk for urban and rural landscapes. In particular, extreme hydro-meteorological events are increasing in frequency and intensity, generating dramatic negative impacts on ecosystems and enhancing hazards for other risks, such as fires, sea-level rise and biodiversity loss. Measures involving landscape planning, agricultural and ecosystem management, water management and drainage are essential for mitigating natural risks and Climate Change effects. Furthermore, quality landscapes could also reduce poverty and improve food security, thereby enhancing community resilience.

Therefore, a landscape approach could help in every step of the risk management chain. In fact, the need to bring together different sectoral approaches represents one of the main points of convergence between the landscape approach and risk theory. Moreover, the multi-relational approach envisaged by landscape theory could represent a reference pattern for risk analysis.

Until recent decades, landscape and risk management were considered two opposite irreconcilable matters: works and engineering solutions to prevent and mitigate risk were usually crushing for landscape.

Nowadays, it is widely recognized that risk management and landscape care are mutually interdependent. The lack of landscape maintenance and daily monitoring, with the consequent loss of environmental balances, could be a driver of natural hazards. Such ecological equilibria were often forged by people historically living with well-known natural hazards, leveraging on traditional knowledge to implement prevention and mitigation measures. Local knowledge is part of the immaterial value of a landscape. Local knowledge and traditional practices in dealing with disasters are reconsidered by main international documents on Disaster Risk Reduction as a welcome supplement to scientific knowledge.

Starting from 2000, a new way to conceive both Landscape and Risk management led to the awareness that landscape design could contribute to hazard mitigation in many ways, i.e. through nature-driven urban and regional regeneration. These policies were strongly justified by the need to cope with adaptation and mitigation to Climate Change. The need to tackle climate-related risk has been pushing researchers, local authorities and policy makers to find and test viable solutions to mitigate the negative effects of climate change and make landscapes more resilient to such effects. New solutions that are landscape consistent have been recently set up to cope with Climate Change effects and hazard mitigation, (i.e. Nature Based Solutions, ecosystem services). The implementation of these solutions will significantly modify urban and rural landscape and its perception by communities. Examples of sustainable solutions that can transform the relation between the landscape and its community can be found at urban scale, such as green roofs and walls, winter gardens, soil sealing recovering or at a wider scale blue –green infrastructures. In addition, solution to mitigate CC are destined to improve urban and regional environment such as the implementation of sustainable mobility-oriented traffic policies (e.g. restricted traffic areas, bike lanes, etc.) or nature-based solutions. At a wider scale, climate-sensitive management of agricultural practices (e.g. by shifting to crops with higher carbon storage potential or reducing forest clearing for agricultural expansion) can contribute to a significant reduction in CO<sub>2</sub> emissions.

Nature and local based solutions aware of traditional practices are one the most suitable “bricks” of landscape design and policies since they make possible to conceive projects and strategies that improve quality of landscapes and, at the same time, contribute to hazard mitigation and climate change adaptation. Furthermore, landscape improvement advantages risk resilience. As a matter of fact, landscape care, poverty reduction, food security, climate change adaptation and disaster risk reduction have to be considered mutually supporting objectives.

Another interesting issue concerns the aftermath of a disasters. Reconstruction represents a crucial phase for the future of communities and landscapes. The landscape approach shows that the relationship between people and their surroundings is based on a system of tangible and intangible values, which are

important in the definition of a sense of belonging and place identity. These values must be carefully considered in all the phases of risk management since they are crucial during the building-back phase. During the reconstruction, among the rubble, the very essence of communities also falls apart, neighborliness and affective ties are broken, habits and customs are interrupted, and small-scale economies grind to a halt. Basically, the link between community and environment, which is crucial in the ELC's conception of the landscape, is severed. Landscape approach is essential in this phase.

A special attention should be paid to cultural heritage and landscape features that are representative of identity and pride: they need to be proactively considered in post-disaster recovery. Safeguard of heritage and landscape features have a significant role in social cohesion and sustainable development especially in time of crisis. The pandemic has focused our attention on a new natural risk –biological risk- that Europe thought it had overcome. A new research agenda on disaster risk reduction has been tabled. Can the pandemic be tackled by using some tools and strategies from the field of disaster risk reduction? Is it possible to identify areas most prone to risk? Do certain elements increase resilience? What strategies can be implemented to avoid future emergencies? What weaknesses and what strengths have emerged in regions while combating the pandemic?

The pandemic has generated considerable awareness that the need to re-establish a more balanced relationship between humankind and nature can no longer be ignored. During lockdowns everyone has perceived an unexpected and sudden return of some aspects of nature in the city. In the aftermath there has been an increasing demand for green spaces and sustainable mobility. In Europe new financial opportunities have emerged to combat CC and the need to implement a sustainable transformation of cities and regions seems to be stronger than ever.

### **Landscapes, depopulation and overexploitation**

Not only natural risks endanger landscape, but also anthropic actions, which could overcharge natural resources or break fragile balances regulating the relationship between communities and nature.

All over Europe there are extensive cultural landscapes at risk of depopulation, they belong to peripheral areas isolated from the main development dynamics. They have gradually become marginalised due to decline of the local economy and depopulation. Frequently, such areas conserve unspoilt natural environments with a rich cultural and historical heritage comprising a network of small historical centres, as well as abundant high-quality agricultural products and knowledge and skills utilised in traditional activities. This heritage is at risk since population decline is leading to the abandonment of these areas with the consequent decay of tangible cultural heritage. These settlements play an important role in preserving such landscapes. They are custodians of memory and beauty, and their depopulation has led to decay of places, emptying of relationships, and desertification of the environment and culture.

New ways of thinking and living, and new approaches to the built environment, are required to give new chances to such areas, using culture and traditional local resources as leverage for new tailored development.

The pandemic has given way to new scenarios for the revitalization of these landscapes and new development paths seem to have opened up within the emergency, where the elements that are traditionally considered weaknesses for economic growth become the strengths of a new concept of development, the starting point of a “different” development pattern, perhaps possible after the pandemic. The boom in home working due to the COVID-19 pandemic, however, could mean a reversal of such negative trends. Lockdowns that trap city dwellers and users in small apartments have made village life more appealing due to the ability of country living to provide attractive vistas, fresh air and more space for social distancing. Small towns are seeing an influx of new residents and homeowners looking to take advantage of a slower pace of life. The crucial question is whether this trend will be confirmed even when the pandemic is definitively vanquished or people will really discover a new way of life in rural environment.

Nowadays it is impossible to understand what will be the future trend. Of course, cities are currently more exposed to pandemic risk and less healthy places but, at the same time, they are still the places where things happen, people meets, ideas run. Therefore, the new trend solution could be a greener city and, perhaps, a new lifestyle, less rooted in a specific place but organized in different homes and places: both in the city and in the village.

On the contrary, the levels of exploitation of the landscape are causing unprecedented changes in the configuration and perception of places, in the maintenance of ecosystems and biodiversity, as well as in social and cultural alterations. The enjoyment of rural, coastal, mountain and urban landscapes is a resource of enormous value that is a great attractor for every type of tourism, whether for cultural and natural heritage or recreation. However, the paradox is that tourism development through infrastructures, building densification, urban space alteration, transformation of tertiary activities and coastal resorts, has a devastating impact on the main attraction, namely landscape, in its multiple manifestations and material and immaterial features.

Overexploitation of resources can be seen in every territorial setting: in peri-urban degraded settlements, in historical urban centres transformed into tourist resorts, and in rural areas modified by intensive crops.

Tourism was a worldwide phenomenon in strong expansion and transformation prior to the pandemic, producing unexpected changes in the social, economic and environmental fields (ISPRA, 2017). At the same time, it has been one of the economic sectors most affected by the pandemic. International tourism is expected to fall by around 80% in 2020. Destinations that mainly rely on international, business and events tourism, as well as art cities, are particularly struggling. The past year has witnessed bans on travel abroad and even within the same country, failure of airlines and travel agencies, and an end to the spread of B&Bs. Yet a predominant aspect is the fear of travel. There is no knowing whether tourism that was for many countries one of their economic mainstays will ever recover from the crisis. To be fair, domestic and proximity tourism, which were previously a lesser phenomenon, have been slowly restarting and helping to mitigate the impact on jobs and businesses in some destinations. Perhaps this is the time to wonder whether a new tourism would be possible after the pandemic, a tourism for the “sober enjoyment” of the man-made and/or natural landscape, through controlled exploitation of the resource: a tourism respecting the “delicate balance” between conservation of the natural environment and its use without destroying identity and local cultures. In this respect, many countries are currently trying to develop measures to build a more resilient post-COVID-19 tourist economy. Perhaps the future of villages at risk of depopulation will be consistent with this new kind of tourism. These include making plans to support the sustainable recovery of tourism, promoting the digital transition and moving to a greener tourism system, and rethinking tourism for the future (OECD, 2020).

### **Which scenarios for landscapes at risk in post-pandemic time?**

If the pandemic, on the one hand, appears to be a certain herald of relevant changes in our way of living and relating to landscape, on the other hand it will produce great uncertainty. In this context, we might dare to ask ourselves about this issue and speculate on different and conflicting scenarios rather than pretending to provide certain solutions and easy formulas.

To date, there is still no certainty about when the emergency will end and its overall duration will reveal whether the pandemic will be a turning point, a diverter, or an accelerator of embryonic processes. In the first case, the pandemic as a turning point, all unrealistic developments become now possible. In the second case, the pandemic will strengthen existing tendencies and approaches: greater care and development of open and green spaces in the city; the transition towards slow mobility supported by suitable urban infrastructures; the use of NBSs to bolster risk mitigation, as well as climate change adaptation; a new type of tourism, no

more aggressive or oriented to a mere use of the place, careful to discover nature and culture of places, in a process that can give credit to the beauty of small villages at risk of depopulation.

## References

- Amarante J.G.M.C., Salvia A.L., Mifsud M., "Governance, Risk and Compliance: Concerns in Sustainability Research Agendas" in *Universities and Sustainable Communities: Meeting the Goals of the Agenda 2030*, 2020, World Sustainability Series, Springer, Cham.
- Burby R. J., *Cooperating with nature: confronting natural hazard with land use planning*. Joseph Henry Press, Washington, DC, USA, 1998.
- Chin A., Simon G.L., Anthamatten P., Kelsey K.C., Crawford B.R., Weaver A.J. (2020), "Pandemics and the future of human-landscape interactions", in *Anthropocene*, 31, <https://doi.org/10.1016/j.ancene.2020.100256>
- Council of Europe, *European Landscape Convention*, 2000, Firenze.
- Federal Emergency Management Agency, *Planning for a more sustainable future: the link between hazard mitigation and livability*, USA, 2002.
- Felsenstein D., Shmueli D.F., Thomas D.S.K. (2020), "Cascades - Mapping the multi-disciplinary landscape in a post-pandemic world", in *International Journal of Disaster Risk Reduction*, 51, <https://doi.org/10.1016/j.ijdrr.2020.101842>
- Gerundo C., *L'adattamento delle città ai cambiamenti climatici*, 2018, Napoli, FedOA Press.
- Intergovernmental Panel for Climate Change (2014) *Climate change 2014: Synthesis report. Contribution of working groups i, ii and iii to the fifth assessment report of the intergovernmental panel on climate change*, Geneva
- Hersperger A., Burgi M. (2009), "Going beyond landscape change description: quantifying the importance of driving forces of landscape change in a Central Europe case study", in *Land Use Policy*, 26 (3) (2009), pp. 640-648, <https://doi.org/10.1016/j.landusepol.2008.08.015>
- Li W., Wang Y., Xie S., Sun R., Cheng X. (2020), "Impacts of landscape multifunctionality change on landscape ecological risk in a megacity, China: A case study of Beijing", in *Ecological Indicators*, 117, <https://doi.org/10.1016/j.ecolind.2020.106681>
- Madu C. N., Kuei C. (eds), *Handbook of Disaster Risk Reduction and Management World Scientific*, 2018, Publisher.
- Organization for Economic Co-operation and Development (2020), *OECD Tourism Trends and Policies 2020*, OECD Publishing, Paris. <https://doi.org/10.1787/6b47b985-en>
- Stanganelli M., "Hyogo Framework for Action an Analisis Ten Years Later", in Madu C. N. & Kuei C. (eds) *Handbook of Disaster Risk Reduction and Management World Scientific*, 2018, Publisher.
- Stanganelli M., Gerundo C., "Understanding the Role of Urban Morphology and Green Areas Configuration During Heat Waves", in: *International Journal of Agricultural and Environmental Information Systems*, vol. 8, issue 2, pp. 49-63, IGI Publishing, ISSN 1947-3192
- Tarolli, P.; Preti, F.; Romano, N. (2014), "Terraced landscapes: From an old best practice to a potential hazard for soil degradation due to land abandonment", in *Anthropocene*, 6, 10-25.
- United Nations, International Strategy for Disaster Reduction (UNISDR), Disaster Risk and Sustainable Development), "Understanding the Links Between Development, Environment and Natural Hazards Leading to Disasters", in: *World Summit on Sustainable Development*, 2002 Johannesburg (<http://www.unisdr.org>).
- UNISDR, *Sendai Framework for Disaster Risk Reduction, 2015-2030*, 2015 ([www.undrr.org](http://www.undrr.org)).
- UNISDR, *Recommendation for Recovery and reconstruction in the Post 2015 Global Framework for DRR*, 2013 ([www.preventionweb.net](http://www.preventionweb.net)).
- United Nations World Tourism Organization (2020), *Tourism and Covid-19*, United Nations World Tourism Organization, Madrid.
- World Bank, *Natural Hazard and Risk Management in the Caribbean: revisiting the challenge*, 2003, Private Sector and Infrastructure Department, Latin America and the Caribbean Region, The World Bank.

# LANDCAPE AT RISK

## Guest Editors

Carlo GERUNDO (Department of Civil, Environmental and Architectural Engineering, University of Naples "Federico II" ITALY)

Marialucre STANGANELLI (Department of Architecture, University of Naples "Federico II" ITALY)

## Scientific Coordinators

Marialucre STANGANELLI (Department of Architecture, University of Naples "Federico II" ITALY)

Elvira PETRONCELLI (Department of Civil, Environmental and Architectural Engineering, University of Naples "Federico II" ITALY)

## Scientific Committee

Gilda BERRUTI (Department of Architecture, University of Naples "Federico II" ITALY)

Francesca BRUNI (Department of Civil, Environmental and Architectural Engineering, University of Naples "Federico II" ITALY)

Fabio CORBISIERO (Department of Social Science, University of Naples "Federico II", ITALY)

Paola DE JOANNA (Department of Architecture, University of Naples "Federico II" ITALY)

Claus-Peter ECHTER (President, CIVVIH ICOMOS)

Dora FRANCESE (Department of Architecture, University of Naples "Federico II" ITALY)

Juanjo GALAN VIVAS (School of Art, Design and Architecture - Aalto University FINLAND)

Carlo GERUNDO (Department of Civil, Environmental and Architectural Engineering, University of Naples "Federico II" ITALY)

Christofer KILBURN (University College of London, UK)

Daniele LA ROSA (Department of Civil Engineer and Architecture, University of Catania, ITALY)

Tana LASCU ("Ion Mincu" University of Architecture and Urban Planning Bucharest, ROMANIA)

Tessa MATTEINI (University of Florence, ITALY)

Rita OCCHIUTO (University of Liegi, BELGIUM)

Anna Laura PALAZZO (University of Rome 3, ITALY)

Juan Manuel PALERM SALAZAR (Universidad de Las Palmas de Gran Canaria, SPAIN)

Elvira PETRONCELLI, DICEA University of Naples Federico II

Chao REN (University of Hong Kong)

Michelangelo RUSSO (Department of Architecture, University of Naples "Federico II" ITALY)

Patrizia TASSINARI (University of Bologna, ITALY)

Daniele TORREGGIANI (University of Bologna, ITALY)

Anna Maria ZACCARIA (Department of Social Science, University of Naples "Federico II", ITALY)

The editors and the Publisher are not responsible for each individual contribution's content.

All the articles of this Special Issue of SMC magazine were submitted to a double peer blind review.

Cover | Graphic elaboration by Carlo Gerundo of the frontispiece of the book entitled *Dell'incendio di Pozzuolo Marco Antonio delli Falconi all'illustrissima signora marchesa della Padula nel MDXXXVIII*, Marco Antonio Passaro, Napoli 1538.

This publication is part of the activities promoted by UNISCAPE for the twentieth anniversary of the European Landscape Convention.

This publication is financed with the contribution of the University of Naples "Federico II"

Graphic design | Luca BUONINCONTI, Carlo GERUNDO

For more information, please contact us: [smc.association@mail.com](mailto:smc.association@mail.com) or [infouniscape@unina.it](mailto:infouniscape@unina.it)

© 2021 BY LUCIANO EDITORE – NAPOLI

80138, NAPOLI

[HTTP://WWW.LUCIANOEDITORE.NET](http://www.lucianoeditore.net)

E-MAIL: [INFO@LUCIANOEDITORE.NET](mailto:INFO@LUCIANOEDITORE.NET)

ISBN: 978-88-6026-304-9



# THE POST-DISASTER TEMPORARY LANDSCAPE

## *Reflecting on housing and tourism practices in the crater of Central Italy*

### Abstract

The vast hilly and mountainous area of the Marche affected by earthquakes between August 2016 and January 2017 represents an important case study concerning both a population's sense of displacement after a disaster and the role of landscape in the recreation of a sense of community. The massively damaged territory is also characterised by a vulnerable internal landscape defined by small settlements presenting an accelerated depopulation trend and left with the need to begin to imagine a future. Though the construction of temporary housing and services allowed the local population to gradually return to their everyday lives, economic reactivation is essential and tourism is seen as one of the strategies to adopt.

The paper analyses the role of post-disaster landscape planning and design in two main contexts which link people to places with temporary living spaces and new tourism experiences. Our research confirms how landscape planning and design could become a strategy for social and spatial reconstruction returning a revitalised territory with new references to the population.

**Keywords:** earthquake, temporary landscape, tourism, Central Italy

### Introduction

In a very short time the forces of nature can generate disasters which modify the landscape and damage the communities of people who keep them alive, seriously compromising the economic dynamics that support them. Between August 2016 and January 2017 there were four earthquakes in Central Italy impacting the regions of Abruzzo, Lazio, Marche and Umbria. The affected area, known as the 'earthquake crater', included 140 municipalities and involved 600,000 people. Of the four regions the Marche was hit the hardest with as many as 87 municipalities involved and a population totalling 23% of the entire regional territory [1]. The land area which suffered the most seismic damage during these quakes is also the most mountainous and is characterised by woodland, pasture ground, and a constellation of small villages of, for the most part, medieval origin. The area also features a dense road network constructed over decades which connects the various villages favouring agriculture and sheep-farming as well as tourism which is one of the main sources of economy here. The Apennine landscape of



Fig. 1. A view of the destroyed village of Arquata del Tronto.

Central Italy is an area of high environmental, cultural, and architectural value. It can be recognised in the definition of 'landscape' according to the European Convention as "a part of territory whose character derives from the action of natural and/or human factors and their interrelationships". The earthquakes devastated this territory, wiping out entire villages or leaving a consistent portion of the architectural heritage unsafe and uninhabitable and it has compromised the social structure itself which had already suffered from abandonment beginning in the early 60s. ISTAT (Istituto Nazionale di Statistica) data on demographic trends show constant decrease in population. During the sixty years from 1961 to 2019 a considerable loss was seen, when the population of Arquata del Tronto — one of the most extended municipality into the area of the upper Tronto Valley in the Marche region — practically reduced from 4088 to 1059 inhabitants (Fig. 1). After the first rescue and emergency interventions following the earthquakes, to keep the population *in situ* as much as possible, policy-makers had to keep in mind people's need to visualise a vital future: firstly, by constructing temporary housing and implementing services during the emergency period which allowed the population to gradually return to live in their places of origin, and secondly, in establishing an economic recovery plan in the emergency period that

could be carried out over the entirety of the historic centre reconstruction phase. Tourism is one of the main strategies because of its huge potential to enforce natural environmental and cultural resources, and to develop economic activity that encourages the presence of a young population. This essay investigates the role of landscape architecture in a post-catastrophe context considering two main areas of application on two different scales: temporary camps for residence and the development of new tourism experiences. In both cases, the relationship that is established with the landscape is analysed by taking into consideration the nature of temporariness, the quality of the spaces, the relationship between culture and nature, and the involvement of local inhabitants. The hypothesis of planning landscapes in different phases of reconstruction that is supported by tactics applied to both residential emergency and to tourism strategy could be a way to build a connection between locals and places following the objectives of the European Landscape Convention: through the landscape project it is possible to strengthen identity, quality, sociability, and to build communities even in post-catastrophic contexts characterised by displacement.

### Methodology

Our research involves an investigation of the crater territory of Central Italy<sup>1</sup>, and begins



with the observation of territorial phenomena at a specific time: the post disaster period, when destruction, traces of memory, temporary construction, and ideas for the future all coexist. In this phase, the community undergoes a displacement process which leads it to live in semi-permanent short-term living accommodations, or SAE (Strutture Abitative in Emergenza/Emergency Housing Facilities), 'homes away from home', so to speak. At this time economic activities linked to the tourism sector, the main source of income, are interrupted. The methodological approach is mixed, based on the acquisition and analysis of both quantitative and qualitative data which are useful in examining the pre- and post-earthquake contexts of the Marche crater and to describe the geographic, demographic, and socio-economic-tourism aspects of the area. In the first and second chapter, the question of the post-earthquake situation is analysed by presenting two issues: placement of temporary residential facilities which make up the installation of the newly founded residential camps; tourism strategies for economic development - strategies built by recovering the network of paths and open areas and reinterpreting experiences of cultural natural resources. The paper examines case studies and several landscape architects' theories taken from their experiments in designing emergency structures. We also look to tourist experiences and how the interpretation of landscape by people 'in the landscape' are the main sources of inspiration for design proposals to be implemented in emergency situations, or to build attractive destinations in remote places. Such references are useful in order to obtain a wider framework and to compare cultural and spatial approaches.

### Integrated landscape into temporary residential facilities

Article 5 of the European Landscape Convention (ELC), under point 'd' reads: "Each party undertakes to integrate landscape into its regional and town planning policies and in its cultural, environmental, agricultural, social and economic policies, as well as in any other policies with possible direct or indirect impact on landscape". The indications contained in ELC should not only be taken into account when considering landscape or urban planning processes in established urban contexts. Landscape quality should also be taken into account when planning temporary camps in post-disaster situations. The emergency situation requires a simplification of the planning processes, but deep reflection on



Fig. 2. The temporary SAE camp in Borgo, Arquata del Tronto near Ascoli Piceno (photo credits: A. Gabbianelli).

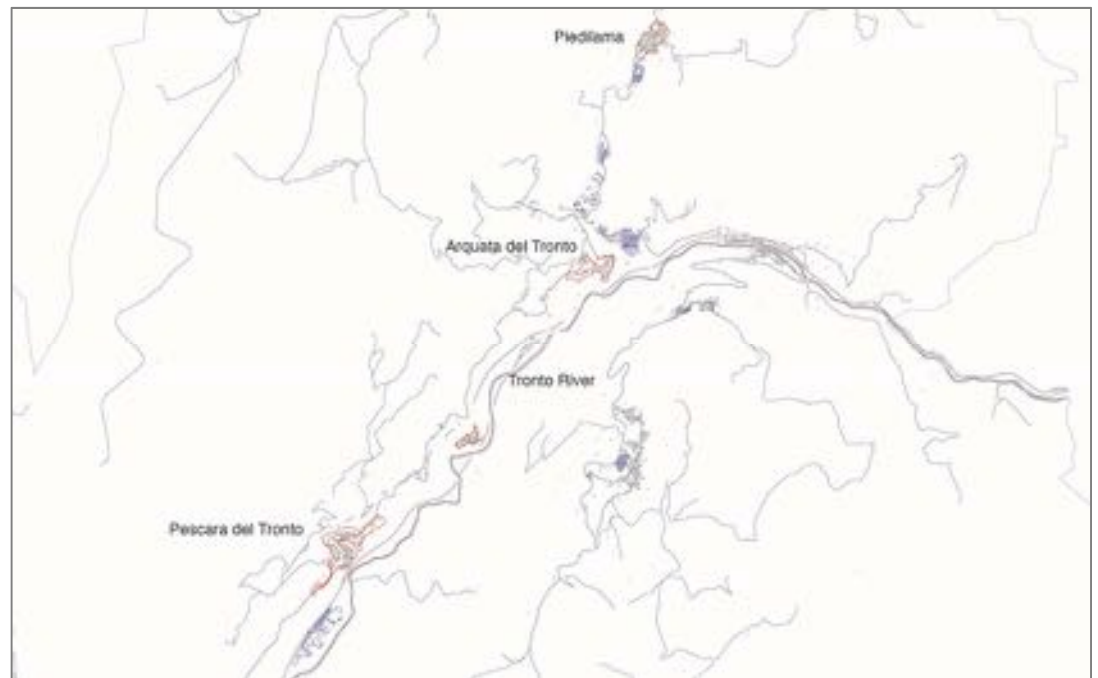


Fig. 3. Post-earthquake map of Arquata del Tronto municipality, in red the 'Perimeters of the Reconstruction Plans' for the historical centres, in blue the seven SAE camps (S. Cipolletti; source: Fact-finding Survey / Quadro Conoscitivo Ordinance n.39 8/09/2017 by University of Camerino, School of Architecture and Design 'Eduardo Vittoria')

landscape planning is necessary especially when the temporary situation risks to turn into a permanent situation. In the emergency phase, because the company selling the SAE guarantees the supply of the housing modules and also provides urbanisation planning services, a synergic and effective dialogue should be established between the company, the public administration, the community, and the designers. It is paramount to develop a spatial solution that responds to the immediacy of the emergency situation without losing sight of the quality of the landscape when building the temporary camps.

Namely, in Arquata del Tronto land 193 housing modules, in seven different zones (Fig. 3), of a variable surface area of 40, 60, or 80 square meters with different spatial configurations are all equipped with a porch and a small lawn — a standardized and anonymous outdoor space separating the domestic space from the infrastructure. In the sites analysed, the nine temporary camps formed by the aggregation of the individual semi-permanent SAE dwellings were positioned on the edge of the destroyed and abandoned historical village centres. These were built respecting the regulations set out in the General Municipal Land Use Plan but in many cases they did not respect



Fig. 4. The temporary SAE camp in Borgo, Arquata del Tronto near Ascoli Piceno (photo credits: A. Gabbianelli).

environmentally protective restrictions (Fig. 2). The project strategy is based on settlement re-foundation interventions that give shape to a housing district alien to the existing urban fabric and where integration of the landscape into the project criteria has not been sufficiently taken into consideration. Inside the SAE temporary camps people's everyday life is hugely different. The inhabitants feel estranged and disoriented without familiar points, or places, of reference shattering daily routines, whether they be work-related or for leisure and social purposes. Public spaces are non-existent: there are no public squares, no open markets, and no parks, playgrounds, or other recreational areas included in the temporary SAE camps and this forces people to drastically change their daily routines. These temporary camps are functional juxtaposed agglomerations of housing modules obligating a sort of homogenized living both in and outside the home (Fig. 4).

A good look at the work of landscape architect Garrett Eckbo (1910-2000), who designed temporary camps for workers by integrating landscape into environmental, social, and economic policies, could help to redefine planning strategies in a post-disaster context [2]. Between 1939 and 1942, directly after the Great Depression, Eckbo worked for the Farm Security Administration (FSA). This group of professionals would design the camp housing for displaced migrant agricultural workers across the Western United States from the State of Washington down through California, and over to Arizona and Texas. The Farm Workers' Housing at Shafter project in California, or the Co-operative Housing in the San Fernando Valley in Los Angeles, are important examples for understanding the role of nature in the configuration of the camp space [3].

Eckbo wrote: "Outdoor spaces are formed, and given character, by structural and/or natural materials performing three functions: Surfacing — the control of ground surfaces to reduce dust

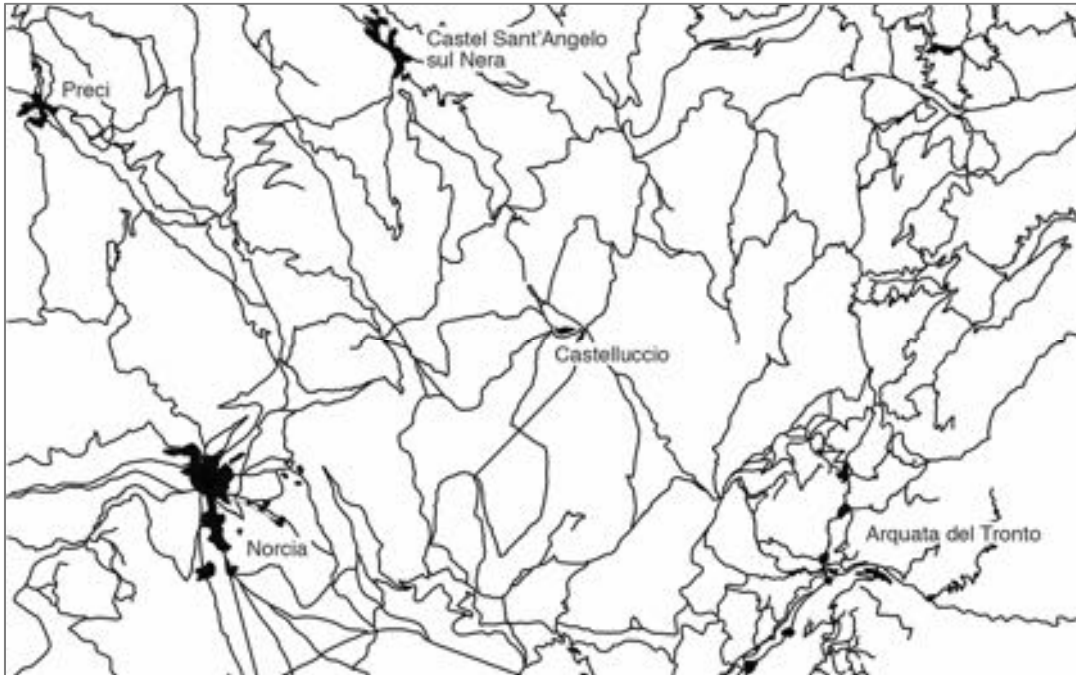


Fig. 5. Maps of network paths in the Monti Sibillini National Park (redrawn by J. C. Procel e D. N. Simion; source: [http://www.sibillini.net/il\\_parco/gps/percorsi.jpg](http://www.sibillini.net/il_parco/gps/percorsi.jpg)).

and mud; the shaping of changes in level with ramps and steps to make vertical movement as comfortable as horizontal; Enclosure — the creation of sides or walls defining three-dimensional spaces and providing privacy and security and controlled or direct movement into, through, and out of a given unit or system of spaces; Shelter — the provision of overhead protection from weather or aerial assault” [4]. Yet Eckbo’s research and design were not limited to mere compositional or environmental concerns. Nature in Eckbo’s design configures the structure of the fields through the use of trees, creates spatial relationships with the context, and guarantees the presence of spaces that can be used by the community for social well-being. The planning of post-earthquake temporary camps should integrate the landscape according to Eckbo’s theories. Moreover, once the emergency is over, nature will also be the persistent element that will welcome new services, new uses, and new practices such as those related to tourism that will allow, through cultural, environmental, social and economic policies, the return of life in the places affected by the earthquake disaster [5].

### Integrated landscape into tourism experiences

National programs, regional studies, policies such as GAL (Group of Local Action), the mayors of the villages, but also the population itself, organized in associations, all see tourism as a possible way to increase identity and economic development. The National Inland Strategies, which has classified the area of study as outlying or remote zones, envisions interventions geared to the acknowledgement and enhancement of an identity tied to themes of wellbeing, quality of life, the relationship between nature and culture, and innovation in traditional knowledge. The principal targets indicated by the national inland strategy are precisely those that would stimulate growth both in production and tourism, enhance landscape-environment itineraries (Fig. 5),

promote small business in the fields of manufacturing, agro-sylvo-pastoral systems, animal husbandry, and of food and wine [6]. The Ecological Network of the Marche Region also has identified the inland areas of the Apennine as a unique and extraordinary source of biodiversity. These territories are characterized by the presence of two National Parks, the Sibillini Mountains National Park (Fig. 6) and the Laga Mountains National Park; a vast ecological reserve connecting the coast to inland, open to recreational practices. In recent years there are also some post-earthquake grassroots initiatives, namely bottom-up, community-oriented, and site-specific which are dedicated to strengthening landscape experience in the open spaces of the mountains. The enormous loss of built heritage with the consequent impossibility to holiday in the remote villages interrupted the local, national, and international tourist flow successively favouring the exploration of the great outdoors of the mountains since it was only this that remained.

All post-earthquake experiences begin with the landscape and environmental resources [7]. This, coupled with the human-induced, allows for the possibility to reinterpret and reimagine those resources to make the experience of the mountainous areas of the Apennines come alive. In all cases, the return to the basic location-specific activity of walking immersed in the landscape was a way to regenerate and rediscover the community. The *Risorgimarche* is a music event which involves all the mountainous areas of the Marche crater. The temporary dimension is established by the connection to the place itself representing a way to experience the landscape walking through it, taking time to gaze at the incredible beauty of the region in all its diversity. The concerts are held in the open air in the natural light of the sun connecting the musicians and the audience.

There are other projects to recover ancient stories and natural resources relying on strictly non-invasive interventions. These are new

destinations which involve the installation of equipment and ecological reorganization of places such as the *Lu vurghe Spa* in Acquasanta Terme where the ancient trail leading to a natural sulphur spring was rehabilitated. The trail had been virtually forgotten and fallen into disuse, yet in just one year’s time it was restored to locals and tourists thanks to the municipal administration and Caving Club. The rock faces along the trail have been equipped for climbing for children and adults and visitors can relax in tubs of lukewarm sulphur water in the open air, surrounded by the gentle sounds of nature. *Trame di travertino* excursion in Acquasanta involves artists which create specific installations along a path using a local stone, so the experience of the landscape is intensified. The travertino material represents a tangible and intangible heritage of a quarrying territory. Reestablishing the bond of community to landscape was achieved in another project initiated *Arquata Potest*. For some years now this voluntary association has worked for the restoration of a network of ancient historical tracks in Arquata del Tronto. So far, twenty-one of these paths have been restored. Their objective is to create a ring circuit connecting the surrounding territories and to be officially recognized as a ‘national culturally prominent walking itinerary by internationally acclaimed associations such as Sentiero Italia (Italy trail) and Cammino nelle Terre Mutate (Walking thought changed lands) which are contributing to the initiative to boost commerce and get Arquata back on its feet again with slow and sustainable experience tourism. We retain that this is actually Arquata’s natural calling. This case strongly encourages local people to keep the identity of the place alive by maintaining the unique character of the cultural landscape. Not all tourist-friendly experiments have any physical or spatial impact on the places designed even if having used the landscape a resource to reinterpret and create a feeling of belonging to territory. Yet, there are some international experiences, such as the National Tourist Routes in Norway, which do however show more interesting approaches to landscape in a tourism project: the relocation of the parking devices, the view of the panoramas, or the crossing foot paths become a supports and devices for the narration of the landscape itself and how to use it. [8]



Fig. 6. A pathway within the Sibillini National Park (photo credits: A. Gabbianelli).

### Results

The choice of two deeper fields of investigation, temporary housing and new tourist experiences in the crater of Central Italy has shown that landscape projects are potentially

able to relate spaces, settlements, resources, and people. We have seen that the temporary structures show indifference to the plots, paths, and plant warps of the places despite allowing people to remain in their original location. Furthermore, they represent the most important transformation that these places have undergone in recent years and will in all probability turn into permanent facilities. Tourism on the other hand stimulates the ways of interpreting and reinventing resources which remain available, the networks of tracks, the natural environment, and derived products which are the premises to reinforce experiences and to propose new ones. Tourism becomes a good strategy for connecting to landscapes, at the same time keeping the population in place. The feeling of belonging to places and a sense of identity in tourist experience (expressed by locals) are very positive. However the lack of a unifying approach in tourism strategy on the one hand, and the absence of architectural and landscape projects on the other, imply that the experiments are insufficient to physically transform places and to accommodate tourist flows to create a solid economic income.

## REFERENCES

- [1] S. Cipolletti, I. Pierantoni, D. Procaccini, M. Sargolini, "Pianificazione e programmazione per la valorizzazione delle risorse naturali e culturali", in I. Pierantoni, D. Salvi, M. Sargolini (a cura di), *Nuovi sentieri di sviluppo per l'appennino marchigiano dopo il sisma del 2016*, Quaderni del Consiglio Regionale delle Marche, Aprile 2019, pp. 55-140.
- [2] G. Eckbo, *Landscape for Living*. Architectural Record with Duell, Sloan, and Pearce, 1950.
- [3] D. Imbert, M. Treib, *Garrett Eckbo. Modern Landscape for Living*, University of California Press, 1997.
- [4] G. Eckbo, C. Sullivan, W. Hood, L. Lawson, (eds.), *People in a Landscape*. New Jersey, Prentice Hall, 1998.
- [5] See also A. Gabbianelli, "Juxtaposing Permanent and Temporary Landscape" in *TOPOS*, n. 108, George D.W. Callwey GmbH & Co. KG, Munich, 2019, pp. 32-37.
- [6] M. Cerquetti, E. Cutrini, C. Ferrara, (2019), "Lo sviluppo del 'turismo del paesaggio culturale' nel cratere sismico. Potenzialità e criticità per la rigenerazione dell'Appennino marchigiano", in I. Pierantoni, D. Salvi, M. Sargolini (eds.), *Op. Cit.*, pp. 139-155.
- [7] S. Cipolletti, "Restart from the landscape. Strategies to reactivate tourism in the Central Italy territories affected by the earthquake", in R. Pié, C. Rosa, J. M. Vilanova, J. Sabaté, E. Porfido (eds.), *TOURISCAPE2 Transversal Tourism and Landscape*, Conference Proceedings, 5-6 Novembre 2020, Barcellona.
- [8] N. Berre, H. Lysholm, *Detour. Architecture and design along 18 national tourist routes in Norway*, 2008.

## NOTES

1. We are referring to the area of the upper Tronto Valley in the Marche region, which includes the small villages of Acquasanta Terme, Arquata del Tronto, Roccafluvione, Venarotta, Valle Castellana, Palmiano, Montegallo.