

BEYOND ALL LIMITS CONGRESS 2018

International Congress on Sustainability in
Architecture, Planning, and Design

Proceedings Book of The Extended Abstracts



ÇANKAYA UNIVERSITY



Università
degli Studi
della Campania
Luigi Vanvitelli



UNIVERSITY OF
PLYMOUTH

October
17-18-19
Ankara, Turkey

Proceedings Book of Extended Abstracts

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International Congress on Sustainability

in Architecture, Planning, and Design

ÇANKAYA UNIVERSITY
MAIN CAMPUS

October 17-18-19, 2018



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Cover Design: Çetin TÜNGER
Printed in: October, 2018
Printed by: Teknoart Digital Ofset Reklamcılık Matbaacılık İth. İhr. San. ve Tic. Ltd. Şti.
Cevizlidere Mah. 1288 Sok. No:1/1
Çankaya | Ankara | Turkey
+90 312 473 92 97 | info@printandsmile.com.tr

ISBN: 978-975-6734-20-9

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FOREWORD

It is our great pleasure to welcome you to BEYOND ALL LIMITS 2018 - International Congress on Sustainability in Architecture, Planning, and Design, a joint collaboration of Çankaya University (Ankara-Turkey), Università degli Studi della Campania “Luigi Vanvitelli” (Caserta-Italy) and University of Plymouth (Plymouth-United Kingdom). The congress takes place in the Congress Hall of Çankaya University, Ankara, Turkey, on October 17-18-19, 2018 and supported by SID “Società Italiana Design”, SITdA “Società Italiana della Tecnologia dell'Architettura”, LeNS “The Learning Network on Sustainability” and GRID “Architecture, Planning and Design Journal”.

The congress aims to discuss and redefine the term sustainability with its all dimensions such as environmental, economic and sociocultural in various disciplines including architecture, planning and design, to extend the term’s boundaries through fulfilling it with scientific, genuine, innovative and inspiring studies and to foster cooperation within and between different disciplines at international level. Besides, workshops and special sessions are organized.

The scientific program consists of keynote speeches, plenary and parallel sessions of presentations and workshops. The 3-day congress has more than 200 contributing academicians, experts, researchers and professionals attending from several countries of the world. More than 100 presentations are planned in 28 sessions in 2 days. The third day is devoted to workshops which are organized by 8 different groups of academicians and professionals from related various fields. In addition to the contributed presentations and workshops, two invited keynote speeches are given: by Prof. Dr. Susan ROAF, Heriot Watt University’s Emeritus Professor of Architectural Engineering and Prof. Dr. Birol KILKIŞ, Başkent University’s Professor of Energy Engineering.

This proceedings book of extended abstracts comprises written contributions of the presentations, keynote speeches and workshops contents. Before the congress, all participants were expected to submit extended abstracts of their presentations in a format formed by a short abstract with keywords, introduction, methods, findings and discussion, conclusion and references, not exceeding 1500 words. All submitted extended abstracts were blind peer reviewed and accepted ones now take part in this book.

BEYOND ALL LIMITS 2018: International Congress on Sustainability in Architecture,
Planning, and Design, 17-19 October 2018, Ankara, Turkey

As being Congress Organization Committee, we would like to express our gratitude to all contributing members of Çankaya University, Università degli Studi della Campania “Luigi Vanvitelli” and the University of Plymouth for their superior efforts and enormous support. Furthermore, we would like to thank all participants of the congress for their outstanding contributions for sharing their knowledge, expertise and vision.

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Adaptive reuse in sustainable development: the case study of Ercolano (Italy)

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Abstract:

The research develops in the context of processes of sustainable adaptive reuse on urban scale. The document proposes a participatory methodological approach that, integrating interviews with privileged interlocutors and performance analysis of settlement processes, is used as an investigative tool in the phase of knowledge of the reuse project. The outcome is embodied in the elaboration of a vulnerability matrix that integrates the needs of the social system with the limits of transformability of the settlement system. This approach was used in the case study of *Via Pugliano* in Ercolano (Italy), characterized by the second hand economy linked to processes of re-use of fabrics. In this case, the adoption of multi-actors participatory process determined the identification of a framework of shared needs based on which it was possible to construct alternative scenarios of sustainable adaptive reuse. The goal integrates the physical, social and economic values expressed by local community.

Keywords: vulnerability matrix; sustainable adaptive reuse.

Introduction

Many cities on international level are experimenting with innovative processes, on a shared basis, for the regeneration of urban spaces. These practices act on built heritage incorporating the needs of the community and of the actors involved in the transformation processes of contexts. In the design phases, the enhancement of existing building resources is necessary to safeguard both physical and cultural values. In this perspective, the reuse project represents a strategic action to promote the extension of life cycle of settlement systems. In fact, it allows defining interventions that satisfy the new needs of users and integrate the physical, economic and social values expressed by the manufactured products and their contexts. The designing process of a sustainable recovery of settlements (Caterina, 2016) includes of new functions that give a second life to the degraded and abandoned building. In this perspective, the degraded and abandoned buildings are considered as an opportunity for experimentation and a potential for the development of settlement systems.

The object of the research is participatory methodological approach as an analytical tool in the phase of knowledge of the reuse project. This approach lets to elaborate design line guides that integrate the needs of the community (ICOMOS, 2017) and the actors involved in the transformation processes of the contexts (Fiore, 2013).

The case study is via Pugliano, a street located in the modern city of Ercolano, near Naples. It needs to develop a sustainable reuse project because of the presence of a severely degraded physical system, subject to spontaneous transformation processes by the local community, and thus becoming vulnerable.

Methods

The creation of new synergies for the recovery of the physical system becomes an opportunity to recast the ability to preserve specific identities by building new values, relating the quality of the built environment with the productivity and innovation of local communities. Experimentation activates a process of social innovation that involves different actors in all phases of the planning process.

The research methodology is based on the hypothesis of an operative model for the knowledge, planning and management of urban productive contexts. This type of experimentation proposes a sustainable and operational model elaborated for its replicability. It consists of five main phases (fig. 1).

The first phase concerns the definition of a model of knowledge of the historical urban landscape (UNESCO, 2011). This phase highlights performance over time to identify the pressures and agents that have driven transformations on a local scale and on shared identification values. This phase involves a multilevel knowledge system on different scales: from the building to the urban aggregate, from the municipal to the intercommunal, combining expert knowledge with local knowledge in a multi-sectoral perspective.

The second phase starts with the interviews with privileged interlocutors to elaborate a complex knowledge model framework based on needs and expectances of different stakeholders. First, the Regions will be interested in investing in the cultural heritage of settlement systems. The second is the Municipalities, which will have the aim of revitalizing the economic and social systems of the city through an urban regeneration project. The third is the University, which will play the role of technical consultant to manage the quality of the project and will increase communication and collaboration between institution and local stakeholders. The fourth is the local community, which will be interested in improving living conditions both through maintenance/recovery action on built environment and through the valorisation of local identity and culture. The last are the traders, which will reactivate the local economy.

The third phase includes the aim of this methodological approach that, regards the identification of a framework of shared needs, construct alternative scenarios of sustainable adaptive reuse. From the comparison among the needs expressed from different stakeholders and the analysis of performances offered by the settlement it is possible to deduce what it is possible to deduce what are the limits set by the examined context to suffer further transformation processes. This phase defines the new changes that depend on the ability of the community to manage urban spaces or to build new relationships between physical and production processes. The level of quality depends on the correspondence between the user's needs and the framework question.

The fourth phase is the elaboration of a vulnerability matrix as outcome of the previous analytical phase (fig. 2). This matrix integrates the needs of the social system with the limits of transformability of the settlement system. The matrix, of a replicable nature depending on the case, deals with the themes of social, technological and urban planning at the same time. Broader frameworks, relating the different units of the environmental built (space) system with the social dynamics of the site, define the work. The matrix analyses the different spatial elements based on the processes in progress, intervention processes and caused phenomena, obtained through the perception of the community in the participated project actions. The drafting of an interpretative matrix of the different aspects of knowledge allows the harmonious coexistence between the "identity" recognized for this sector. In this way is possible to protect the identity of the asset in relation to the settlement system, ensuring a significant growth of economic and social values.

The last phase coincides with the elaboration of an urban-scale adaptive and inclusive reuse project that, basing on multi actor participatory approach, is able to protect the identity of the settlement system, guaranteeing a significant growth of the site's economic, cultural and social values.

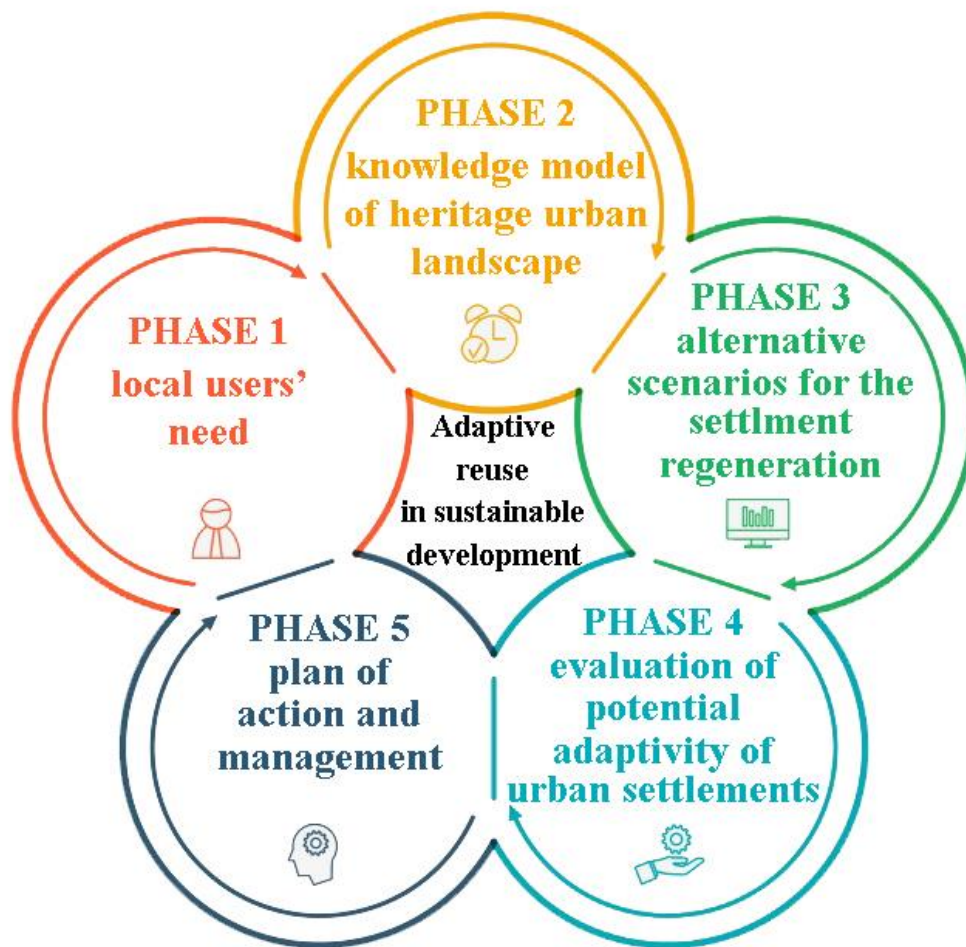


Figure 1. Sustainable and operational model for adaptive reuse in sustainable development: the case study of Ercolano (Italy) (Ciampa, Bosone).

Findings and Discussion

The result of the research is a replicable operating model in different contexts. The sustainable and resilient regeneration (Walker et al., 2004; Folke et al., 2010, Resilience Alliance, 2010) of cultural heritage is based on actions of adaptive reuse of urban aggregates with a productive vocation. The fundamental principles derive from the application of a matrix of vulnerability to the context in which it operates. The proposed approach is based on the idea of rethinking the public space as a place influenced by the population in every phase of its life, not only in its use but also in its design. The collaboration among different stakeholders guides the strategies to elaborate a shared regenerative project. The basic process is influenced by the

role of an active community, which builds and controls the actions of regeneration. This vision manages the cultural values produced over time (Cerreta and De Toro, 2010). The innovativeness of the model developed consists in the role of the new local communities on the interaction between decision makers, stakeholders, users and designers. In this perspective the design process is sustainable because every decision is the result of the comparison and the consultation among different stakeholders and is directly connected with the needs and the expectances expressed by local community.

SOCIAL SYSTEM	SPACE SYSTEM	PROCESSES IN PROGRESS
Regions		perceived physical degradation
Municipalities	space element: <i>Market Texile Place</i>	unawareness of the potentiality of the site
University		denial of the place's identity
Traders	space element: <i>Via Pugliano</i>	denial of the place's values
Local Community	space element: <i>Ercolano</i>	failure to share civil values
		loss of cultural values and attractiveness of the site
		absence of economic investments
		wrong interventions on the existing heritage
		economic suffering and increased crime
		emigration of the population from the site

Figure 2. Methodological vulnerability matrix for adaptive reuse in sustainable development: the case study of Ercolano (Italy) (Ciampa, Bosone).

Conclusion

The new sustainable landscape policy has to provide for constant recovery and maintenance actions as a means of productivity (Pinto and Viola, 2016). As recommended by the UNESCO Recommendations Recovery and Maintenance Strategies for the Historic Urban Landscape, the aim to protect the identity of the territories is the active role of local communities in landscape management. Many decision makers participate in maintenance, recovery, re-use and redevelopment of the landscape. Stakeholders allow local authorities to enable, together with the populations, a sustainable circle of research and training for the management of the territory.

References

- Caterina, G., (2016). Innovative strategies for the recovery of historic cities. *Techne*. (No. 12, pp. 33-35)
- Cerreta, M. and De Toro, P., (2010). Integrated Spatial Assessment for a Creative Decision-making Process: a Combined Methodological Approach to Strategic Environmental Assessment. *International Journal of Sustainable Development* (vol. 13, No. 1 / 2, pp. 17-30). Napoli.
- Council of Europe, (2005). Framework convention on the value of cultural heritage for society (Faro Convention). Web at: <http://conventions.coe.int>
- Fiore, V., (2013). Technological potential / figurative potential: reading for the control of urban transformations. In *Regenerating the cities of the Mediterranean*. LetteraVentidue. Siracusa.
- Folke, C., Carpenter SR, Walker B., Scheffer M., Chapin T., Rockstrom J. (2010). Resilience Thinking: Integrating Resilience, Adaptability and Transformability. In *Ecology and Society*. (vol. 15, No 4, pp. 20).
- ICOMOS. (2017). Delhi Declaration on Cultural Heritage and Democracy. Web at : <http://icomosga2017.org/delhi-declaration>.
- Ostrom, E., (2006). *Governing the Commons: The Evolution of Institutions for Collective Action*. Venice. MarsilioEditori.
- Pinto, M.R.(2004). Il riuso edilizio. Procedure, metodi ed esperienze. *UTET Università* (pp. 280-291).
- Pinto, M.R. and Viola, S. (2016). Material culture and planning commitment to recovery: Living Lab in the Parco del Cilento. *Techne*. (No. 12, pp. 223-229).
- Resilience Alliance (2010). *Assessing Resilience in Social-Ecological Systems: Workbook for Practitioners*. Version 2.0.
- UNESCO (2011). Recommendation on the Historic Urban Landscape. *UNESCO World Heritage Center*, Resolution 36C / 23, Annex, Paris, France.
- Walker B., Holling CS, Carpenter SR, Kinzig A. (2004). Resilience, adaptability and transformability in social-ecological systems. *Ecology and Society*. (vol.9, No.2, pp 5).

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ISBN: 978-975-6734-20-9