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**Sustainable Built Environment Conference**  
May 16th - 17th 2019, Scilla

# **PROCEEDINGS** **book**



Smart Specialization Strategy Calabria  
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Sustainable Built Environment Conference  
May 16th – 17th 2019, Scilla

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## INDEX

<b>Foreword</b>	<b>5</b>
<b>Building design and operation</b>	
<b>A new interpretation of local materials: innovations, technologies, researches</b>	<b>7</b>
Francesca Giglio, Rosamaria Codispoti, Renato S. Olivito	
<b>Building energy and environmental performance of high-rise residential buildings with a newly developed cladding</b>	<b>14</b>
Goopyo Hong, Suk Won Lee, Ji Yeon Kang, Hyunggeun Kim	
<b>Design of integrated sustainability “off-shore” and “off-site”. Prototype-mvp “S2_Home” by Demasi mechanical industries</b>	<b>19</b>
Consuelo Nava	
<b>Use of generalised additive models to assess energy efficiency savings in buildings using smart metering data</b>	<b>27</b>
Benedetto Grillone, Gerard Mor, Stoyan Danov, Jordi Cipriano, Jordi Carbonell, Eloi Gabaldón	
<b>Energy efficiency measures uncoupled from human perception: the control of solar shading systems in residential buildings</b>	<b>35</b>
Francesco Nicoletti, Davide Condò, Cristina Carpino, Natale Arcuri, Roberto Bruno	
<b>Architectural quality and typological flexibility: the role of buffer spaces in warm climates buildings. An application in a steel and hemp construction system</b>	<b>43</b>
Roberta Lucente	
<b>Experimental results on the thermal properties of reflective materials for building insulation applications</b>	<b>49</b>
Roberto Bruno, Vittorio Ferraro, Piero Bevilacqua, Giorgio Cuconati Cristina Carpino, Natale Arcuri	
<b>The role of thermal inertia in wooden buildings</b>	<b>57</b>
Piero Bevilacqua, Roberto Bruno, Antonietta Pellegrino, Natale Arcuri	
<b>Decision Making and Evaluation Tools</b>	
<b>Multi-criteria decision support system for urban energy group planning and decision-making activities</b>	<b>65</b>
Sara Torabi Moghadam, Patrizia Lombardi	
<b>Eco-efficiency Assessment of Administrative Divisions in 42 Countries Based on Environmental Impact and Gross Regional Product</b>	<b>71</b>
Junya Yamasaki, Toshiharu Ikaga, Norihiro Itsubo	
<b>Comparative analysis for the evaluation of sustainable mobility in urban scale environmental certification</b>	<b>79</b>
Mauro Francini, Giusi Mercurio	
<b>Education and Training</b>	
<b>Water World: Architecture Design Proposals Address Climate Change and Rising Sea Levels</b>	<b>88</b>
Theodore Sawruk, Timothy Abblebee	
<b>Innovative features in training methods for sustainable architecture design</b>	<b>99</b>
Ernesto Antonini, Francesca Giglio, Massimo Rossetti	
<b>The Rural Making Lab: Tactic of Social, Cultural and Sustainable Innovation for the Inner Areas of Calabria</b>	<b>106</b>
Giuseppe Mangano	
<b>Living in the Clouds: Sustainable Pencil Towers for Hartford, Connecticut</b>	<b>113</b>
Theodore Sawruk, Seth Holmes	

## Policies and programs

- Induced impacts from the building and transportation sectors as a means to achieve environmental goals** 125  
John Erik Anderson
- Working on value chains for sustainable buildings in Calabria: the approach of the regional Pole of Innovation Green HoMe** 129  
Mario Maiolo, Giuseppe Rossi, Marida Bevacqua, Gilda Capano
- Sustainable Building Program of the Calabria Region. First results** 135  
Giovanna Petrunaro, Barbara Corasaniti

## Sustainable neighborhoods and cities

- Rebuilding a community for sustainability and resilience** 141  
Ann Edminster
- Effects of urban morphology on outdoor thermal comfort. A microclimate parameterization of housing blocks in the Euro-Mediterranean context** 146  
Carmela Aprea, Alfredo Reder, Paola Mercogliano
- Sustainability and resilience in the southern outskirts of Reggio Calabria. Strategies and projects for soil recycle and management.** 153  
Alessia Leuzzo
- Mapping trees in European cities with Urban Atlas under consideration of natural vegetation formations** 160  
Ulrich Schumacher, Clemens Deilmann
- Cost-effective structural planning of the apartment for flexibility and durability** 166  
Jiyeon Kang, Goopyoh Hong, Hyunggeun Kim

## Assessment methods and tools - Building scale

- BuildDOP: one single tool to evaluate energy, environmental impact and costs** 172  
Carlotta Dolzani, Mariadonata Bancher, Martina Demattio, Ulrich Klammsteiner, Ulrich Santa
- Analysis of the discrepancy between estimated energy demand and real energy consumption of buildings** 179  
Svenja Carrigan, Marco Hartner, Oliver Kornadt
- Remarks on Application of Building Physics for Climate Change Mitigation** 185  
Jan Tywoniak, Pavel Kopecky, Zdenko Malik, Nikolaos Skandalos
- Ontology-based cost estimation for construction projects** 190  
Jaehyun Choi
- Smoothing out the interaction among BIM, sustainability rating systems and minimum environmental criteria** 193  
Floriana Calise, Nunzia Cascone, Erica Proietti
- Itaca-food a model for the sustainability assessment of food process buildings** 198  
Francesco Barreca, Giuseppe D. Cardinali
- Dry construction systems for sustainable design: issues and perspectives for the use of dry construction systems in the Mediterranean context** 202  
Laura Greco
- Maintenance and assessment of environmental sustainability in buildings: a possible synergy between present and future** 210  
Maria Azzalin

## The Rural Making Lab: Tactic of Social, Cultural and Sustainable Innovation for the Inner Areas of Calabria

**Giuseppe Mangano**

PhD SIACE, University of Calabria - Pensando Meridiano Association, Italy; giusepmangano@gmail.com

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### Abstract

In the last two decades, the inner areas in Italy have shown a tendency to experiment new local development practices through projects oriented to the participation and knowledge transfer on the topics of innovation and process technologies. In this context fits the Rural Making Lab<sup>1</sup>, the tactic promoted by the Pensando Meridiano association, which has become the experimental phase of research within the PhD thesis entitled "Inner Areas, innovative processes for emerging communities. Strategies and tactics of Rural Making in ITI called Presila Catanzarese, Reventino-Savuto and Area Grecanica". The main objective is the adoption of sustainability approaches to activate projects of social, cultural, productive and environmental innovation for the inner areas of Calabria as the field of "transfer of knowledge and practices" for the activation of new emerging communities, sustainable micro-economics chains through the co-production of innovative goods and services, with reference to the local development drivers proposed by the National Inner Areas Strategy. The tactic is activated through four territorial laboratories and collaborative networks, organized in two phases: work-education, for the information and co-planning on the themes of sustainable culture, and work-project for actions of "self-construction" with the use of advanced technologies and digital processes. The capacity of Rural Making Lab to implement "training and education actions" in the case of experimentation on the Calabrian inner areas, produces a multiplier regenerative effect for the landscapes and "temporary" communities that move between urban areas and inner territories, according to the new paradigm based on the theoretical and scientific contribution argued in the research (commuting).

### 1. The territorial and cultural reference scenario

#### 1.1. The Calabrian inner areas in the National and Regional Inner Areas Strategy

The Calabria region's territory includes over 50% of small municipalities with a population of less than 6,000 inhabitants currently living in the geographic areas of the coast, where there has been in recent years the largest land consumption, and with a large natural availability and settlement in inner areas, over the urban. For the identification and classification of Calabrian inner areas, the methodology developed by the DPS (now Department for Cohesion Policies) has been applied, which returns a geography of the Calabrian territory characterized by a high presence of municipalities classifiable as Inner Areas, in total 323, corresponding to 78.7% of the total (while the national average stands at 52%). In the Calabrian inner areas there are just over half of the population, with a strong incidence of "peripheral" and "ultra-peripheral" municipalities (almost 40% compared to 22.5% national data). The remaining municipalities fall into the category of "Centers" and are classified as Poles, Inter-municipal Poles and Belt. The methodology adopted in the first SRAI document returns a mapping of the Calabrian Municipalities as in figure 1. It is expected that we can intervene with projects that affect demographic weakness of the occupied communities, of the lack of urban processes (metabolism) and of services for citizens (education, health, work and mobility), including the same inner areas of Calabria in a territorial project over existing geographical and administrative boundaries, not only associative structures, but also variables structures on scenarios of different relationships.

The goal is also to enable the protection processes, enhancement of natural and cultural resources, innovation in the fields of agri-food systems, local branches of renewable energy and a new craft sector connected to the enabling technologies and extra-national competitiveness, as reported by the National and Regional strategy for Inner Areas (see National strategy document for Inner Areas, par. 1.7, p. 22).

Referring to the National Strategy for the Inner Areas (SNAI), there are five areas of intervention (drivers) that include development projects:

- active protection of land/environmental sustainability;
- enhancement of the natural/cultural capital and tourism;
- enhancement of agri-food systems;
- activation of chains of renewable energies;
- know-how and craftsmanship.

Referring to the National Strategy for Inner Areas, the region Calabria defines for areas of action in compliance with the drivers for local sustainable development:

- Protection of the territory, essential and local community services;
- Enhancement of natural and cultural resources for the development of sustainable tourism;

- Sustainable mobility
- Manufacture, Crafts, agricultural products.

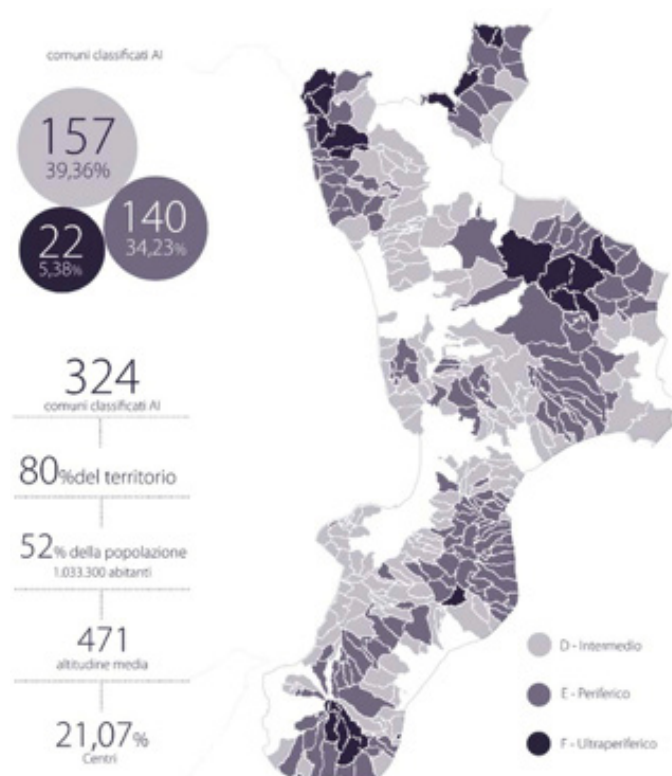


Figure 1 Map of Inner Areas in Calabria. Source: G. Mangano's graphic processing

The attention of national, regional and local government on inner areas, in parallel with the increasing spread of experiences of return to the "rural" as good practices for developing these territories, triggered the testing of a number of innovative models of participatory planning, together with the instruments provided in the measures by European funds POR and PSR 2014-2020 and of probable integration with the National Strategy for the Inner Areas.

**1.2 The "emerging" communities and the innovative instrument of Rural Making Lab: territorial laboratories of social, cultural and sustainable innovation for capacity building and regenerative actions in the inner areas of Calabria.**

The "emergent communities" of such "co-territories" are identifiable among the new inhabitants that can settle due to the integration of migration processes, to new business commuting and attractiveness, to favourable conditions of residency and to a transfer of sustainability processes from the coast to the inner areas (Fig. 2- 3-4)



Figure 2 The categories of new citizens (populations of non-EU citizens) in virtuous new experiences residency and economies for territories.



Figure 3 The young generations who will be able to engage in activities innovative able to create a new value and a new one consumption economy sustainable.



Figure 4 A new entrepreneurship, also coming from extraterritorial experiences, capable of transferring innovation and good practices in territories particularly favorable to competitive processes.

On the sidelines of the National Forum for internal areas 2017 in Aliano (MT), Fabrizio Barca underlined the value of community participation processes in the construction of local development policies as the only true instrument for the rebirth of the internal territories. A complementary reflection to that of Veronica Lo Presti, Daniela Luisi and Silvia Napoli (2018) according to which, through the adoption of a sustainable approach, it is possible to "constitute an innovative way to tackle the design of development interventions in the local area, enhancing the resources and proposals that emerge directly from the territories and that, if implemented with the accompaniment of experts, they can amplify the capacity building of all the stakeholders involved in the process of relaunching and developing an area, [...] since change and the relaunching of inner areas necessarily pass through the propulsive thrust of young people who must be adequately equipped with citizenship and innovation skills (as indicated in objective 4 of Agenda 2030 for Sustainable Development)".

This is the context within which the Rural Making Lab is inserted, the planning and operational tactic of the association Pensando Meridiano for projects of social, cultural, productive and environmental innovation for the internal areas of Calabria, selected as territorial Laboratories experimentation sites with the aim of triggering inclusion and cohesion processes for "emerging communities" (young innovators, visitors, entrepreneurs promoting local development, returning citizens, migrants) and to activate local micro- economies and knowledge through collaborative networks (with bottom-up approach) to respond to the marginalization phenomena of these same territories. With reference to the drivers proposed by the regional strategy for inner areas, the research intends to experiment strategies and tactics of social innovation through the creation of permanent laboratories for the social and occupational inclusion of "new residents" that will constitute emerging communities (young people, migrants and new entrepreneurs) in the internal areas of the mapped case. The Rural Making Lab is activated through four laboratories of sustainable, social, cultural and technological innovation that possess their own "themes", "objectives", "products" and "inclusion tools / strategies" and are able to find effectiveness within the actions put in place and drivers of local development defined by the National Strategy for Internal Areas and also implemented by the regional one. The four laboratories are structured as follows:

a) The Territorial Laboratory, which aims to trigger and coordinate all the innovative actions envisaged on the topics "internal areas, sustainable local development, innovation and emerging communities". The laboratory defines and coordinates the thematic trajectory of the entire project as a link between the subjects of the collaborative network and the local communities, as a real control room on a place-based approach. Furthermore, the objective of the laboratory is to activate innovative processes and projects on the development drivers of SNAI / SRAI / Area Strategy through the construction of collaborative territorial networks and to use open knowledge seminars as a dissemination and participation strategy (open knowledge) and the launch of co-planning laboratories with local communities (citizens, associations, informal groups, institutions, cooperatives and entrepreneurs). In this regard, the laboratory intends to build an integrated information system (dossiers and smart mapping on the topics of SNAI / SRAI or Area

Strategy) as a work tool for the analysis of sustainable scenarios that can be activated in the territories;

Figure 5 A moment of the Territorial Laboratory of Belmonte C. Ph. courtesy C. Zappalà (PM)



b) The Storytelling Laboratory, which develops multimedia communication strategies with the objective of enhancing and promoting the cultural, environmental, landscape and architectural heritage of the territories affected by the actions of the Rural Making Lab. This workshop creates storytelling in an innovative and creative form for communities, places and cultures but also of ongoing activities. "Storytelling" is a horizontal action foreseen in many Area and SNAI Strategies, as a tool through which it is possible to promote territorial values and contexts through new narrative and multimedia forms;



Figure 6 VideoStorytelling in Gallicianò (Condofuri, RC). C. Ph. Courtesy M. Cannizzaro (PM)

c) The Eco-Design and Enabling Technologies Laboratory, which works on the themes of advanced manufacturing processes and open-source technological innovation to trigger regenerative actions of spaces and places with sustainable self-building-recycle technologies. The objective of this laboratory is to regenerate and "compensate" places located in fragile contexts (marginal or abandoned spaces) or to be reactivated as collectives and identities for the communities through projects carried out with hybridized processes that use recycle technologies, additive manufacturing tools ( digital fabrication and 3D printing) and Arduino open source technologies for environmental monitoring with self-built sensors;



Figure 7 Additive manufacturing laboratory in Belmonte C. Ph. Courtesy M. Cannizzaro (PM)

d) The Creative Cultural Projects Laboratory, which aims to promote open knowledge of places and landscapes through integrated innovative communication devices through the use of "analog" (totem mapping) and "digital" devices (mappings on open platforms, eg Google My maps, media, qr-code, etc.). Furthermore, this workshop intends to make information on places, territories, and landscapes accessible and integrated by developing devices with a high content of integrated information. The enabling technologies used also refer to the processes of open knowledge of the context values examined.



Figure 8 Integrative information maps in Belmonte C. Ph. courtesy D. Emo (PM)

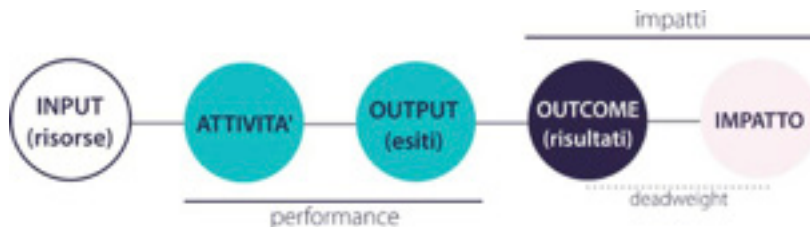
The Rural Making Lab is a sustainable strategy that adopts enabling technologies "to control the transformations of the built environment, implementing impact regenerative design models, defining more coherently the nature of the term environmental impact towards its strictly connected meaning to the social impact" (Nava C, 2016).





Figure 9 Informative totem maps in Belmonte C. Source: extract from G. Mangano's PhD Thesis, elaboration by A. Procopio (PMopenlab srls)

And again, on the theme Key enabling technologies and innovation design driven in the regenerative approaches of the aforementioned work, Consuelo Nava relates the measurement of impact and regenerative systems of social and sustainable innovation as factors that "intercept and trigger process aspects (process design) and product aspects (product design), incoming (in) and outgoing (output) with respect to the ecosystems of the resources, the scenarios that can be produced, the operation of the networks. These three reference domains feed and manage values connected to the available data, to the detected performances, to the reactivated resources, to the functioning of the devices, to the configuration of different geographical models, to the variable and flexible arrangements of the territories and contexts (co-territories)". The impact of the projects referring to the activities and the technologies employed can be illustrated in the figure 10.



The actions of the Rural Making Lab find effectiveness in the construction of "co-territorial" collaborative networks that activate public-private partnerships as a new participatory dimension of emerging communities for the local development of inner areas. In particular, for these innovative forms of co-planning and collaboration in projects aimed at social, cultural and productive innovation of the internal areas, it is possible to define different levels of participation and active subjects. The four laboratories are organized in two phases:

- the Work Education phase, a training workshop, the in-training of young "makers" under 35 (who have joined the project on open call of the association) on the themes of innovative processes for internal areas, of the sustainable design and visioning for the transformation of places and the construction of information mappings with the identification of the spaces affected by the projects;
- the Work Project phase, during which the project is carried out on site in "self-construction" by activating the four operational laboratories, using recycle and innovative technologies.

## 2. Rural Making Lab Experiences on the SNAI experimental inner areas of Calabria

The experiences of Rural Making Lab conducted in the Territorial Integrated Investments (ITI) Presila Catanzarese, Reventino-Savuto and Area Grecanica represent the experimental and application phase of the research within the PhD thesis entitled "Inner Areas, innovative processes for emerging communities. Strategies and tactics of Rural Making in ITI called Presila Catanzarese, Reventino-Savuto and Area Grecanica". From September 2016 to June 2018, five territorial laboratories have been activated (figure 11):

The activities of the Rural Making Lab are promoted by the association Pensando Meridiano and, since november 2017, also in collaboration with the innovative start-up PMopenlab srls.



Figure 11 Rural Making Lab, projects timeline. Source: elaboration by G. Mangano

### 2.1 Rural Making Lab\_Sila Orientale: activation of emerging communities processes through urban and rural regeneration projects in Zagarise (CZ)

The Collective Landscape Opera in Zagarise, a small village of about 1500 inhabitants located in the Catanzaro presila, concerned the regeneration of the landscape path that leads to the remains of the twentieth-century fountain called by the local population "acque e' fohre", or "waters at outside the country", through an installation of information totems about the identity, cultural and productive values of the village and the self- construction of a landscape room, which together with the refurbishment of tanks and realization of seats in eco-design and additive manufacturing, returned the place for collective use of the community. With the Collective Landscape Work at the "Giardini delle Esperidi" Festival in Zagarise, the Rural Making Lab was able to experience a real research / action program on the themes of environmental and landscape regeneration with training activities (capacity building) and the realization of projects on site at two different times (pre- festival at the university classrooms and during the festival at the Fontanile "Acque e 'fohre"), employing the 23 young people selected on the association's open call in over 150 hours of activity (see figure 13).

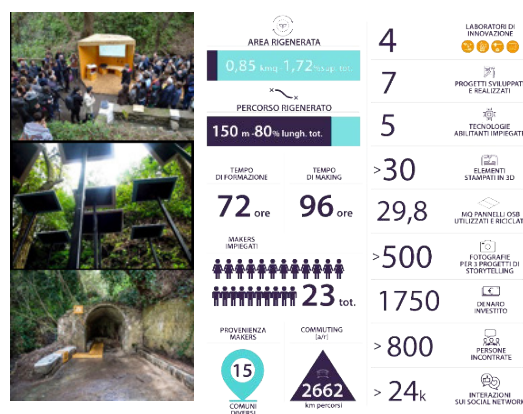


Figure 13 Projects and Impacts for Rural Making Lab in Zagarise. Source: extract from G. Mangano's PhD thesis, elaboration by G. Mangano

### 2.2 Rural Making Lab\_ Reventino-Savuto: transfer of knowledge and innovation for the enhancement and regeneration of the cultural and landscape heritage of Belmonte Calabro (CS)

The opportunity to carry out a project in the field of regeneration and at the same time of training and continuous information on the issues of social and sustainable innovation for the Belmonte Calabro co-territory was presented by ErgoSud, the cultural project for young people from south, conceived by Professor Consuelo Nava in 2013, for the transfer of knowledge on innovation and sustainability of the Southern regions. The third edition of Ergosud provided a time dedicated to training and the transfer of skills within Officine Sostenibili in Reggio Calabria (Work-education), directed by the coordinators of the Pensando Meridiano association for the 40 "makers" enrolled in the school during the first half of May 2017 and then conducting the activities in

Belmonte Calabro on 19-20-21 May for the Rural Making Lab in a "residential" form with a project of environmental regeneration and cultural narration of the landscapes and the Gardens of the Castle "Galeazzo di Tarsia" (Work-project). The objective of the four laboratories was to create innovative projects and products for the reactivation of spaces of strong historical, cultural and landscape value to return them to its community also with a view to possible actions that can be activated in the future (figure 14). In this regard, the path of the gardens has been regenerated with cleaning and reclamation operations and the installation of five information totems with integrated technologies, a temporary event room was built in a cave previously used as a rubbish dump and plantings were carried out in collaborations with primary school students in the area. All the action was narrated on social media through photo and video products and the school ended with an open public seminar involving representatives of regional politics, experts and entrepreneurs.



Figure 15 Projects and Impacts for Rural Making Lab in Gallicianò. Source: extract from G. Mangano's PhD thesis, elaboration by G. Mangano

### 3. Conclusions

Measuring and rereading critically the impacts of the three experiences illustrated above, it is possible to affirm that the Rural Making Lab can be inserted as a contribution to the most innovative instruments of governance of territorial development as a practice of sustainable social innovation, capable of activating virtuous and new networks supply chains of knowledge on local development and sustainability issues through territorial projects and laboratories for the training and information of communities active in the inner areas of Calabria.

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